



INQUEST INTO THE DEATHS OF  
STAR ELLEN BORLASE, JACK MORLEY BORLASE,  
HELEN KALD CASTLE, JUDITH MAUD GRIFFITH,  
JODY MARIA KAY, GRAHAM JOSEPH RUSSELL,  
ZOE RUSSELL-KAY, TRENT ALAN MURNANE  
AND NEIL GEORGE RICHARDSON

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Inquest conducted by Mr Anthony E Schapel, Deputy State Coroner, South Australia





## FINDING OF INQUEST

*An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide and Port Lincoln in the State of South Australia, from the 5<sup>th</sup> day of October 2005 to the 8<sup>th</sup> day of May 2007 and the 18<sup>th</sup> day of December 2007<sup>1</sup>, by the Coroner's Court of the said State, constituted of Anthony Ernest Schapel, Deputy State Coroner, into the deaths of Neil George Richardson, Trent Alan Murnane, Star Ellen Borlase, Jack Morley Borlase, Judith Maud Griffith, Jody Maria Kay, Graham Joseph Russell, Zoe Russell-Kay and Helen Kald Castle.*

*The said Court finds that Neil George Richardson aged 54 years, late of Section 103, Hundred of Stokes, Tumby Bay, South Australia, died on Settlers Road near Wanilla, South Australia on the 11<sup>th</sup> day of January 2005 as a result of incineration.*

*The said Court finds that Trent Alan Murnane aged 30 years, late of 13 O'Malley Street, Cummins, South Australia, died on Settlers Road near Wanilla, South Australia on the 11<sup>th</sup> day of January 2005 as a result of incineration.*

*The said Court finds that Star Ellen Borlase aged 3 years, late of Borlase Road, Wanilla, South Australia, died on Borlase Road near Wanilla, South Australia on the 11<sup>th</sup> day of January 2005 as a result of incineration.*

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<sup>1</sup> Refer to Annexure E for a complete listing of Court sitting days

*The said Court finds that Jack Morley Borlase aged 2 years, late of Borlase Road, Wanilla, South Australia, died on Borlase Road near Wanilla, South Australia on the 11<sup>th</sup> day of January 2005 as a result of incineration.*

*The said Court finds that Judith Maud Griffith aged 59 years, late of 10 Edgar Street, Bedford Park, South Australia, died on Borlase Road near Wanilla, South Australia on the 11<sup>th</sup> day of January 2005 as a result of inhalation of products of combustion.*

*The said Court finds that Jody Maria Kay aged 33 years, late of Lot 92, Hundred of Poonindie, via North Shields, South Australia, died at Poonindie, South Australia on the 11<sup>th</sup> day of January 2005 as a result of a ruptured heart due to blunt chest trauma.*

*The said Court finds that Graham Joseph Russell aged 13 years, late of Lot 92, Hundred of Poonindie, via North Shields, South Australia, died at Poonindie, South Australia on the 11<sup>th</sup> day of January 2005 as a result of multiple injuries.*

*The said Court finds that Zoe Russell-Kay aged 11 years, late of Lot 92, Hundred of Poonindie, via North Shields, South Australia, died at Poonindie, South Australia on the 11<sup>th</sup> day of January 2005 as a result of an undetermined cause.*

*The said Court finds that Helen Kald Castle aged 57 years, late of 20 Dorward Street, North Shields, South Australia, died at North Shields, South Australia on the 11<sup>th</sup> day of January 2005 as a result of the combined effects of inhalation of products of combustion and hyperthermia.*



## **INQUEST INTO THE DEATHS OF**

**STAR ELLEN BORLASE, JACK MORLEY BORLASE, HELEN KALD CASTLE,  
JUDITH MAUD GRIFFITH, JODY MARIA KAY, GRAHAM JOSEPH RUSSELL,  
ZOE RUSSELL-KAY, TRENT ALAN MURNANE AND NEIL GEORGE RICHARDSON**

## **FINDING OF THE CORONER**

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## **ACKNOWLEDGEMENTS**

There are a number of people whose participation in these proceedings I must acknowledge. Their contribution to this difficult Inquest was quite exceptional.

The first group of people I would like to thank are the members of the Lower Eyre Peninsula community. It is fair to say that this Inquest could not have been conducted without the full cooperation of the community. Without exception, the cooperation of witnesses who attended the Inquest, some of them for many days, some of them in Port Lincoln and some of them in Adelaide, was always forthcoming. It is difficult to think of one instance where cooperation to this Inquest was not unhesitatingly given and given in the full knowledge that the individual concerned might be required to spend considerable time in the witness box, or indeed waiting to give evidence. To those people who extended their full cooperation to this Inquest I express my heartfelt thanks. To those individuals who may have perceived that they were unnecessarily and unduly delayed, I take full responsibility.

It is difficult to express the magnitude of my appreciation of the work of two members of the Coroner's Court staff, namely Ms Tanya MacPhedran, Wangary Executive Assistant and Ms Liz O'Keeffe, Senior Researcher. Their contribution to the conduct of the Inquest during its currency and in respect of the preparation of these Findings has been quite outstanding. It is no exaggeration to say that this whole exercise could not have been conducted without their prodigious input.

I would also like to record my appreciation of the work of Mr Dean Turnbull, Sheriff's Officer. Mr Turnbull was the Sheriff's Officer and Court Orderly on duty for the entirety of this Inquest. The Inquest could not have been efficiently conducted without Mr Turnbull's efforts. Mr Turnbull's ability to marshal the frequent avalanches of documentary material was, to say the least, an asset that was extremely important to have in a case of this nature.

May I also record my appreciation of the work of Mr William Boucaut, of the private Bar, Counsel Assisting the Coroner. Mr Boucaut agreed to conduct this matter as Counsel Assisting at relatively short notice. Notwithstanding this, Mr Boucaut diligently and at short notice familiarised himself with the mass of material that had been generated in respect of this investigation. Mr Boucaut conducted the Inquest in his capacity as Counsel Assisting with skill, integrity and complete dedication to the task.

Finally, I would like to pay tribute to the men and women of the Country Fire Service without whose cooperation this Inquest would have been considerably more difficult. The task that is performed by the CFS is a very difficult one and would not have been made any easier by the intrusion of this inquiry into its activities. Notwithstanding this, at no stage, at any level, be it volunteer or otherwise, did I detect any resistance to scrutiny.

The community owes a debt of gratitude to the people I have identified in these acknowledgements.



## **INTRODUCTION AND GEOGRAPHY OF THE LOWER EYRE PENINSULA**

Not long after 3pm on Monday, 10 January 2005 a bushfire started in the Wangary District on the Lower Eyre Peninsula. It was a hot afternoon and the bushfire spread quickly, first in a generally easterly direction and as the afternoon went on, in a north-easterly direction. CFS crews responded to the incident very quickly and with the help of numerous farm firefighting units and Council and private machinery attempted to stop the spread of the fire. The fire was declared contained by the CFS at 8:54pm. By 11pm on the Monday night the fire had burnt some 1800 hectares of swamp, scrubland and pasture paddocks.

Tuesday, 11 January 2005 was a total fire ban day with high temperatures and strong northerly winds with a westerly change forecast. Just before 10am the first of several breakouts occurred from the overnight fireground.

These breakouts spread extremely quickly under strong north-westerly winds. The fires spread initially in a south-easterly direction reaching the Wanilla Forest, some 14 kilometres away, by 11:40am. The westerly wind change occurred just before midday pushing the fire in an easterly direction. By 1pm the fire reached North Shields on the East Coast of the Lower Eyre Peninsula some 35 kilometres away from the original fireground.

At approximately 1:30pm the fire started to burn in a more north-easterly direction following a southerly wind shift. The fires spread was halted late on the Tuesday evening and CFS crews continued to mop up the fire until 20 January 2005 when it was extinguished.

During the Tuesday the fire claimed the lives of nine people and injured 115, three of whom required urgent hospital treatment in Adelaide.

It is estimated that the fire caused approximately \$100 million in total property damage including:

- 77,964 hectares of land burnt
- 93 houses destroyed or significantly damaged
- 316 sheds destroyed or significantly damaged
- 45 vehicles destroyed
- 139 farm machines destroyed
- 6,300 kilometres of fencing destroyed
- 47,000 stock losses
- 135 commercial properties affected

- 100 small holdings affected
- \$4.6 million damage to SA Water pipelines and infrastructure
- \$1.07 million damage to the Transport SA road network
- \$465,000 damage to Telstra infrastructure
- \$245,000 damage to electricity infrastructure
- \$100,000 damage to conservation parks

Following the fire the previous State Coroner, Mr Wayne Chivell, established 16 terms of reference to assist the police investigation. They were:

- The identity and antecedents of the deceased persons;
- The causes of each of the deaths;
- The circumstances leading to the deaths including the date and time of death;
- The number of persons suffering injuries caused by the fire and the general nature of those injuries;
- The cause of the fire(s);
- The nature and geographic extent of the fire(s);
- If there was more than one fire, which fire killed which victims?;
- Timelines of the fire from beginning to end with particular emphasis on the status of the fire at times of the deaths and significant damage;
- Timelines of critical decisions made by all responding agencies regarding the response to and the management of the fire in the time leading up to and during the fire, and an assessment of the appropriateness of such decisions;
- Weather information provided during the relevant period leading up to and during the fire;
- What public notices, evacuation notices, or fire warnings were issued and by whom for the relevant period;
- What was the correlation between the notices or warnings and the state of the fire at the time of warning?;
- How were those notices or warnings delivered?;
- Whether people heard and heeded those notices or warnings, an assessment of the appropriateness of the warnings, and the relevant policies and procedures in that regard;
- An overall assessment of stock losses and property damage caused by the fire;
- Any other issue concerning the cause and circumstances of the fire(s) and the resulting deaths, in particular whether any such issue was relevant to the cause of the initial fire, exacerbated the spread of the fire(s), hindered or rendered less effective fire-fighting activities, or otherwise contributed to the circumstances in which the deaths occurred.

This Inquest attempted to address these same issues.

## Geography of the Lower Eyre Peninsula

The Lower Eyre Peninsula is the southern most part of the Eyre Peninsula and is bordered by the Great Australian Bight on its western side and the Spencer Gulf to its east.

The map below outlines the geography of the Lower Eyre Peninsula and shows the fire scar boundary in red indicating the total area burnt by this fire of 77,000 hectares.

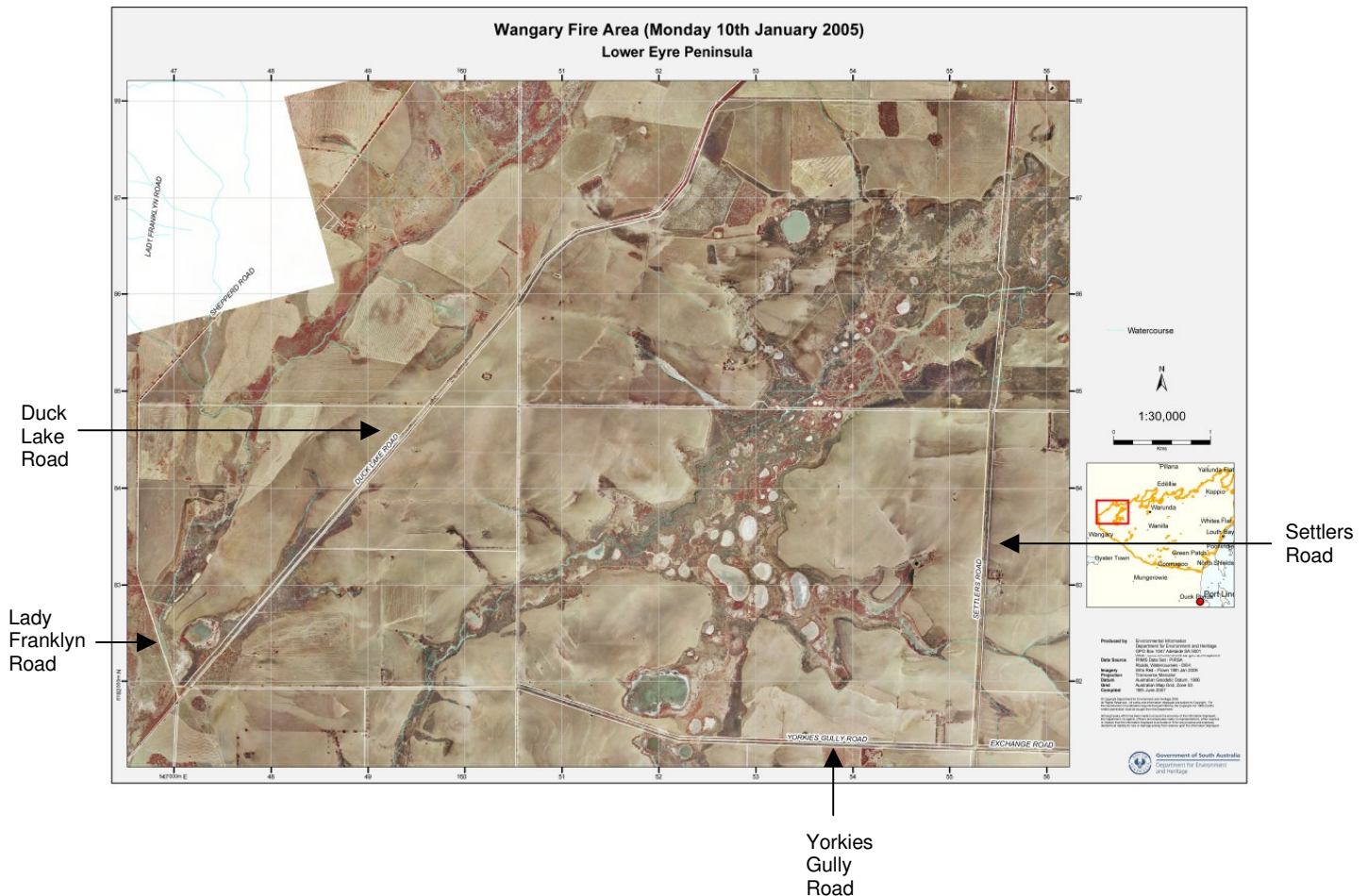


The map illustrates the following locations of significance:

- Coffin Bay:** A coastal town to the south of the fire area. It was from this location that people initially reported seeing smoke on Monday afternoon.
- Edilillie:** The fire was stopped at this location by CFS crews on the Tuesday evening.
- Marble Range:** The shaded green long narrow native vegetation area that borders the eastern side of the highway between Wangary and Coultas. This range is said to have a significant affect on local weather patterns.

- Murrumbidgee CP: This conservation park is to the south east of the Monday night fire ground and was affected by fire on the Tuesday morning after fire broke out.
- North Shields: A coastal town on the eastern side of the Lower Eyre Peninsula. This town was directly in the fire path on the Tuesday afternoon. Several homes in North Shields were destroyed in the fire, including the home of Mrs Helen Castle who perished at that location.
- Poonindie: A coastal town on the eastern side of the Lower Eyre Peninsula. This town was also affected by the fire on Tuesday afternoon. Mrs Jody Kay and her children, Graham Russell and Zoe Russell-Kay, died in her vehicle fleeing the fire from their home in Poonindie.
- Wanilla: The town in which the Incident Control Centre was established on the Monday evening. This town was affected by the fire on the Tuesday.
- Wanilla Forest: The Forest is indicated in the block of green underneath the words 'The Fountain' on the above figure. The Forest is managed by the Port Lincoln Aboriginal Community Council. The Forest was affected by fire on the Tuesday.
- Wangary: The town to which the Incident Control Centre moved from Wanilla on the Tuesday morning.

The next map, is an aerial view of the area of the fireground on the Monday. The map illustrates the four roads that will be referred to throughout the finding, they are Lady Franklyn Road, Duck Lake Road, Yorkies Gully Road and Settlers Road.

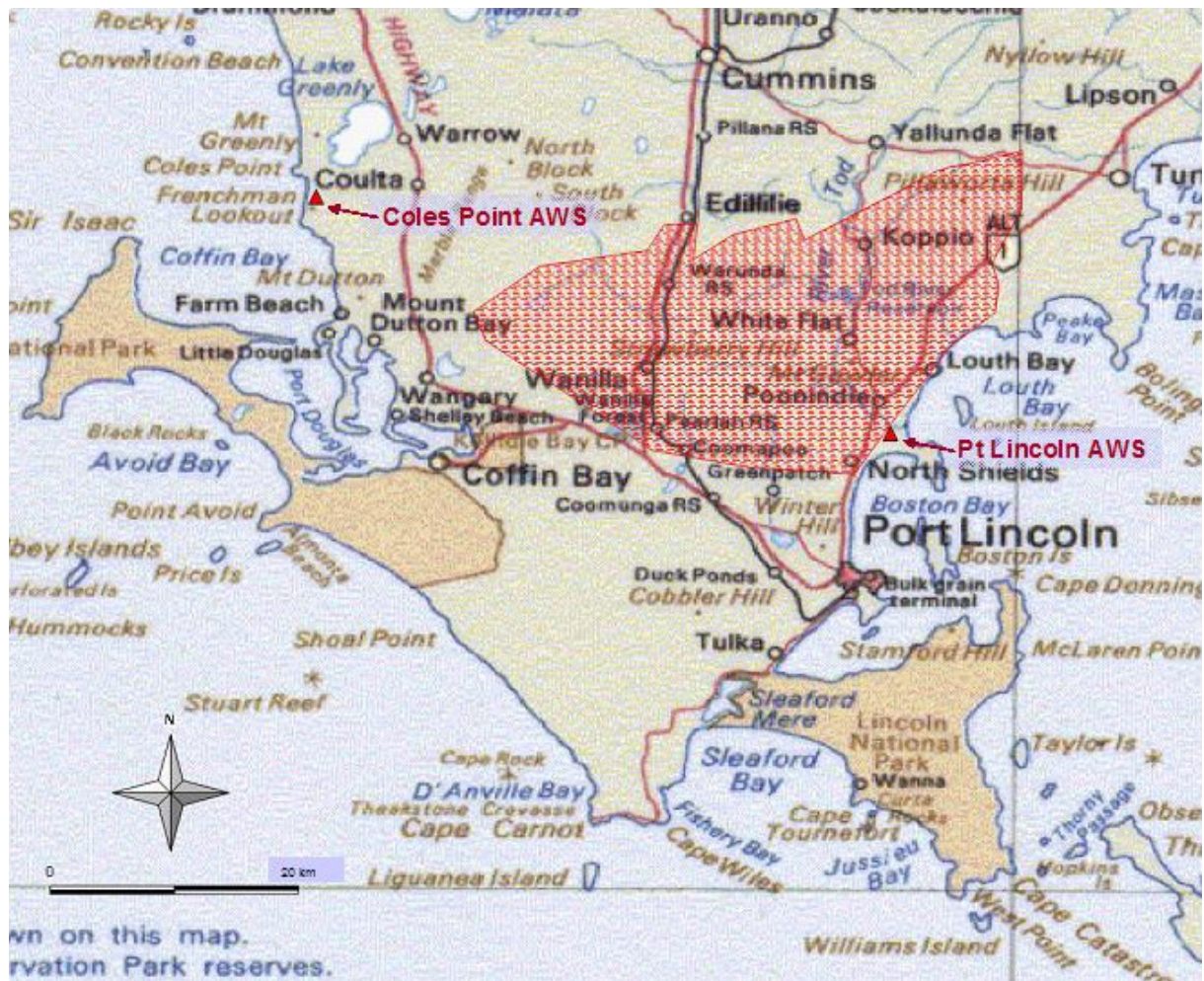


As can be seen on the map, there is a swamp which runs in a generally north-east direction throughout the area. This swamp is called the paperbark swamp and had some permanent wet areas, with vegetation consisting mainly of melaleuca and samphire shrubs.

Another area that will be referred to throughout the finding, has become known throughout the Inquest as the 'sugar gums'. These are the two large areas of sugar gums on the western and eastern sides of Duck Lake Road around the intersection of Duck Lake and Yorkies Gully Roads. They can be seen as darker areas on the imagery.



The third map included in this section displays the locations of the two Bureau of Meteorology Automatic Weather Stations (AWS) that provided the weather data that was used to forecast conditions in the fire area. One is at Coles Point, which is on the western side of the Peninsula and the other is located at Port Lincoln Airport, on the eastern side of the Peninsula just north of North Shields. The fire boundary is again shown in red on this map.



## **WITNESSES**

### **Mr Neil Ackland**

Mr Ackland gave evidence on 14 and 15 February and 17 March 2006. Mr Ackland has been a member of Yeelanna CFS for over 20 years, and at the time of the fire was Captain of that Brigade<sup>2</sup>. Mr Ackland attended the fire early on Monday evening as Captain of the Yeelanna 34 appliance and was later appointed Sector Commander of the North-West Sector. Mr Ackland coordinated backburning on both sides of Duck Lake Road on Monday evening. Mr Ackland attended the Wangary Incident Control Centre on Tuesday morning and undertook tracking and observation of the fire for the Incident Management Team and later that day was involved in the effort to protect the township of Edilillie<sup>3</sup>.

### **Mr Peter Aird**

Mr Aird was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 14, 15 and 16 March 2006. Mr Aird is the District Clerk and Chief Executive Officer of the District Council of Lower Eyre Peninsula. At the time of the fire he had been in that position for approximately 10 years and prior to that had worked either in local or state government positions<sup>4</sup>. Mr Aird is responsible for implementing all aspects of Council policy including bushfire prevention and roadside vegetation management.

### **Mr Richard Alder**

Mr Alder gave evidence on 20 September 2006. Mr Alder is the General Manager of the National Aerial Firefighting Centre and the Executive Officer of the Australasian Fire Authorities Council Wildfire Aviation Technical Group<sup>5</sup>. Mr Alder has held a private pilot's license for nearly 25 years and has a Bachelor of Forest Science with Honours from the University of Melbourne<sup>6</sup>. Mr Alder has attended numerous fires over his career, as a firefighter, crew leader, Air Attack Supervisor, Air Operations Manager and State Coordinator<sup>7</sup>.

### **Mr David Andrew**

Mr Andrew was represented by Mr Sean Richter and gave evidence on 21 February 2006 and 23 March 2007. Mr Andrew is a farmer and a member of the Coultas CFS<sup>8</sup>. Mr Andrew

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<sup>2</sup> Exhibit C194

<sup>3</sup> Exhibit C194

<sup>4</sup> Transcript, page 5768

<sup>5</sup> Exhibit C269

<sup>6</sup> Transcript, page 16753

<sup>7</sup> Exhibit C269

<sup>8</sup> Exhibit C199

fought the fire on the Monday afternoon along Duck Lake Road on his private farm fire unit. Early on the Tuesday morning Mr Andrew again attended the fire in his private unit and worked in the sugar gums on the western side of Duck Lake Road. Mr Andrew was in Chris Hull's property later in the morning and noticed fire flaring up in the vicinity of the swamp<sup>9</sup>.

### **Mr Trevor Arnold**

Mr Arnold was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 15 August 2006. Mr Arnold is a plant operator with the District Council of Lower Eyre Peninsula and has previously worked at fires with heavy machinery. Mr Arnold was asked to attend the fire on Monday afternoon by his supervisor with his 140G Caterpillar grader. Mr Arnold put in breaks in the properties of Les and George Hull, John Giddings and Trevor Puckridge<sup>10</sup>. Mr Arnold returned to the fireground with his colleagues on Tuesday morning but after being told they were not required, took his grader back to Cummins. His supervisor later asked him to return to the fireground after the fires had broken away and he worked putting in breaks in the vicinity of Settlers Road and Edilillie.

### **Ms Sonia Ayers**

Ms Ayers was represented by Mr Andrew Harris QC and Mr David Greenwell. She gave evidence on 14 March and 15 and 16 August 2006. Ms Ayers has been a General Inspector for the District Council of Lower Eyre Peninsula since 2003 and in October 2004 was appointed the Council's Assistant Fire Prevention Officer<sup>11</sup>. Ms Ayers is involved with the Council's Bushfire Prevention Committee and also in undertaking Section 40<sup>12</sup> inspections of properties within the council district.

### **Mr Jason Barnes**

Mr Barnes was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 16 March 2006. Mr Barnes is a plant operator with the District Council of Lower Eyre Peninsula, he has worked in that position for six years<sup>13</sup>. Mr Barnes was called to the fire on Monday afternoon and took a LX100 Hitachi front end loader. It was the first time Mr Barnes had undertaken bushfire suppression work. Mr Barnes put in breaks and cleared vegetation on Duck Lake Road on the Monday afternoon and in various locations on the Tuesday.

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<sup>9</sup> Transcript, page 4829

<sup>10</sup> Exhibit C262

<sup>11</sup> Transcript, page 5661

<sup>12</sup> Now known as Section 83

<sup>13</sup> Transcript, page 5995



### **Mr Gary Bau**

Mr Bau was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 24 and 26 May 2006. Mr Bau is employed by the CFS as the Communications Coordinator and manages the CFS State Operations Centre<sup>14</sup>. The State Operations Centre receives all SitReps and monitors fires from all regions within the State. The Centre is also responsible for sending out any SigInc pages as required.

### **Mr Matthew Bawden**

Mr Bawden was represented by Mr Brian Austin and gave evidence on 14 August 2006. Mr Bawden is a farmer who lives at Butler Tanks. He is a member of the Port Neill CFS and had also previously been the Tumby Bay Group Training Officer<sup>15</sup>. Mr Bawden attended the fire on Monday evening on the Port Neill appliance and worked the Monday night shift initially in the Swampy Sector blacking out and later during that shift worked on the perimeter of the swamp in Mr Peter Cabot's property<sup>16</sup>.

### **Mr Glen Boucher**

Mr Boucher was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 9 August 2006. Mr Boucher is a charter operator and a member of the Wangary CFS. Mr Boucher worked on the Wangary 24 appliance during the Monday night shift in Lady Franklin Sector until 7:30am when they returned to Wanilla Hall. Mr Boucher attended the Wangary fire shed on Tuesday morning at about 9:50am after noticing smoke and met Mr Nettle and the Wangary appliance there. Mr Boucher drove the Wangary appliance back to the fire and fought the fires as they broke across Yorkies Gully Road<sup>17</sup>.

### **Mr Russell Branson**

Mr Branson was represented by the late Mr Terry McRae, Mr Graham Dart and Mr Brian Austin. He gave evidence on 16, 17, 18, 19, 22 and 23 May 2006 and 8 February 2007. Mr Branson owns a hardware store and has been a member of the CFS for over 40 years. At the time of the fire Mr Branson was Deputy Group Officer 3 of the Lower Eyre Peninsula CFS Group and was the Deputy Presiding Member of the CFS Board. He had previously been Captain of the Cummins CFS for many years<sup>18</sup>. Mr Branson had undertaken extensive training with the CFS including leadership and AIIMS courses and had performed Incident Management Team roles at numerous large fires. After becoming aware of the fire on the

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<sup>14</sup> Exhibit C228

<sup>15</sup> Exhibit C135

<sup>16</sup> Exhibit C135

<sup>17</sup> Exhibit C255

Monday, Mr Branson met the Group Officer Mr Chambers at Wanilla and accompanied him to the fireground. He remained with Mr Chambers in the command vehicle, undertaking the role of Operations Officer. He undertook a tour of the fireground in the early evening with Mr Lock. At around 8:30pm Mr Branson and Mr Lock were called back to the 'hayshed' from the fireground and subsequently travelled to Wanilla where the Incident Control Centre had been established. Mr Branson remained at Wanilla Hall and agreed to stay on as Operations Officer for the evening shift as he was unavailable to work on the Tuesday. Mr Branson went on another tour of the fireground early on Tuesday morning. Mr Branson returned to Wanilla around 6:30am and after briefing the new Incident Management Team left the fire.

### **Mr Nigel Breed**

Mr Breed was represented by Mr Brian Austin and gave evidence on 28 March 2006. Mr Breed is a farmer and a long serving member of Karkoo CFS. At the time of the fire he was a Lieutenant in that Brigade, having previously held the rank of Captain<sup>19</sup>. Mr Breed attended the fire on Monday afternoon as Officer in Charge of the Karkoo 24 appliance. They worked in the Swampy Sector putting in breaks and conducting a small backburn. Mr Breed re-attended the fire on Tuesday morning and fought the fire on Karkoo 24 when it broke away over Yorkies Gully Road.

### **Mr David Bryant**

Mr Bryant gave evidence on 7 February 2007. He is a tanker driver and has been a member of Lincoln CFS since 1983<sup>20</sup>. Mr Bryant was a member of the Lincoln appliance for the Monday night shift and worked initially in the Lady Franklin Sector and later in the swamp off Yorkies Gully Road in the vicinity of the hundred line<sup>21</sup>.

### **Mr Mervyn Buddle**

Mr Buddle gave evidence on 9 August 2006. Mr Buddle is a retired building contractor who lives at Coult. On Monday afternoon Mr Buddle was visiting his son-in-law Trevor Puckridge and drove down Lady Franklin Road on his way home at about 2:45pm<sup>22</sup>. Mr Buddle saw Mr Visic's vehicle parked on the western side of Lady Franklin Road.

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<sup>18</sup> Transcript, page 9935

<sup>19</sup> Transcript, page 6890

<sup>20</sup> Exhibit C329

<sup>21</sup> Exhibit C329

<sup>22</sup> Exhibit C71

### **Ms Cathy Burbidge**

Ms Burbidge was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. She gave evidence on 27 July 2006. Ms Burbidge is employed as an Operations Centre Officer in the CFS State Headquarters and has been for nine years<sup>23</sup>. Ms Burbidge was working in the State Coordination Centre from 8pm Monday evening to 8am Tuesday morning.

### **Mr Graeme Burton**

Mr Burton gave evidence on 26 February 2007. Mr Burton is a Consulting Engineer with Tonkin Engineering, he has worked for that company since 1973. Mr Burton has been working as a consulting automotive engineer since 1982. Mr Burton has a degree in Civil and Structural Engineering from the University of Adelaide and has also undertaken additional study in mechanical engineering<sup>24</sup>. Mr Burton has on a number of occasions given expert evidence into mechanical failures in motor vehicles. Mr Burton was requested by Counsel Assisting the Coroner to undertake an investigation into the configuration of Mr Visic's and several other mufflers. Mr Burton's report is Exhibit C332.

### **Mr Peter Cabot**

Mr Cabot was represented by Mr Peter Humphries and gave evidence on 7 and 8 February 2006. Mr Cabot is a retired farmer with a property in the Wangary district which was extensively affected by the fire. Mr Cabot had previously been a member of the CFS for eight years and has farm firefighting experience<sup>25</sup>. Mr Cabot returned to his property on Monday afternoon and saw the fire to the north west of his location. Mr Cabot observed the fire from his property that afternoon from various locations and decided at about 8:45pm to do a backburn to protect his property. On Tuesday morning Mr Cabot patrolled his property in his fire unit and he was in 'Area A' with the Wanilla appliance and two other farm units when the fire came out of the swamp on Tuesday morning<sup>26</sup>.

### **Mr Derek Carkle**

Mr Carkle gave evidence on 8 February 2007. Mr Carkle is a business manager and has been a member of the Lincoln CFS Brigade since 2004. Mr Carkle was a crew member on the Lincoln appliance for the Monday night shift and initially was involved in blacking out in the Lady Franklin Sector and later in the swamp off Yorkies Gully Road.

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<sup>23</sup> Transcript, page 14595

<sup>24</sup> Transcript, page 21220

<sup>25</sup> Transcript, page 3621

<sup>26</sup> Transcript, page 3668

### **Mr Geoffrey Carpenter**

Mr Carpenter gave evidence on 10 August 2006. Mr Carpenter is a retired weather observer at the Bureau of Meteorology. He has been a member of the CFS since 2001 assisting them by gathering local and marine weather observations and providing them to the Bureau of Meteorology to assist CFS with managing incidents<sup>27</sup>. Mr Carpenter attended Region 6 Headquarters on Tuesday morning and monitored the local weather conditions and provided that information to CFS and the Bureau of Meteorology throughout the day.

### **Mr James Casanova**

Mr Casanova gave evidence on 13 and 15 December 2005. Mr Casanova is a farmer and fencing contractor on the Lower Eyre Peninsula. At the time of the fire he was not a member of the CFS but had undertaken basic bushfire training when previously in the Air Force<sup>28</sup>. On the Monday afternoon Mr Casanova was driving a SAME Buffalo tractor with a bulldozer blade in the Duck Lake Road area and noticed the smoke from the fire. Mr Casanova attended the fire location and spent the afternoon putting in various breaks with his tractor on Christopher Hull's and Troy Siegert's properties in an attempt to stop the spread of fire<sup>29</sup>.

### **Mr Robert Chambers**

Mr Chambers was represented by Mr Geoff Britton and gave evidence on 31 May and 1, 2, 5, 6, 7, 8, 9 and 13 June 2006. Mr Chambers is a mechanic and at the time of the fire was the recently elected Group Officer of the Lower Eyre Peninsula CFS Group. Mr Chambers had been involved with CFS for about 20 years as a member of the Lincoln Brigade<sup>30</sup>. He had undertaken numerous training courses with the organisation including AIIMS, Sector Commander and leadership courses<sup>31</sup>. Mr Chambers became aware of the fire not long after it was reported to CFS on Monday afternoon. He arranged to meet Mr Branson at Wanilla and travelled to the fireground in his Group Command vehicle. On his arrival at the fireground Mr Chambers sought out Mr Nettle and asked him to assist them in managing the fire. From that point Mr Chambers was the Incident Controller of the fire. He remained in the vicinity of Mr Christopher Hull's property and the 'hayshed' which became the forward command point. Mr Chambers later accompanied Mr Maddern to Wanilla Hall after it was set up as the Incident Control Centre and remained there, leaving some time before midnight. Mr Chambers returned to Wanilla Hall on Tuesday morning and was Incident Controller for

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<sup>27</sup> Exhibit C256

<sup>28</sup> Exhibit C182

<sup>29</sup> Transcript, pages 1608 to 1609 and 1622

<sup>30</sup> Exhibit C229

<sup>31</sup> Transcript, page 11044

the Tuesday day shift, both at Wanilla Hall and later when the Incident Control Centre was moved to Wangary.

### **Mr Ian Charlton**

Mr Charlton gave evidence on 1 March 2006. Mr Charlton is a farmer who resides in the hundred of Butler. At the time of the fire Mr Charlton had been Deputy Group Officer of the Tumby Bay CFS Group for about eight years and had previously been a long serving Captain of Butler CFS<sup>32</sup>. Mr Charlton took over from Mr Russ on the Monday evening as Sector Commander of Swampy Sector. Mr Charlton remained in the vicinity of George Hull's property for the Monday night shift and had three appliances in his sector patrolling and blacking out<sup>33</sup>.

### **Superintendent Colin Cornish**

Superintendent Cornish gave evidence on 7 July 2006. Superintendent Cornish has been a member of the SA Police since 1974 and is the Officer in Charge of the Communications Branch<sup>34</sup>. He was the police project manager responsible for the introduction of the SA Government Radio Network (GRN) in 2002 which was the radio network utilised by CFS, SAPOL and other emergency agencies during this fire.

### **Mr Simon Cox**

Mr Cox was called at the request of Mr Neville Morcombe QC for Lumley General Insurance. He gave evidence on 5 and 6 September 2006. Mr Cox is a Forensic Consultant and holds a Degree in Secondary Metallurgy and is a Fellow of the Institution of Fire Engineers. At the time of giving evidence he had nearly completed a Master of Arts in Fire Investigation<sup>35</sup>. Mr Cox has extensive experience in the investigation of fires in motor vehicles on behalf of insurance companies. Mr Cox prepared a report on the likelihood of emissions from Mr Visic's exhaust system igniting vegetation and the temperatures and conditions required for such an event to occur<sup>36</sup>.

### **Mr Jonathon Cummings**

Mr Cummings gave evidence on 15 August 2006. Mr Cummings is a shearer and a member of the Port Neill CFS<sup>37</sup>. Mr Cummings attended the fire as the driver of the Port Neill

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<sup>32</sup> Transcript, page 5512

<sup>33</sup> Transcript, page 5520

<sup>34</sup> Exhibit C246

<sup>35</sup> Transcript, page 16341

<sup>36</sup> Exhibit C268

<sup>37</sup> Exhibit C263

appliance on the Monday evening and worked initially in the Swampy Sector and later adjacent to the swamp in Peter Cabot's property.

### **Mr Graeme Dahlitz**

Mr Dahlitz gave evidence on 11 August 2006. Mr Dahlitz is a farmer who lives at Cummins. He is not a member of the CFS but has been involved in fire suppression numerous times on a farm fire unit. Mr Dahlitz noticed smoke shortly after 3pm on Monday afternoon and attended the scene in a friend's farm fire unit. Mr Dahlitz was one of the first people on the scene of the fire and fought it in the paddocks on the eastern side of Lady Franklin Drive<sup>38</sup>.

### **Mr Peter Davis**

Mr Davis gave evidence on 16 August 2006. Mr Davis is the Mayor of Port Lincoln and has been in that position since 1995. He has lived on the Lower Eyre Peninsula for over 40 years<sup>39</sup>.

### **Mr Mark Dennis**

Mr Dennis was represented by Mr Sean Richter and gave evidence on 2 February 2006. He is a farmer from the Koppio area. At the time of the fire he was Captain of the Koppio Brigade and had been a member of the CFS for approximately 25 years<sup>40</sup>. The Koppio appliance attended the fire late on Monday afternoon with Mr Dennis as Captain. Mr Dennis and his Brigade participated in the 'Ackland backburn' on Monday evening. The appliance left the fireground at around midnight. Mr Dennis returned with the Koppio appliance to the fireground mid Tuesday morning and fought the fire coming out from the swamp into the paddocks of 'Area A'<sup>41</sup>.

### **Mr Mark Dickinson**

Mr Dickinson gave evidence on 23 November 2006. Mr Dickinson is a salesman and a member of the Cummins CFS Brigade. Mr Dickinson was a member of the Cummins appliance on the Tuesday day shift and was assigned to the Yorkies Crossing Sector. His appliance was one of the first to attend to the breakaways across Yorkies Gully Road on Tuesday morning.

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<sup>38</sup> Exhibit C258

<sup>39</sup> Exhibit C119

<sup>40</sup> Transcript, page 3273

<sup>41</sup> Transcript, page 3310

**Mr Peter Doudle**

Mr Doudle was represented by Mr Sean Richter and gave evidence on 8, 9, 12, 15 and 16 December 2005. Mr Doudle is Captain of the Coultas CFS Brigade and has nearly 40 years experience in the CFS<sup>42</sup>. Mr Doudle attended the fire on Monday afternoon as Captain of the Coultas appliance and participated in two small backburns on George and Les Hull's property early on Monday evening. Mr Doudle continued on as Captain of the Coultas appliance on the Monday night shift and was appointed Sector Commander of the Scrubby Sector. Following the fire Mr Doudle participated in several meetings with Government Minister's McEwen and Conlon and also the Chief Officer of the CFS Mr Ferguson. He also accompanied Minister Conlon, Mr Ferguson and Mr Gould on separate tours of the fireground.

**Mr Glen Doughty**

Mr Doughty was represented by Mr Brian Austin and gave evidence on 27 and 28 March 2006. Mr Doughty is a builder and Captain of North Shields CFS. He has been a member of the CFS for approximately 10 years<sup>43</sup>. Mr Doughty was Captain on the North Shields appliance on Monday afternoon and fought the fire along Duck Lake Road, participating in the Ackland backburn in the early evening.

**Mr Andrew Duggin**

Mr Duggin was represented by Mr Sean Richter and gave evidence on 29 January 2007. Mr Duggin is a wool classer and at the time of the fire was a member of the Wanilla CFS<sup>44</sup>. Mr Duggin attended the fire on Monday afternoon in a private vehicle and joined a CFS appliance at the fireground and fought the fire until going home at midnight. He reattended at Wanilla Hall on Tuesday morning and became a crew member on the Wanilla appliance for the day shift. The appliance was involved in fighting the fire on Mr Les Hull's and Mr Peter Cabot's properties that morning<sup>45</sup>.

**Mr Neil Ellis**

Mr Ellis was represented by Mr Mike Hayes and gave evidence on 18, 19, 20, 21 and 24 July 2006. Mr Ellis has been involved with the CFS since 1966 and joined the paid staff in 1979. At the time of the fire Mr Ellis was the Regional Commander of CFS Region 6 and had been in that position for 10 years<sup>46</sup>. Mr Ellis was extensively trained in incident management and the AIIMS system and had been involved in the management of several large campaign fires

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<sup>42</sup> Transcript, page 1246

<sup>43</sup> Transcript, page 3772

<sup>44</sup> Transcript, page 20783

<sup>45</sup> Exhibit C322

including the Tulka Fire in 2001. On Monday 10 January Mr Ellis was in Adelaide and was made aware of the fire by his Regional Duty Officer Mr Vogel, with whom Mr Ellis had several conversations about various aspects of the fire. Mr Ellis played no active role in the management of this fire until he flew back to Tumby Bay on the Tuesday at 3pm<sup>47</sup>.

### **Sergeant Peter Feltus**

Sergeant Feltus was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 31 July 2006. Sergeant Feltus is based at Port Lincoln Police Station and was the Shift Manager on the Monday when police were notified about the fire. Sergeant Feltus attended the fire scene and met up with the Incident Controller and established a forward command post at the hayshed. Sergeant Feltus remained at the hayshed and then later in the evening went to Wanilla Hall when that was established as the Incident Control Centre. He left the hall at 11pm Monday evening and recommenced work at midday on Tuesday assisting Senior Sergeant Swalue at Lincoln Command Base<sup>48</sup>.

### **Detective Sergeant George Fenwick**

Detective Sergeant Fenwick gave evidence on 22 September and 8 December 2006. Detective Sergeant Fenwick has been a member of the Criminal Investigation Branch at Port Lincoln since 2002<sup>49</sup>. Detective Fenwick undertook investigations into the fire which included interviewing relatives of the deceased and securing the locations of the deceased<sup>50</sup>. Detective Fenwick also interviewed Trevor Puckridge, Mr Russell (John) Giddings, Mrs Johanna Visic and Mr Marco Visic in relation to the causation of the fire. Detective Fenwick accompanied Mr Visic to Lady Franklin Road and videotaped Mr Visic outlining his movements on Monday 10 January 2005.

### **Mr Euan Ferguson**

Mr Ferguson was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 16, 17, 19, 20, 23, 24, 25, 26, 30 and 31 October; and 1, 2, 3 and 10 November 2006. Mr Ferguson is the Chief Officer and Chief Executive Officer of the CFS. He has been in that position since December 2001. Mr Ferguson has extensive experience in bushfire management having worked with the fire services in Victoria since 1985 holding various positions including that of Deputy Chief Officer and Regional Commander<sup>51</sup>. Mr Ferguson holds a Diploma of Forestry, Bachelor of Forest Science with Honours and a

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<sup>46</sup> Transcript, page 13868

<sup>47</sup> Exhibit C248

<sup>48</sup> Exhibit C143

<sup>49</sup> Exhibit C168

<sup>50</sup> Exhibit C168a



Masters in Business Administration. Mr Ferguson is the Chair of the National Aerial Firefighting Council and the Treasurer of the Australasian Fire Authorities Counsel<sup>52</sup>. Mr Ferguson was involved in the weather teleconference on the Monday afternoon at CFS State Headquarters and was made aware of the Wangary fire at that time<sup>53</sup>. Mr Ferguson also participated in a telephone conversation with Mr Vogel and Mr Miller on Tuesday morning where he was further updated on the progress of the fire. Following that he attended meetings with the CFS State Coordination Centre and then the State Emergency Operations Centre discussing the weather affecting the State and their levels of preparedness that day. Following the breakout of the fires Mr Ferguson was involved in the high level management of the incident in Adelaide.

### **Mr Graeme Fisher**

Mr Fisher was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 31 March 2006. Mr Fisher is a member of the Cummins CFS and at the time of the fire was the Captain. He attended the Cummins CFS Base on Tuesday morning and manned the station assisting with public enquiries about the fire. Later that afternoon he took over as Officer in Charge of the Cummins appliance and worked overnight in the Yallunda Flat area<sup>54</sup>.

### **Mr Ian Fisher**

Mr Fisher gave evidence on 30 and 31 August 2006. Mr Fisher is a Brevet Sergeant and a Fire Cause Investigator with the South Australian Police. He has been a member of the Forensic Services Branch of SAPOL since 1982 and has examined in excess of 1800 fire scenes<sup>55</sup>. Mr Fisher was a crime scene investigator at this fire and was involved in investigating the cause of the fire and in the recovery of the deceased.

### **Mr Brian Foster**

Mr Foster was represented by Mr Sean Richter and gave evidence on 16, 17, 18, 19, 20 and 23 January 2006. Mr Foster is a farmer from the Coultas district and has been a member of the CFS for nearly 40 years<sup>56</sup>. At the time of the fire he was the Administration Officer for the Coultas Brigade and also the Presiding Member of the Eyre Peninsula Natural Resource Management Board. On the Monday afternoon Mr Foster was in Adelaide and returned to Port Lincoln on the 6:15pm flight from which he could see the fire. Mr Foster went to his

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<sup>51</sup> Exhibit C280a, Page 5

<sup>52</sup> Exhibit C280, EF2

<sup>53</sup> Exhibit C280, Page 2

<sup>54</sup> Exhibit C218

<sup>55</sup> Exhibit C54

home and then straight to the fireground in his farm firefighting unit. He met up with Mr John Myers and toured the southern perimeter of the fireground. Mr Foster and Mr Myers went into Mr Peter Cabot's property and spoke to Mr Michael Treloar who was in the process of attempting a backburn into the swamp. Mr Foster had a telephone conversation with Mr Jerry Woodroffe at Lincoln Base shortly after that. Mr Foster met up with the Coultas appliance and became a crew member for the Monday night shift. Following the fire Mr Foster participated in the various meetings and fireground tours with Mr Doudle.

### **Mr Richard Franklin**

Mr Franklin was represented by Mr Sean Richter and gave evidence on 6 and 7 February 2006. Mr Franklin is a contract tanker driver living in North Shields and at the time of the fire he had been a member of North Shields CFS for two years<sup>57</sup>. Mr Franklin was the driver of the North Shields appliance for the Monday night shift and worked along Duck Lake Road blacking out overnight. Mr Franklin was driving his tanker on the Tuesday and was asked by a CFS officer to fill it with clean water and take it to the fireground to provide water to the appliances<sup>58</sup>.

### **Mr David Giddings**

Mr Giddings gave evidence on 24 November 2006. Mr Giddings is a farmer and the son of Mr Graham Giddings. Mr Giddings fought the fire on a private farm unit on Monday afternoon with his father on Christopher Hull's property. On Tuesday morning Mr Giddings returned to the fireground in a private farm unit and initially was at George Hull's property and on hearing that the fire had broken away, attended at Yorkies Crossing and helped protect Mr Nelligan's property<sup>59</sup>.

### **Mr Graham Giddings**

Mr Giddings gave evidence on 24 November 2006. Mr Giddings is a farmer and owns a property on Settlers Road called Beaumont that was affected by the fire on Tuesday. Mr Giddings fought the fire on a private farm unit on Monday afternoon in Mr Christopher Hull's property and on Tuesday morning was present in his private unit on Yorkies Gully Road when the fire started to break away.

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<sup>56</sup> Exhibit C183

<sup>57</sup> Transcript, page 3565

<sup>58</sup> Transcript, page 3587

<sup>59</sup> Exhibit C290

### **Mr Russell (John) Giddings**

Mr Giddings was represented by Mr Sean Richter and gave evidence on 30 November 2005. Mr Giddings owns a property to the north west of Duck Lake Road<sup>60</sup>. His property was affected by fire on the Monday. At the time of the fire Mr Giddings had over 30 years experience with the CFS and was a member of the Wangary Brigade. Mr Giddings was one of the first people to arrive at the fire on the Monday afternoon. He fought the fire in a private farm unit<sup>61</sup>.

### **Mrs Veronica Giddings**

Mrs Giddings was represented by Mr Sean Richter and gave evidence on 8 December 2005. Mrs Giddings is the wife of Russell (John) Giddings. She was contacted by her husband on the Monday afternoon and asked to ring the council and request a dozer to assist at the fireground<sup>62</sup>.

### **Mr Owen Glover**

Mr Glover was represented by Mr Morry Bailes and gave evidence on 17 and 18 July 2006. Mr Glover is a paid staff member of the CFS and at the time of the fire was the State Air Resources Coordinator (SARC). Mr Glover has over 30 years experience with the CFS, 20 of which have been as a staff member and he is a ranked a commander level 5<sup>63</sup>. Mr Glover is a nationally accredited AIIMS trainer and has conducted about 20 AIIMS training courses for the CFS<sup>64</sup>. As the SARC, Mr Glover was responsible for coordinating the deployment of aircraft for water bombing as required throughout the State.

### **Mr James Gould**

Mr Gould gave evidence on 25 November 2005, 3, 4 and 5 October 2006, 19 December 2006, 24 January and 12 April 2007. Mr Gould also participated in a site view on 23 and 24 November 2005. Mr Gould is a Bushfire Research Leader for the CSIRO. He obtained a Bachelor of Science in Forestry in 1978 from the University of Alberta, Canada and a Graduate Certificate in Biometrics from the Charles Sturt University in 1999. Mr Gould was employed by the CSIRO in 1982 and has been involved in the research of bushfires since that time. Mr Gould was involved in the investigation into the 1994 Sydney bushfires and assisted a colleague in their investigation into the 2003 Canberra bushfires. Mr Gould is a member of the Forest Fire Management Group and the Commonwealth Research Group No.

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<sup>60</sup> Transcript, page 553

<sup>61</sup> Transcript, page 559

<sup>62</sup> Transcript, page 1235

<sup>63</sup> Transcript, page 13666

6 which looks at fire research. Mr Gould has published many articles relating to bushfire behaviour and progression<sup>65</sup>. Mr Gould was retained by the State Coroner's Office and the CFS to undertake an expert investigation into the spread of the Wangary fire and provided several reports to this inquest. He visited the fire scene several times during the course of his investigation, including once with another expert witness Dr Kevin Tolhurst. Mr Gould also had access to all witness statements taken by the police and radio logs to assist in his investigation.

### **Mr David Hall**

Mr Hall was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 17 March and 21 November 2006. Mr Hall has worked for the District Council of Lower Eyre Peninsula for 23 years, initially as a plant operator and at the time of the fire was Area Supervisor<sup>66</sup>. Mr Hall had previous experience in providing plant support to bushfires. Mr Hall authorised council equipment to attend the fire after receiving an official request from the CFS, Mr Hall himself attended to supervise the operators. Mr Hall worked with Mr Ackland organising for bare earth breaks to be put in to allow backburning to occur off Duck Lake Road early on Monday evening. On the Tuesday morning Mr Hall and his operators reattended the fireground but were advised by the CFS Incident Management Team that their services weren't required so they left the area. Later that morning after hearing that the fire had broken out Mr Hall organised for his plant operators to return to the fire and assist where they could<sup>67</sup>.

### **Mr Anthony Head**

Mr Head gave evidence on 7 December 2005. Mr Head is a farmer who resides at Cockaleeche. He attended the fire on the Monday and Tuesday in a private farm unit<sup>68</sup>.

### **Mr Patrick Head**

Mr Head gave evidence on 5 December 2005. At the time of the fire Mr Head lived in Cummins and was not a member of the CFS. He was in business as a spraying contractor with the late Mr Trent Murnane<sup>69</sup>. Mr Head attended the fire on Monday early evening on a private unit and again on the Tuesday morning after hearing that the fire was getting away. Mr Head was at the Giddings property with Mr Murnane and the late Mr Richardson and left

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<sup>64</sup> Transcript, page 13669

<sup>65</sup> Exhibit C175

<sup>66</sup> Transcript, page 6046

<sup>67</sup> Transcript, page 6080

<sup>68</sup> Exhibit C180

<sup>69</sup> Transcript, page 897

the property with them in a convoy of vehicles which were caught in the fire whilst driving north along Settlers Road<sup>70</sup>.

### **Detective Sergeant Nicholas Hill**

Detective Sergeant Hill gave evidence on 22 September 2006. Detective Sergeant Hill is a member of the Criminal Investigation Branch in Adelaide. He travelled to Port Lincoln on 12 January 2005 and accompanied Detective Sergeant Fenwick in his enquiries in relation to the causation of the fire<sup>71</sup>.

### **Mr Brad Holliday**

Mr Holliday was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 30 March 2006. Mr Holliday is a builder's labourer and a 10 year member of the Tumby Bay CFS. At the time of the fire he was First Lieutenant of that Brigade. Mr Holliday was Officer in Charge of the Tumby Bay 34 appliance that went to the fireground on Monday afternoon as part of the Tumby Bay Strike Team. The appliance worked initially in the Swampy Sector and later off Duck Lake Road until leaving the fireground at 12:30am and returning to Tumby Bay. Mr Holliday and the crew returned to the fireground on Tuesday morning after the fire had broken away and were initially tasked to protect the Gidding's property on Settlers Road<sup>72</sup>.

### **Mr Ian Huckel**

Mr Huckel gave evidence on 20 November 2006 and also attended a site view on 22 November 2006. Mr Huckel is a grader operator for Aztec Services<sup>73</sup>. Mr Huckel attended the fire on Monday evening with his grader and put in breaks on the western side of Duck Lake Road and also on George Hull's property. Mr Huckel reattended the fire on Tuesday morning and put in breaks on properties south of the Murrumbidgee Conservation Park. He observed the fire enter the park later that morning.

### **Mr Christopher Hull**

Mr Hull was represented by Mr Sean Richter and gave evidence on 28 November 2005 and 8 February 2007. Mr Hull owns property that was affected by fire on both the Monday and

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<sup>70</sup> Transcript, pages 917 to 919

<sup>71</sup> Exhibit C55b

<sup>72</sup> Transcript, page 7146

<sup>73</sup> Exhibit C282

Tuesday. It was the hayshed on his property that was the initial CFS Incident Control Centre on the Monday afternoon<sup>74</sup>.

### **Mr George Hull**

Mr George Hull was represented by Mr Peter Humphries. He gave evidence on 27 and 30 January and 24 November 2006. Mr Hull is the joint owner of a property with his brother Les Hull which was extensively affected by the fire on the Monday and Tuesday. Mr Hull was a member of the CFS until 1993 and had over 25 years experience with the organisation<sup>75</sup>. Mr Hull fought the fire on Monday afternoon, evening and Tuesday in a private farm unit. Mr Hull witnessed fire flaring up in the swamp to the south of his property on Tuesday morning and witnessed it spreading across the paddocks in 'Area A' subsequent to that<sup>76</sup>.

### **Mr Leslie Hull**

Mr Hull was represented by Mr Peter Humphries. He gave evidence on 23, 24, 27 and 30 January and 11 August 2006. Mr Hull also participated in a site view on 25 January 2006. Mr Hull is a primary producer with a property he jointly owns with his brother Mr George Hull near Wangary. Mr Hull has been a member of the CFS 'on and off since the 1960's' and at the time of the fire was the Strategic Officer for the Wanilla CFS<sup>77</sup>. Mr Hull's property was directly affected by the fire on both the Monday and Tuesday. Mr Hull fought the fire on a private farm unit on the Monday afternoon and was successful in stopping it burning his home. Mr Hull was involved in the decision to undertake the backburn known as the 'Puckridge backburn' on Monday night on his property<sup>78</sup>. Mr Hull continued to work on flare-ups on his property on Monday night and during the Tuesday.

### **Mr Wayne Hull**

Mr Hull gave evidence on 1 February and 31 March 2006 and 23 March 2007. Mr Hull lives in Coffin Bay and is the uncle of Mr Christopher Hull. At the time of the fire he was not a member of the CFS but had previously been a member for some 22 years<sup>79</sup>. Mr Hull attended the fire in a private vehicle on the Monday and subsequently worked with his nephew Chris Hull that afternoon. Mr Hull returned to the fireground early on Tuesday

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<sup>74</sup> Exhibit C176

<sup>75</sup> Transcript, page 2771

<sup>76</sup> Transcript, page 2808

<sup>77</sup> Transcript, page 2560

<sup>78</sup> Transcript, pages 2597 and 2598

<sup>79</sup> Transcript, page 3164

morning and worked putting out spot fires in the vicinity of the ‘sugar gums’ and ‘Area D’. Mr Hull witnessed the fire break from the sugar gums later that morning<sup>80</sup>.

### **Mr Gary Johnson**

Mr Johnson was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 1 August 2006. Mr Johnson is an auxiliary member of the Port Lincoln CFS Brigade, prior to that he had been a volunteer with the same brigade. Mr Johnson was asked to assist with the fire on Monday evening and worked as a radio operator and scribe at the Wanilla Hall on Monday night monitoring GRN006. Mr Johnson helped with the shift of the ICC from Wanilla to Wangary on Tuesday morning and remained monitoring GRN006 at Wangary until 6:30pm Tuesday evening<sup>81</sup>.

### **Mr Ashley Joyce**

Mr Joyce was represented by Mr Sean Richter and gave evidence on 3 February 2006. Mr Joyce is a farmer from Kimba and at the time of the fire was the Captain of the Cootra CFS and had 15 years CFS experience<sup>82</sup>. Mr Joyce and his Brigade were asked to attend the fire on Tuesday afternoon and undertook a backburn to protect a farm property on Tuesday afternoon with the assistance of some farm units.

### **Mr Kym Kenny**

Mr Kenny gave evidence on 9 and 10 February and 17 August 2006. Mr Kenny is a farmer from Brenfen Lake and has been a member of CFS since 1987<sup>83</sup>. Mr Kenny had been Captain of the Kapinnie CFS since 1993. Mr Kenny contacted CFS late Monday afternoon to enquire whether they required additional crews and was asked to provide a crew for the Monday evening shift<sup>84</sup>. Mr Kenny was appointed Sector Commander of Lady Franklin Sector for that shift and worked with four appliances on the western side of Duck Lake Road<sup>85</sup>.

### **Mr Jeffrey Klitscher**

Mr Klitscher gave evidence on 30 August 2006. Mr Klitscher is a 30 year member of the South Australian Farmer’s Federation (SAFF) and a Past President of the organisation<sup>86</sup>. Mr

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<sup>80</sup> Transcript, page 3193 to 3195

<sup>81</sup> Exhibit C112

<sup>82</sup> Exhibit C98

<sup>83</sup> Transcript, pages 3836 and 3837

<sup>84</sup> Transcript, page 3843

<sup>85</sup> Transcript, pages 3852 and 3853

<sup>86</sup> Transcript, page 16023

Klitscher has been involved on a committee with the CFS and SAFF dealing with the use of farm fire units.

### **Mr Steven Konitzka**

Mr Konitzka gave evidence on 30 March 2006. Mr Konitzka is general manager of Aztec Services Pty Ltd, a construction company, and has previously been involved with supplying equipment such as graders and water carts to the CFS for large fires<sup>87</sup>. Mr Konitzka supplied the CFS with one water tanker on Monday afternoon and another after it was requested on Tuesday morning<sup>88</sup>. Mr Konitzka also supplied a grader and operator to assist with the cleanup effort after Tuesday's fire.

### **Mr Barrie Kotz**

Mr Kotz gave evidence on 7 February 2007. Mr Kotz is a motor mechanic and has been a member of the Port Lincoln CFS for 13 years<sup>89</sup>. Mr Kotz worked as a crew member on the Lincoln appliance during the Monday night shift. Mr Kotz initially worked with the appliance in the Lady Franklin Sector but was called back to Wanilla to assist in the repair of the Greenpatch appliance. Mr Kotz returned to the Lincoln appliance with Greenpatch, and worked in the swamp area off Yorkies Gully Road in the vicinity of the hundred line which formed the boundary between the properties of Mr Christopher Hull and Mr Peter Cabot.

### **Mr Andrew Lawson**

Mr Lawson was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 28 and 29 September 2006. Mr Lawson is the Deputy Chief Officer of the CFS and has been a member of the organisation since 1979<sup>90</sup>. Mr Lawson is also a qualified diesel mechanic. Mr Lawson worked for 18 years as a Regional Commander and has extensive experience in managing incidents at a regional level<sup>91</sup>. Mr Lawson did not have any direct involvement with the fire on 10 and 11 January but was appointed as the CFS Liaison Officer with the SAPOL team on 12 January 2005. Mr Lawson attended the Lower Eyre Peninsula Group meeting on 1 February 2005 and also took part in a tour of the fireground in March 2005.

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<sup>87</sup> Exhibit C217

<sup>88</sup> Exhibit C217

<sup>89</sup> Exhibit C330

<sup>90</sup> Exhibit C279a

<sup>91</sup> Transcript, page 17130



### **Mr David Lewis**

Mr Lewis gave evidence on 8 and 18 December 2006. Mr Lewis is a Technical Field Manager for Toyota Australia. He became a qualified motor mechanic in 1980 and has worked for Toyota since that time<sup>92</sup>. Mr Lewis was called to give evidence about the exhaust systems used in Toyota vehicles.

### **Mr Anthony Leyson**

Mr Leyson gave evidence on 21 March 2006. Mr Leyson owns Leyson Haulage and Earthmoving based at Coffin Bay. His company possesses an 8000 litre water truck which CFS had previously utilised during major incidents<sup>93</sup>. Mr Leyson was contacted by CFS on Monday afternoon and was asked to make his water tanker available, which he did. The tanker remained at the fireground until 9pm on Monday evening. The CFS contacted Mr Leyson again on Tuesday morning at 10:30am and requested that the water tanker return to the fireground and also that a loader attend, both of which he arranged<sup>94</sup>.

### **Senior Sergeant Phillip Linton**

Senior Sergeant Linton gave evidence on 8 December 2006. At the time of the fire, Senior Sergeant Linton was attached to the Major Crime Unit and was responsible for SAPOL's investigation into the Wangary bushfire.

### **Mr Jeffrey Lock**

Mr Lock was represented by Mr Sean Richter and gave evidence on 11, 12, 13, 24 and 26 April 2006. Mr Lock is a Correctional Services Officer and prior to that worked on a farming property for 20 years<sup>95</sup>. At the time of the fire he was a member of the Coultas CFS and had been with them since about 1985 and had served previously as Captain of that Brigade and was the Deputy Group Officer 2 for the Lower Eyre Peninsula CFS Group. Mr Lock had undertaken CFS Levels 1-3 training, Officer training, ICS and Leadership courses previously. Mr Lock attended the fire in his own vehicle on Monday afternoon and met up with the Incident Commander at the 'hayshed'. He subsequently undertook a tour of the fireground with Mr Russell Branson and allocated sectors and mapped the fire before returning to the hayshed when they were called back. Mr Lock accompanied Mr Shepperd to the Wanilla Hall Incident Control Centre and assisted with the preparation of a map of the fireground based on his tour. Mr Lock returned to Wanilla Hall on Tuesday morning, after organising

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<sup>92</sup> Transcript, page 20363

<sup>93</sup> Exhibit C123

<sup>94</sup> Exhibit C123

<sup>95</sup> Transcript, page 8003

for Wangary Hall to be made available as the Incident Control Centre. Following the move to Wangary Mr Lock then mapped the fire at the ICC based on information he received from Mr Shepperd and others.

### **Mr Anthony Luke**

Mr Luke gave evidence on 31 August and 4 September 2006. Mr Luke is a metallurgist and works for AMDEL Limited. Mr Luke obtained a Bachelor of Applied Science in Secondary Metallurgy from the South Australian Institute of Technology in 1980. He has previously provided expert reports and evidence in various states in relation to metallurgical investigations. He was requested by SAPOL to undertake an investigation into the condition of the exhaust system on Mr Marco Visic's car<sup>96</sup>.

### **Mr Robert Maddern**

Mr Maddern was represented by Mr Brian Austin and gave evidence on 26, 27 and 28 April; 1, 2, 3, 4, and 5 May; and 2 and 3 August 2006. Mr Maddern is a farmer and has been a member of the Yeelanna CFS for over 35 years<sup>97</sup>. At the time of the fire Mr Maddern was Deputy Group Officer 1 of the Lower Eyre Peninsula CFS Group, having recently resigned from the position of Group Officer which he had held for over 20 years<sup>98</sup>. Mr Maddern was also Chairman of the Lower Eyre Peninsula District Council Bushfire Prevention Committee<sup>99</sup>. Mr Maddern had undertake numerous training courses with the CFS including Levels 1-3, AIIMS and leadership courses. Mr Maddern had considerable experience in being a member of Incident Management Team's at fires and major incidents, including the Tulka bushfire in 2001. Mr Maddern was in Adelaide on Monday 10 January and after returning in the early evening he first attended Region 6 Headquarters, then Lincoln Base and then went out to Wanilla Hall. Mr Maddern then went out to the hayshed and accompanied the Incident Controller Mr Chambers back to Wanilla Hall. Mr Maddern remained at Wanilla Hall until about 1.00am Tuesday morning and returned at 7:00am and was the Planning Officer on the Incident Management Team for the Tuesday day shift.

### **Mr Samuel McCabe**

Mr McCabe gave evidence on 28 August and 6 September 2006. Mr McCabe is the General Manager and Pilot of Australian Maritime Services Pty Ltd. He has worked with the company for 18 years and has over 8,000 flying hours as a pilot<sup>100</sup>. Mr McCabe's company

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<sup>96</sup> Exhibit C173a

<sup>97</sup> Exhibit C224

<sup>98</sup> Transcript, page 8577

<sup>99</sup> Exhibit C224

<sup>100</sup> Transcript, page 15991

is contracted to provide water bombing aircraft for the CFS<sup>101</sup> and Mr McCabe has in the past undertaken many hours of bushfire suppression work in an aircraft.

### **Mr Philip McFarlane**

Mr McFarlane gave evidence on 29 January 2007. Mr McFarlane is a farmer and owns a property near the Wanilla Forest called 'The Fountain'. He has been a member of the Wanilla CFS for over 20 years. Mr McFarlane was a crew member on the Wanilla appliance for the day shift on Tuesday and initially was tasked to patrol around Mr Les Hull's property in Swampy Sector and after the fire broke out was tasked to Mr Peter Cabot's paddocks south of Warunda Road<sup>102</sup>.

### **Mr Desmond Mead**

Mr Mead was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 31 July 2006. Mr Mead is the Captain of Region 6 Operations and Logistics Support and has been involved with that Unit for over 15 years<sup>103</sup>. Mr Mead attended at Lincoln Base on Monday afternoon and was requested to take food out to the fireground. Mr Mead delivered the food to the 'hayshed' and then returned to Port Lincoln to get supplies to assist in the setting up of Wanilla Hall as an Incident Control Centre. After delivering them to Wanilla and setting up the fax machine at Wanilla CFS Station Mr Mead returned to Port Lincoln<sup>104</sup>.

### **Mr Paul Mickan**

Mr Mickan was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 16 March 2006. Mr Mickan is a plant operator for the District Council of Lower Eyre Peninsula, he has been with the Council for 17 years. Mr Mickan had previously been a member of the Yallunda Flat CFS<sup>105</sup>. Mr Mickan had previous experience as both a CFS member and in suppression work with heavy equipment at fires. Mr Mickan attended the fire on Monday afternoon on a 12H Cat Grader after being requested to by his supervisor. He participated in suppression work on Duck Lake Road until 8:30pm Monday evening and on the Tuesday he worked along Yorkies Gully Road and later at Edilillie<sup>106</sup>.

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<sup>101</sup> Transcript, page 15992

<sup>102</sup> Exhibit C324

<sup>103</sup> Exhibit C253

<sup>104</sup> Exhibit C253

<sup>105</sup> Exhibit C210

<sup>106</sup> Exhibit C210

### **Mr Branco Milic**

Mr Milic was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 16 August 2006. Mr Milic is the Manager of Development and Environmental Services for the City of Port Lincoln. At the time of the fire he worked for the District Council of Lower Eyre Peninsula as the Development Manager and Fire Prevention Officer<sup>107</sup>. In that position, Mr Milic was responsible for the implementation of the Council's Bushfire Prevention Plan and the issuing of Section 40 breach notices to landowners.

### **Mr Thomas Millard**

Mr Millard was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 30 March 2006. Mr Millard is a farmer and a member of the Mount Hope CFS. He attended the fire on Tuesday morning as Officer in Charge of the Mount Hope appliance and was initially tasked to the Lady Franklin Sector<sup>108</sup>. His appliance later pursued the fire after it had broken away.

### **Mr Leigh Miller**

Mr Miller was represented by Mr Nicholas Niarchos and gave evidence on 4 and 5 July 2006. Mr Miller is a paid staff member of the CFS and at the time of the fire was a Level 3 CFS Officer based at State Headquarters in Adelaide. Mr Miller has extensive training in AIIMS and has managed numerous emergency incidents throughout the State<sup>109</sup>. On Monday 10 January 2005 Mr Miller was the Deputy State Coordinator and was responsible for managing the State Coordination Centre and coordinating CFS responses to incidents at a state level. Mr Miller convened a weather teleconference with all regions on Monday afternoon to discuss the predicted weather for Tuesday 11 January and was advised of the fire during that discussion<sup>110</sup>. Mr Miller left State Headquarters' at approximately 7pm on Monday evening and returned at 7am Tuesday morning. Mr Miller participated in a telephone briefing with Mr Vogel and Mr Ferguson about the fire at 8am on Tuesday and continued to work as Deputy State Coordinator for the remainder of the day coordinating the state response to the fire which included approving phase warnings to be issued to the public.

### **Mr Leon Modra**

Mr Modra gave evidence on 30 and 31 January and 1 February 2006. Mr Modra is a farmer who lives at Karkoo. He has been a member of the CFS for approximately 30 years and at

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<sup>107</sup> Transcript, page 15782

<sup>108</sup> Transcript, page 7166

<sup>109</sup> Exhibit C245

<sup>110</sup> Transcript, page 13421

the time of the fire was the Administration Officer for the Karkoo Brigade<sup>111</sup>. Mr Modra attended the fire as Captain of the Karkoo appliance on the Monday night. The Karkoo appliance initially blacked out on George and Les Hull's property and was then directed to go and blackout the swamp in 'Area C' later in the night<sup>112</sup>.

### **Mr Mark Modra**

Mr Modra was represented by Mr Sean Richter and gave evidence on 2 March 2006. Mr Modra is a farmer with four different properties on the Lower Eyre Peninsula<sup>113</sup>. At the time of the fire Mr Modra was a Lieutenant with the Greenpatch CFS and had been a member for 18 years<sup>114</sup>. Mr Modra attended the fire on the Monday afternoon as a member on the Greenpatch appliance and fought the fire along Duck Lake Road. Mr Modra and his father observed the fire from their own plane on Tuesday and contacted farms that were directly in the fire path<sup>115</sup>. Mr Modra took a number of photographs of the fire which were tendered as Exhibit C207a.

### **Mr Bruce Morgan**

Mr Morgan was represented by Mr Sean Richter and gave evidence on 6 February 2006. Mr Morgan is a farmer and has been a member of the Coultas CFS for more than 20 years<sup>116</sup>. Mr Morgan attended the fire in a farm firefighting unit on Monday evening and obtained a loader to knock down some burning trees on the western side of Duck Lake Road. Mr Morgan returned to the fireground in his private unit early on Tuesday morning. He went to the 'Casanova break' and blacked out some burning logs in that area. Mr Morgan assumed responsibility as the driver of the Coultas appliance for the Tuesday and worked initially in the Swampy Sector near the Puckridge backburn and then in 'Area A' after the fire broke out<sup>117</sup>.

### **Mr Donald Morrison**

Mr Morrison was represented by Mr Peter Humphries and gave evidence on 6 December 2005. At the time of the fire Mr Morrison lived at Louth Bay. Mr Morrison's daughter was at their property when the fire went through on the Tuesday and suffered from smoke inhalation whilst fleeing the area<sup>118</sup>.

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<sup>111</sup> Transcript, page 2936

<sup>112</sup> Transcript, page 2942

<sup>113</sup> Transcript, page 5591

<sup>114</sup> Exhibit C207

<sup>115</sup> Exhibit C207

<sup>116</sup> Transcript, page 3447

<sup>117</sup> Transcript, pages 3470 and 3471

<sup>118</sup> Exhibit C75

### **Mr Arie Mulders**

Mr Mulders gave evidence on 23 November 2006. Mr Mulders is a member of the Kimba Group and at the time of the fire was the Group Administration Officer<sup>119</sup>. Mr Mulders worked as the Logistics Officer for the evening and night shift on Tuesday 11 January and arrived at Wangary Incident Control Centre at 5:25pm<sup>120</sup>.

### **Mr Raymond Murchison**

Mr Murchison gave evidence on 21 November 2006. Mr Murchison is a retired farmer and a member of the CFS for 35 years<sup>121</sup>. Mr Murchison attended the fireground on Tuesday morning in a private vehicle to warn people of the fire. He witnessed the fire breaking out from the swamp south of Warunda Road<sup>122</sup>.

### **Mr John Myers**

Mr Myers was represented by Mr Sean Richter and gave evidence on 21 February 2006. Mr Myers is a farmer and has been a member of the Coultas CFS for more than 35 years<sup>123</sup>. Mr Myers attended the fire on a private unit on the Monday evening and undertook a tour of the southern edge of the fireground with Mr Brian Foster. Mr Myers then became the driver on the Coultas appliance for the Monday night shift and worked firstly in the Scrubby Sector and later in the sugar gum area. Mr Myers was present when Mr Foster and Mr Treloar discussed implementing the Cabot backburn.

### **Mr Greg Napier**

Mr Napier was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 23 and 24 February 2006, 3 August 2006 and 8 February 2007. Mr Napier has been a member of the Port Lincoln CFS Brigade for over seven years and at the time of the fire was 3<sup>rd</sup> Lieutenant of the Brigade<sup>124</sup>. Mr Napier assisted CFS personnel at Lincoln Base on the Monday afternoon and on Monday evening attended the fireground as Officer in Charge of Lincoln 24 appliance. His appliance was tasked to the Lady Franklin Sector but then early on the Tuesday morning moved to work in the area of the hundred line following a discussion with Mr Christopher Hull.

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<sup>119</sup> Exhibit C287

<sup>120</sup> Exhibit C287

<sup>121</sup> Transcript, page 19859

<sup>122</sup> Transcript, page 19861

<sup>123</sup> Exhibit C200

<sup>124</sup> Transcript, page 201

### **Mr Shane Nelligan**

Mr Nelligan gave evidence on 23 November 2006. Mr Nelligan is a farmer with a property between Wanilla and Edilillie and is a member of Edilillie CFS<sup>125</sup>. Mr Nelligan attended the fireground in a private unit on Tuesday morning and undertook a tour of the south-eastern perimeter up to Mr Leslie Hull's house with Mr Jed Siegert. They returned to Yorkies Gully Road through Mr Peter Cabot's property and fought the fire along that road.

### **Mr Steven Nettle**

Mr Nettle was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 10 and 13 February 2006. At the time of the fire Mr Nettle had been involved with the Wangary CFS for nine years and had been Captain of that Brigade for five<sup>126</sup>. Mr Nettle attended the fire as Captain of the Wangary appliance on Monday afternoon and his was the first appliance to arrive at the scene<sup>127</sup>. Mr Nettle became the Incident Controller of the fire until he relinquished his role to Mr Robert Chambers after the latter arrived at the fireground. Mr Nettle was then asked to leave the Wangary appliance and stay with Mr Chambers in his command vehicle and later at the hayshed to assist him. Mr Nettle later went with the Incident Management Team to Wanilla after the Incident Control Centre had been set up on Monday evening. On Tuesday morning Mr Nettle attended at Wanilla Hall and was appointed Sector Commander of the Yorkies Crossing Sector<sup>128</sup>. He assisted with the relocation of the Incident Control Centre to Wangary by transporting equipment in the Wangary appliance.

### **Mr Gregory Packer**

Mr Packer gave evidence on 29 January 2007. Mr Packer is a farmer from Wanilla and has been involved with the CFS for over 15 years. Mr Packer was a member on the Wanilla appliance on Tuesday morning and was tasked initially to Mr Les Hull's property and later to Mr Peter Cabot's property to fight the breakout of fire<sup>129</sup>.

### **Mr Neville Parker**

Mr Parker was represented by Mr Sean Richter and gave evidence on 2 and 3 February 2006. Mr Parker is a farmer at Mount Greenly. He has been a member of the CFS since about 1980 and at the time of the fire was a Lieutenant of the Coultla Brigade<sup>130</sup>. Mr Parker attended the

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<sup>125</sup> Transcript, page 20013

<sup>126</sup> Transcript, page 4045

<sup>127</sup> Transcript, page 4049

<sup>128</sup> Exhibit C222d - Please note that this Sector may also be referred to as Yorkies Gully Sector in these Findings

<sup>129</sup> Exhibit C325

<sup>130</sup> Transcript, page 3347

fire on the Coultas appliance on the Monday afternoon and participated in small backburns around the houses on Messrs Les and George Hull's property. Mr Parker reattended the fire as Captain of the Coultas appliance on Tuesday morning and initially drove to the 'sugar gums' before being tasked to the Swampy Sector. Whilst in that sector Mr Parker and his crew initially patrolled the 'Puckridge backburn' before being tasked to attend the fire breakout in 'Area A'.

### **Mr Roger Pepworth**

Mr Pepworth was represented by Mr Andrew Harris QC and Mr David Greenwell. He gave evidence on 1 August 2006. Mr Pepworth is the Fire Prevention Officer for the Tumby Bay District Council and is also Captain of the Ungarra CFS Brigade<sup>131</sup>. Mr Pepworth attended Wanilla Hall at 11pm on Monday evening on the Ungarra appliance and relieved Tumby Bay 34. Mr Pepworth was appointed Sector Commander of the North-West Sector and his appliance patrolled that sector overnight blacking out. Mr Pepworth and the Ungarra appliance left the fire at about 9am and returned to their district<sup>132</sup>.

### **Mr Brenton Plane**

Mr Plane gave evidence on 14 August 2006. Mr Plane is a farmhand and works on the property of Mr Christopher Hull. Mr Plane had previously been a member of the Wangary CFS and at the time of the fire was an auxiliary member of that Brigade<sup>133</sup>. Mr Plane attended the fire on Monday afternoon in a private farm unit and fought the fire on Mr Hull's property until midnight<sup>134</sup>. Mr Plane returned to the fire early on Tuesday morning and worked in the sugar gum area wetting down hot spots before the fire broke away.

### **Ms Katrina Pobke**

Ms Pobke was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. She gave evidence on 4 April 2006. Ms Pobke is employed as a Project Officer with the Department of Environment and Heritage and is also a member of the Lincoln CFS Brigade. She has undertaken numerous CFS training courses, but at the time of the fire was not AIIMS trained<sup>135</sup>. Ms Pobke assisted at Lincoln Base on Monday afternoon before being asked to rest so that she could undertake a night shift. She later attended at Wanilla Hall and was asked to be the Logistics Officer for the night shift<sup>136</sup>. Ms Pobke and Ms Sonia Post set up the Ozzie Explorer program which Ms Pobke used to make several maps of the fireground

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<sup>131</sup> Transcript, page 14689

<sup>132</sup> Exhibit C94

<sup>133</sup> Exhibit C259

<sup>134</sup> Exhibit C259

<sup>135</sup> Exhibit C220



overnight. Ms Pobke also produced other documents as requested by the Incident Controller until completing her shift at 7am on Tuesday morning.

### **Mr Jeffery Poole**

Mr Poole gave evidence on 29 and 30 November 2005. At the time of the fire Mr Poole was a member of North Shields CFS and had 21 years CFS experience<sup>137</sup>. Mr Poole attended the fire as a crew member on the North Shields appliance on the Monday afternoon and returned as Officer in Charge of that appliance on the Tuesday morning<sup>138</sup>.

### **Mr Ross Pope**

Mr Pope was represented by Mr Sean Richter and gave evidence on 8, 20 and 21 February 2006. Mr Pope is a farmer with a property to the southeast of Wanilla. He has had some 23 years experience with the CFS and at the time of the fire was the Captain of the Wanilla Brigade<sup>139</sup>. Mr Pope and the Wanilla appliance were one of the first appliances to respond to the fire on the Monday afternoon. Later that afternoon Mr Pope was appointed Sector Commander of the North East Sector and he fought the fire on George and Les Hull's property for the remainder of his shift. On Tuesday morning Mr Pope returned to the fireground and was appointed Sector Commander of the Scrubby Sector. Mr Pope based himself at Les Hull's house and directed appliances throughout the sector and sent appliances into Area A after witnessing the fire break out of the swamp<sup>140</sup>.

### **Ms Sonia Post**

Ms Post was represented by Mr John Lister and gave evidence on 13, 14, 15, 16, 19, 20, 21 and 22 June 2006. At the time of the fire Ms Post was the regional training officer for CFS Region 6. She had been in that position for five years and had previously been a volunteer member of several CFS Brigades<sup>141</sup>. Ms Post had undertaken numerous training courses both as a CFS volunteer and staff member including the AIIMS course. Ms Post was working at Region 6 Headquarters' on Monday afternoon when CFS were first advised of the fire. She was asked by Mr Vogel to assist him in the Regional Coordination Centre and worked with him until she went to set up Wanilla Hall for the Incident Management Team at about 8:00pm<sup>142</sup>. Ms Post remained at Wanilla Hall until approximately 11:50pm. Ms Post

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<sup>136</sup> Exhibit C220

<sup>137</sup> Transcript, page 404

<sup>138</sup> Transcript, page 432

<sup>139</sup> Transcript, page 3784

<sup>140</sup> Transcript, pages 4757 to 4759

<sup>141</sup> Transcript, page 11911

<sup>142</sup> Exhibit C234

returned to Wanilla Hall on Tuesday morning and collected documentation before arriving at the Regional Coordinator Centre at 8:45am where she worked for the rest of the day<sup>143</sup>.

### **Mr Damien Puckridge**

Mr Puckridge was represented by Mr Sean Richter and gave evidence on 7 December 2005. At the time of the fire Mr Puckridge was Captain of the Edilillie Brigade and had several years experience with CFS<sup>144</sup>. Mr Puckridge attended the fire on Monday afternoon as Captain of the Edilillie appliance and was later that evening appointed Sector Commander of the Scrubby Sector<sup>145</sup>. Mr Puckridge undertook a backburn early on the Monday evening in that sector.

### **Mr Leslie (Wayne) Puckridge**

Mr Puckridge was represented by Mr Sean Richter and gave evidence on 30 November and 1 December 2005. Mr Puckridge owned property that was affected by the fire on Tuesday. At the time of the fire Mr Puckridge had 36 years experience with the CFS and was a member of the Edilillie Brigade<sup>146</sup>. Mr Puckridge attended the fire on the Monday afternoon and Tuesday on a private farm unit.

### **Mr Phillip Puckridge**

Mr Puckridge was represented by Mr Sean Richter and gave evidence on 1 and 2 December 2005. At the time of the fire Mr Puckridge was a member of the Coultla Brigade and had been with the CFS for 35 years<sup>147</sup>. Mr Puckridge attended the fire on Lady Franklin Road in a private farm unit on Monday afternoon and witnessed a motorist attempting to put out the fire on the side of the road<sup>148</sup>. He fought the fire on Monday afternoon in his private unit and attended the fire on Tuesday morning as a crew member on the Coultla appliance.

### **Mr Trevor Puckridge**

Mr Puckridge was represented by Mr Sean Richter and gave evidence on 22 and 23 February and 15 August 2006. Mr Puckridge is a farmer whose property was directly affected by the fire on both the Monday and Tuesday. On the Monday afternoon Mr Puckridge gave directions to Mr Marco Visic to a mine in the general vicinity of Lady Franklin Road<sup>149</sup>. At about 3:20pm Mr Puckridge noticed smoke south of his location and subsequently travelled

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<sup>143</sup> Transcript, page 12219

<sup>144</sup> Transcript, page 1070

<sup>145</sup> Exhibit C179

<sup>146</sup> Exhibit C68

<sup>147</sup> Exhibit C91

<sup>148</sup> Transcript, page 796

<sup>149</sup> Exhibit C50

to the fire which was on his property on the eastern side of Lady Franklin Road<sup>150</sup>. Mr Puckridge fought the fire on both the Monday and Tuesday in his private farm fire unit.

### **Mr Alan Rhodes**

Mr Rhodes gave evidence on 27 September 2006. Mr Rhodes has been a employee of the Country Fire Authority in Victoria since 1994 and holds a Bachelor of Education and Curriculum Development<sup>151</sup>. Mr Rhodes prepared a report into the preparedness of the community in relation to the Wangary fires entitled 'Householder Preparedness & Response in the Wangary Bushfire, Lower Eyre Peninsula South Australia 2005'<sup>152</sup>.

### **Mr Gary Riley**

Mr Riley gave evidence on 14 August 2006. Mr Riley is a farmhand and former member of the CFS. He attended the fire on Monday afternoon and worked on a private farm unit with Mr Brenton Plane. He participated in a minor backburn on Duck Lake Road in the vicinity of the sugar gums that afternoon and then obtained a tractor and water cart from a property at Farm Beach<sup>153</sup>. Mr Riley returned to the fireground with the machinery and left it at the hayshed on the Monday night. On Tuesday morning he returned to the fireground and remained in the vicinity of the sugar gums in a private unit before witnessing the fire jump across Yorkies Gully Road later that morning.

### **Mr Quentin Russ**

Mr Russ gave evidence on 15, 16 and 20 February 2006. Mr Russ is an electrical contractor and the Group Officer of the Tumby Bay CFS Group. Mr Russ has over 20 years experience with the CFS as a Captain and also as the Group Officer in charge of eight brigades<sup>154</sup>. He had been involved in numerous large incidents prior to this one, and had worked using the AIIMS system at major fires previously<sup>155</sup>. On the Monday afternoon Mr Russ was asked by CFS Region 6 to organise a strike team from his area. Mr Russ arranged for Koppio, Tumby Bay, Yallunda Flat and Lipson Brigades to attend and he attended in a group vehicle. This strike team arrived at George and Les Hull's property and attacked the fire at that location. Mr Russ was later appointed Sector Commander of that area, which was called the Swampy Sector. Mr Russ arranged for grader breaks and small backburns to be done in that sector early on Monday evening. Mr Russ was involved in the provision of another task force from his group on the Tuesday morning after the fire had broken away.

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<sup>150</sup> Transcript, page 4903

<sup>151</sup> Transcript, page 17060

<sup>152</sup> Exhibit C278

<sup>153</sup> Exhibit C260

### **Mr Peter Russell**

Mr Russell was represented by Mr Brian Austin and gave evidence on 27 March 2006. Mr Russell is a farmer and has been a member of the Greenpatch CFS for at least 15 years. At the time of the fire he was a Lieutenant of that Brigade<sup>156</sup>. Mr Russell was in charge of the Greenpatch appliance for the Monday night shift and worked in the Swampy Sector until 3am when their pump broke. After having the pump repaired Mr Russell and his crew were directed to work in the Yorkies Crossing Sector in the vicinity of the hundred line and worked there for the remainder of their shift<sup>157</sup>.

### **Mr Malcolm Schluter**

Mr Schluter gave evidence on 24 July 2006. Mr Schluter was a police officer for 43 years and at the time of the fire was Chief Inspector in charge of the West Coast Local Service Area<sup>158</sup>. Mr Schluter was made aware of the fire on Monday afternoon and went to Lincoln Base to get an update on the fire from CFS. He later attended at Region 6 Headquarters and then at the ICC at Wanilla Hall to obtain further information about the fire. On Tuesday morning Mr Schluter again attended Lincoln Base to obtain an update on the fire and following the fire breaking out he attended CFS Region 6 Headquarters.

### **Mr Geoffrey Schunke**

Mr Schunke was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 28 March 2006. Mr Schunke is a farmer and the Captain of Port Neill CFS. He has been a member of that Brigade for over 10 years<sup>159</sup>. Mr Schunke and his Brigade were paged to attend the fire on the Monday evening shift and worked, blacking out in the Swampy Sector for the entire shift<sup>160</sup>.

### **Mr Terence Secker**

Mr Secker gave evidence on 6 December 2005. Mr Secker has a farming property at Wanilla which was affected by the fire on the Tuesday<sup>161</sup>. At the time of the fire Mr Secker was a member of the Wanilla Brigade and had been involved with the CFS for about 45 years<sup>162</sup>. Mr Secker attended the fire on the Monday and Tuesday in a private farm unit. Mr Secker was involved in a backburn on Bratten Way on Tuesday evening.

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<sup>154</sup> Transcript, pages 4399 to 4401

<sup>155</sup> Transcript, page 4405

<sup>156</sup> Transcript, page 6699

<sup>157</sup> Exhibit C141

<sup>158</sup> Transcript, page 14235

<sup>159</sup> Exhibit C216

<sup>160</sup> Exhibit C216

<sup>161</sup> Exhibit C218

<sup>162</sup> Transcript, page 943

**Mr Adrian Sheppard**

Mr Sheppard was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 23 March 2007. Mr Sheppard is a retired motor mechanic and has been a member of the Cummins CFS for 30 years<sup>163</sup>. Mr Sheppard attended the fire on Tuesday morning as the driver of the Cummins CFS appliance and was tasked to the Yorkies Crossing Sector. Mr Sheppard patrolled the paddocks of Mr Peter Cabot's property before driving the appliance to a reported outbreak at the 'sugar gums'. His appliance was then advised of an outbreak from the Yorkies Crossing area and encountered the fire as it reached Yorkies Gully Road west of the hundred line<sup>164</sup>.

**Mr Grant Shepperd**

Mr Shepperd was represented by Mr Sean Richter and gave evidence on 4, 5, 6, 7, 10 and 11 April and 23 November 2006. Mr Shepperd also accompanied the court on a site view on 22 November 2006. Mr Shepperd is a Correctional Services Officer and prior to that worked on farming properties. Mr Shepperd has been a member of Wangary CFS since 1990 and held positions of Captain and also Deputy Group Officer during that time. Mr Shepperd has undertaken Level 1-3 CFS training, AIIMS and Incident Controller training courses<sup>165</sup>. Mr Shepperd had previously undertaken roles in an Incident Management Team at several large fires. Mr Shepperd first attended at Wanilla Hall at about 8:30pm on Monday night after finishing work. He subsequently drove Mr Maddern out to the Chris Hull's hayshed and then returned to Wanilla Hall with Mr Lock. He assisted Mr Lock and Ms Pobke plot a map of the fireground and then left the hall at around 10pm. On Tuesday morning Mr Shepperd returned to Wanilla and was appointed the Operations Officer for the day shift. He assisted in the movement of the Incident Control Centre from Wanilla to Wangary and after the fire broke was tasked to follow the fire and set up a forward control point. Mr Shepperd followed the fire for the rest of the day providing information back to the Incident Management Team at Wangary.

**Mr Adrian Simpson**

Mr Simpson was represented by Mr Brian Austin and gave evidence on 7 February 2007. Mr Simpson is a Project Officer and a 19 year member of the Greenpatch CFS. Mr Simpson was

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<sup>163</sup> Exhibit C334

<sup>164</sup> Transcript, page 21669

<sup>165</sup> Transcript, page 7540

a crew member on the Greenpatch appliance for the Monday night shift and worked initially in the Swampy Sector and later in the swamp to the north of Yorkies Gully Road<sup>166</sup>.

### **Dr Robert Smith**

Dr Smith gave evidence on 12, 13 and 18 October 2006. Dr Smith is a self-employed consultant with a background in forestry and risk assessment. He has a Master of Business Administration, Doctorate of Philosophy, Master of Science (Resource Economics) and a Bachelor of Science in Forestry. Dr Smith is a Director on the VicForests Board in Victoria and has previously worked as the Director General of the NSW Department of Land and Water Conservation<sup>167</sup>. Dr Smith has over 40 years experience working as a forester which has seen him involved in all aspects of bushfire management. He has held senior management debriefs into fires that have occurred in forestry land, including reporting to parliamentary committees and other coronial inquiries. At the time of giving his evidence, Dr Smith was part of a project group looking into technology that will allow a fire to be tracked in real time. Dr Smith was commissioned by the South Australian Minister for Emergency Services in May 2005 to provide a report into the management of the Wangary fire. Dr Smith undertook tours of the fireground, had access to CFS documentation and interviewed many people involved in the fire and produced the report 'Report of Independent Review of circumstances surrounding Eyre Peninsula Bushfire of 10<sup>th</sup> and 11<sup>th</sup> January 2005 (Wangary Bushfire) in September 2005<sup>168</sup>. Dr Smith spent a considerable period of time based in Port Lincoln meeting with people affected by the fire and was given access to CFS documentation relating to the fire.

### **Mr Kelvin Starke**

Mr Starke gave evidence on 21 and 23 November 2006. Mr Starke is a farmer with a property on the southern side of Yorkies Gully Road and is a member of Wanilla CFS. Mr Starke attended the fire on Monday afternoon in a private farm unit and worked on Mr Les Hull's property. On Tuesday morning Mr Starke attended the fire when he saw it flaring up and witnessed the fire burning on Yorkies Gully Road in the vicinity of the hundred line<sup>169</sup>.

### **Ms Krista St John**

Ms St John was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. She gave evidence on 26 July 2006. Ms St John is a Media Liaison Officer for the CFS. She attended

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<sup>166</sup> Exhibit C327

<sup>167</sup> Exhibit C185a

<sup>168</sup> Exhibit C278

<sup>169</sup> Exhibit C285

the weather teleconference at CFS Headquarters on Monday 10 January and was involved in the dissemination of information regarding the fire to the media<sup>170</sup>.

### **Mr Casey Stopetie**

Mr Stopetie gave evidence on 14 August 2006. Mr Stopetie has been a member of the CFS for seven years and at the time of the fire was a Lieutenant in the North Shields Brigade. Mr Stopetie worked as Officer in Charge of the North Shields appliance on the Monday night shift and his appliance worked in the Lady Franklin Sector blacking out. Mr Stopetie's home at White Flat was destroyed in the fire on Tuesday afternoon.

### **Mr Peter Story**

Mr Story gave evidence on 10 August 2006. Mr Story is the Service Manager at Alan Biggs Ford and Mitsubishi in Port Lincoln. Mr Story's business undertakes the servicing of Mr Merv Buddle's vehicle.

### **Senior Sergeant Hendrik Swalue**

Senior Sergeant Swalue gave evidence on 3 July 2006. Snr Sgt Swalue is a police officer with over 40 years experience and has been based at Port Lincoln since 1998<sup>171</sup>. Snr Sgt Swalue was advised of the fire on Monday afternoon by the CFS and was the Forward Commander of the incident. He sent patrol's out to the fire location on the Monday afternoon and on Tuesday directed police in their roles after the fire broke containment lines<sup>172</sup>.

### **Mr Jason Sweet**

Mr Sweet gave evidence on 7 February 2007. He is employed by SA Water and is a member of the Port Lincoln CFS Brigade. Mr Sweet was a member on the Port Lincoln appliance for the Monday night shift and initially worked in Lady Franklin Sector before going to work in the swamp north of Yorkies Gully Road<sup>173</sup>.

### **Mr Jeffrey Tiller**

Mr Tiller was represented by Mr Sean Richter and gave evidence on 29 January 2007. Mr Tiller is a diesel fitter and a member of the Wanilla CFS<sup>174</sup>. Mr Tiller attended the fire in his private vehicle on Monday afternoon and helped to protect Mr Les Hull's house from the fire.

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<sup>170</sup> Exhibit C251

<sup>171</sup> Exhibit C244

<sup>172</sup> Exhibit C244

<sup>173</sup> Exhibit C328

<sup>174</sup> Transcript, page 20799

He worked as a member on the Wanilla appliance on Tuesday morning on the properties of Messrs Hull and Mr Cabot.

### **Mr Joseph Tilley**

Mr Tilley was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 25 and 26 July and 17 August 2006. Mr Tilley is a Fire Management Officer with the Department of Environment and Heritage (DEH) in Port Lincoln. Mr Tilley has undertaken extensive training in the AIIMS system including an Operations Officer course in Victoria<sup>175</sup>. Mr Tilley has previously assisted CFS on Incident Management Team's at major fires including the Coffin Bay fire and the Tulka fire. The DEH has six 14 fire appliances throughout the Eyre Peninsula and on the Monday after being made aware of the fire Mr Tilley ensured that the three units based in Port Lincoln were available if required. Mr Tilley was contacted by CFS on Tuesday morning after the fire had broken away and asked to supply all available DEH appliances which he did. Mr Tilley later attended CFS Region 6 Headquarters and assisted Mr Vogel with managing the incident at that location.

### **Dr Kevin Tolhurst**

Dr Tolhurst was called at the request of Mr Paul Cuthbertson QC and Mr Michael Evans for the Minister. He gave evidence on 6, 7, 8 and 9 November 2006, 27 and 28 February, and 10, 11 and 12 April 2007. Dr Tolhurst is the Senior Lecturer in Fire Ecology Management at the University of Melbourne and has been involved in fighting and managing fires since 1974<sup>176</sup>. Dr Tolhurst holds a Diploma of Forestry, a Bachelor of Forest Science with Honours and was awarded a Doctor of Philosophy in 1996<sup>177</sup>. Dr Tolhurst is regarded as an expert in fire science and management and previously given expert in opinions in several major bushfires including the Linton fires in Victoria and the ACT bushfires in 2003. Dr Tolhurst was commissioned by the Crown Solicitor's Office to provide his opinion on the best options and practices available to CFS volunteers on the Monday night in terms of managing the fire and preventing its escape the following day. His report, entitled 'Report on the Fire Suppression Options at the Wangary Fire, Lower Eyre Peninsula, S.A. on Monday 10<sup>th</sup> January 2005' is Exhibit C281. Dr Tolhurst has provided to the Inquest several subsequent reports on various issues. He undertook several tours of the fireground including one with Mr Gould and had access to various witness statements and radio logs to assist him with his investigation.

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<sup>175</sup> Transcript, page 14311

<sup>176</sup> Transcript, page 19079

<sup>177</sup> Exhibit C281



### **Mr Michael Treloar**

Mr Treloar was represented by Mr David Howard and gave evidence on 16 August 2006. Mr Treloar is a farmer from Cummins and the son-in-law of Mr Peter Cabot. Mr Treloar attended the fire on Monday afternoon on his private farm unit and patrolled the paddocks in Mr Cabot's property. He participated in a backburn with Mr Cabot on his property and monitored that area until about 10:30pm. Mr Treloar returned to the area of the backburn on Tuesday morning and remained in this area until he noticed the fire had broken away in Mr Christopher Hull's and Mr Peter Cabot's properties.

### **Mr Bryan Trigg**

Mr Trigg gave evidence on 21 November 2006. Mr Trigg runs a rural merchandising business in Cleve and is the Group Officer of the Eastern Eyre Group, formerly known as the Cleve Group. He has been a member of the CFS since 1960 and Group Officer since 1990<sup>178</sup>. Mr Trigg has extensive experience as a member of Incident Management Teams at large fires. Mr Trigg offered assistance from his group on Monday night to Region 6 Headquarters but was advised that they were not required. On Tuesday morning he was contacted by Region 6 and asked to send a strike team to the area to assist with the fire. On Tuesday evening Mr Trigg was in charge of a backburn that took place along Bratten Way.

### **Senior Constable Stephen Tully**

Senior Constable Tully gave evidence on 19 and 21 September 2006. He is a police officer attached to the Physical Evidence Section of SAPOL since 2000 and has undertaken several training courses in relation to crime scene investigation<sup>179</sup>. Prior to becoming a police officer in 1984 Mr Tully worked as a motor mechanic<sup>180</sup>. Mr Tully attended the fire scene and was involved in the recovery of the deceased and also undertook an examination of Mr Visic's vehicle. Mr Tully examined the condition of the exhaust system and considered whether or not the escape of any gases from Mr Visic's exhaust system would be capable of igniting dry vegetation<sup>181</sup>.

### **Mr Darren Van Ek**

Mr Van Ek was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 7 September 2006. Mr Van Ek is an Operations Centre Officer with the CFS.

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<sup>178</sup> Transcript, page 19783

<sup>179</sup> Exhibit C66

<sup>180</sup> Transcript, page 16684

<sup>181</sup> Exhibit C66

He worked the day shift until 8pm on Monday 10 January in the State Coordination Centre and was responsible for paging the initial brigades that attended the incident<sup>182</sup>.

### **Mr Jonathon Van Ek**

Mr Van Ek was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 7 September 2006. Mr Van Ek is an Operations Centre Officer with the CFS. He worked the evening shift from 8pm on Monday evening. He worked with Ms Burbidge in the State Operations Centre.

### **Mr Terry Vigar**

Mr Vigar gave evidence on 29 March 2006. Mr Vigar is a council employee and formerly a farmer with over 35 years experience with the CFS. At the time of the fire he was a Lieutenant in the Cummins Brigade<sup>183</sup>. Mr Vigar attended the fire on Monday afternoon as Officer in Charge of the Cummins appliance and fought the fire along Duck Lake Road and in the North-West Sector. On Tuesday morning Mr Vigar was again in charge of the appliance and was tasked to the Yorkies Crossing Sector and responded to the initial breakaways of the fire<sup>184</sup>.

### **Mrs Johanna Visic**

Mrs Visic was represented by Mr Mark Semmens and gave evidence on 20 November 2006. Mrs Visic is the mother of Marco Visic and was called to give evidence in relation to conversations she had with her son and police about his movements on Monday 10 January 2005.

### **Mr Marco Visic**

Mr Visic was represented by Mr Sam Abbott and Mr Mark Semmens. He gave evidence on 7, 8 and 9 August and 27 November 2006. Mr Visic is a truck driver for Marco Transport and undertakes prospecting in his spare time. Mr Visic was present on Lady Franklin Drive on Monday afternoon looking for local mines in which to prospect. Mr Visic notified the emergency services after seeing the fire. He called 000 from the Wangary general store before returning to the fire scene and attempting to douse the fire with a towel and shovel<sup>185</sup>.

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<sup>182</sup> Transcript, page 16558

<sup>183</sup> Transcript, page 6987

<sup>184</sup> Exhibit C118

<sup>185</sup> Exhibit C32

### **Mr Simon Vogel**

Mr Vogel was represented by Mr Michael Sykes and gave evidence on 23, 26, 27, 28, 29 and 30 June 2006. At the time of the fire Mr Vogel was the Regional Prevention Officer for CFS Region 6 and was acting as the Regional Duty Officer. Mr Vogel had been a CFS volunteer since 1982 and joined the CFS paid staff in 2001. Mr Vogel had undertaken numerous training courses including AIIMS and CFS Officer Development<sup>186</sup>. On the Monday afternoon Mr Vogel activated the Regional Coordination Centre at Region 6 Headquarters after becoming aware of the fire. He paged the initial brigades to attend the fire and was responsible for providing State Headquarters with information about the fire's development. Mr Vogel remained at Region 6 headquarters until 1am on the Tuesday morning and returned at 7:30am. Mr Vogel was the Regional Duty Officer and in charge of the Regional Coordination Centre until handing over to the Regional Commander Mr Ellis at 8pm Tuesday evening<sup>187</sup>.

### **Mr Anthony Warren**

Mr Warren gave evidence on 20 and 21 March 2006. Mr Warren is a qualified commercial pilot and works for Eyreial Agricultural Services. He has held his pilot's license for around nine years. Mr Warren had previously undertaken water bombing activities at the Tulka fire and at various smaller fires on the Peninsula<sup>188</sup>. On the Monday evening Mr Warren flew over the fire in a Piper Brave aircraft in an attempt to help farmers by providing surveillance intelligence. Mr Warren at one stage spoke to Greenpatch CFS and gave assistance to them. His aircraft dumped a load of water on the fire they were attempting to control. Mr Warren also flew over the fire on Tuesday morning, taking off at about 11:45am. He again provided intelligence support and dropped several loads of water to protect properties<sup>189</sup>.

### **Mr Kevin Warren**

Mr Warren gave evidence on 22, 23 and 24 March 2006. Mr Warren is the Proprietor of Eyreial Agricultural Services which has six aircraft<sup>190</sup>. At the time of the fire Mr Warren did not have a formal water bombing contract with the CFS but had been utilised by the organisation on numerous occasions including at the Tulka fire<sup>191</sup>. Mr Warren was not directly involved with the fire on the Monday but on Tuesday morning he undertook aerial surveillance of the fire in his GlasAir 3 aircraft. He was also involved in warning people of

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<sup>186</sup> Exhibit C241

<sup>187</sup> Exhibit C241

<sup>188</sup> Exhibit C213

<sup>189</sup> Exhibit C213

<sup>190</sup> Transcript, page 6377

<sup>191</sup> Exhibit C214

the fires approach. Later that afternoon Mr Warren collected a water bombing aircraft and dropped numerous loads on locations affected by fire<sup>192</sup>.

### **Mrs Margaret Warren**

Mrs Warren gave evidence on 24 March 2006. Mrs Warren is married to Mr Kevin Warren and is a partner in the business Eyreial Agricultural Services<sup>193</sup>. Mrs Warren was in telephone contact with the CFS on both the Monday and Tuesday organising approval for their planes to undertake water bombing on the fire.

### **Mr Anthony Watkins**

Mr Watkins gave evidence on 22 March 2006. Mr Warren is the owner of AR Watkins Transport. He possesses two water tanker trucks as part of his fleet<sup>194</sup>. On Monday afternoon, Mr Watkins was contacted by CFS and asked to provide both tankers to the fireground. This was the first time Mr Watkins had been involved in fire fighting support. Mr Watkins also provided tanker support on the Tuesday and Wednesday of the fire<sup>195</sup>.

### **Mr Andrew Watson**

Mr Watson was represented by Mr David Williams and gave evidence on 21 and 22 September 2006. Mr Watson is employed at the Bureau of Meteorology and has been a weather forecaster for 28 years<sup>196</sup>. Mr Watson co-authored a report entitled 'Meteorological Report on the Wangary and Black Tuesday Fires Lower Eyre Peninsula, 10-11 January 2005'<sup>197</sup>, which examines the meteorological conditions that existed in the lead up and during the bushfire.

### **Ms Angela Whillas**

Ms Whillas was represented by Mr Brian Austin and Ms Margaret Kelly. She gave evidence on 8, 9, 10, 11, 29 and 30 May 2006. Ms Whillas is an employee of the Port Lincoln Council and at the time of the fire was the Captain of Greenpatch CFS. Ms Whillas had undertaken numerous training courses with the CFS including CFS Levels 1-3 and the AIIMS course<sup>198</sup>. Ms Whillas had experience in Incident Control systems at minor fires but had not undertaken an Incident Management Team role at any major incident prior to this fire. On the Monday afternoon Ms Whillas attended Lincoln Base and assisted Mr Woodrooffe in logistical

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<sup>192</sup> Exhibit C214

<sup>193</sup> Exhibit C215

<sup>194</sup> Exhibit C130

<sup>195</sup> Exhibit C130

<sup>196</sup> Transcript, page 16922

<sup>197</sup> Exhibit C221

<sup>198</sup> Transcript, page 9494

matters at the base. Ms Whillas attended Wanilla Hall at approximately 11:45pm and undertook the role of Incident Controller until 7am the following morning. Ms Whillas returned to the fireground around midday on the Tuesday and assisted Mr Shepperd and Mr Ackland in advising people of impending danger and later worked with two appliances to attack the fire at various locations<sup>199</sup>.

### **Mr Simon Whillas**

Mr Whillas was represented by Mr Brian Austin and gave evidence on 7 February 2007. Mr Whillas has been a member of the Greenpatch Brigade for over 15 years<sup>200</sup>. Mr Whillas attended at Wanilla Hall at 10pm on Monday night to work on the Greenpatch appliance for the overnight shift. His appliance worked initially in the Swampy Sector on Mr Les Hull's property and then after going back to Wanilla for some repairs, was tasked to Yorkies Gully Road to work blacking out in the swamp near the hundred line<sup>201</sup>.

### **Mr Craig Whisson**

Mr Whisson was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 26 July and 28 August 2006. Mr Whisson is the Executive Officer of the Native Vegetation Council in South Australia. He has been in that position since 2000. Mr Whisson gave evidence to the Inquest in relation to native vegetation and land clearance practices.

### **Mr Anthony White**

Mr White was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 27 and 28 February 2006. Mr White has been a member of the CFS for over 22 years and at the time of the fire was Captain of Port Lincoln CFS<sup>202</sup>. Mr White attended the Lincoln Base on Monday afternoon and assisted in a general gopher and logistics capacity. He delivered food to the Wanilla Hall late on Monday evening and on the Tuesday worked as Officer in Charge of the Lincoln 24 appliance when they were called out after the fire had broken away<sup>203</sup>.

### **Mr Peter Whittaker**

Mr Whittaker gave evidence on 24 February 2006. Mr Whittaker is a farmer at Edilillie and also share farms the property of Mr Peter Cabot. Mr Whittaker used a tractor and water cart

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<sup>199</sup> Exhibit C225

<sup>200</sup> Transcript, page 20959

<sup>201</sup> Exhibit C326

<sup>202</sup> Exhibit C103

<sup>203</sup> Exhibit C103

to fight the fire on Peter Cabot's and Christopher Hull's properties on both the Monday and Tuesday<sup>204</sup>.

### **Mr David Wilkins**

Mr Wilkins gave evidence on 27 July 2006. Mr Wilkins is a Fisheries Officer from Western Australia and is related to Mr Christopher Hull. At the time of the fire he was staying at Mr Hull's other property at Farm Beach. Mr Wilkins attended the fire on Monday afternoon and worked from a private farm unit on Mr Hull's Wangary property. Mr Wilkins also assisted at the fire on Tuesday morning after it had broken away.

### **Senior Sergeant Manfred Wojtasik**

Senior Sergeant Wojtasik gave evidence on 7 August 2006. He is a police prosecutor in the Criminal Justice Section of SAPOL with 27 years experience in that position<sup>205</sup>. Senior Sergeant Wojtasik was the prosecutor in the criminal proceedings involving an alleged breach of the Country Fire Acts by Mr Marco Visic.

### **Mr Gerald Woodroffe**

Mr Woodroffe was represented by Mr Paul Cuthbertson QC and Mr Michael Evans. He gave evidence on 3 April 2006. Mr Woodroffe has been a member of the CFS since 1974 and at the time of the fire was the main operator of the Lincoln CFS base and maintained the Lincoln Base logistics file<sup>206</sup>. He had undertaken numerous training courses including AIIMS and GRN over his years in CFS. Mr Woodroffe opened Lincoln Base after the initial notification of the fire and manned the base and the radios and undertook logistical duties until 2am Tuesday morning. He returned to the base at 7:30am on Tuesday morning and worked until 10pm that evening<sup>207</sup>.

### **Mr Hagen Zerk**

Mr Zerk gave evidence on 17 August 2006. Mr Zerk is a mechanic at Alan Biggs Ford. He has been a qualified mechanic for around 12 years<sup>208</sup>. Mr Zerk performed the mechanical work on Mr Buddle's car when it was serviced at the Alan Biggs dealership in 2004<sup>209</sup>.

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<sup>204</sup> Exhibit C202

<sup>205</sup> Transcript, page 15042

<sup>206</sup> Exhibit C219

<sup>207</sup> Exhibit C219

<sup>208</sup> Transcript, page 15910

<sup>209</sup> Transcript, page 15911

## **EXECUTIVE SUMMARY AND CONCLUSIONS**

1. Shortly after 3pm on Monday, 10 January 2005 a fire ignited in roadside vegetation on the eastern side of Lady Franklyn Road approximately 45 kilometres north-west of Port Lincoln on the Lower Eyre Peninsula.
2. A number of members of the public who resided or were working in locations approximate to the fire witnessed smoke rising from the Lady Franklyn Road location. One of those persons was a Mr Steven Nettle who resided at Wangary and who was at that time the Captain of the Wangary CFS Brigade. Mr Nettle telephoned the CFS at approximately 3:20pm to advise them of his sighting of smoke.
3. Mr Marco Visic a resident of Port Lincoln had, a little time before the smoke from the Wangary fire was detected, parked his Toyota diesel 4WD motor vehicle on the eastern side of Lady Franklyn Road. Mr Visic had alighted from his vehicle and walked into a paddock on the eastern side of Lady Franklyn Road to inspect a pile of rocks that had excited his attention. Mr Visic had been in the general area that afternoon prospecting with a metal detector.
4. At the time Mr Visic's vehicle was parked on the eastern side of Lady Franklyn Road, the weather conditions were hot and dry and there was a wind in existence. At the time Mr Visic's vehicle was situated on the eastern side of Lady Franklyn Road, there was no other activity of any kind at that location.
5. Mr Visic was to also advise the CFS of the existence of a fire on the eastern side of Lady Franklyn Road. He did this from a payphone at the Wangary Store at 3:29pm.
6. Mr Visic returned to the scene of the fire having made that call and encountered a Mr Thring and Mr Trevor Puckridge who had been engaged in shearing at Mr Puckridge's property further north on Lady Franklyn Road. Mr Visic made utterances at that stage from which it can be concluded that Mr Visic entertained the firm belief that his activities on the eastern side of Lady Franklyn Road had caused the ignition of the fire.
7. Having considered very carefully all of the evidence that has been adduced during the course of this Inquest as to the circumstances in which this fire started, I am firmly of the conclusion that the source of ignition for the fire on the eastern side of Lady Franklyn

Road was Mr Visic's Toyota vehicle. I am satisfied that a carbonaceous particle or particles of a sufficient size and temperature to ignite dry vegetation were emitted from the exhaust system of Mr Visic's vehicle. I am further satisfied that the carbonaceous particle or particles landed in dry vegetation at the side of Lady Franklyn Road and immediately, or virtually immediately, ignited that vegetation.

8. Mr Visic's exhaust system had a number of irregularities and defects that consisted of holes and imperfect joins in the system. Fitted to the Toyota vehicle was a muffler that was not a standard part for that vehicle. Compared to the standard muffler that would normally be fitted to a vehicle of that type, the non-standard after-market muffler had a lesser capacity to inhibit the passage of hot carbonaceous particles through it.
9. A hot carbonaceous particle of sufficient size could either have been emitted through the tail pipe of the vehicle having passed through the muffler, or been emitted through one of the defects in the exhaust system as a whole. I think it more probable that the hot carbonaceous particle that set fire to the vegetation on the eastern side of Lady Franklyn Road was emitted through the tail pipe having passed through the entire exhaust system including the after-market muffler.
10. After the fire was detected, a number of members of the public attended. These included farmers who had seen the smoke from a distance and who had travelled to the location in their farm firefighting appliances.
11. As well, a number of CFS appliances and their crews were despatched to the location.
12. The fire proved difficult to quell under the influence of a strong breeze. Valiant efforts were made to contain the fire during the course of the afternoon. Further CFS appliances were brought to bear on the problem. It became obvious fairly quickly that sourcing water in this general area was a problem.
13. A Mr James Casanova who had been approaching the scene along Duck Lake Road, also noticed the smoke. Mr Casanova was driving a SAME tractor with a square bulldozer blade. Mr Casanova attended at the fire scene and during the course of the afternoon cut a number of bare earth breaks in the trees at the junction of Duck Lake Road and Yorkies



Gully Road and in the stubble paddocks on the property to the north of Yorkies Gully Road.

14. The fire proceeded in a generally east or north-easterly direction throughout the course of the afternoon and it quickly ignited trees in a large stand of sugar gums at the junction of Duck Lake Road and Yorkies Gully Road. The fire that ignited the trees at that location proved very difficult to quell during the course of the rest of the daylight hours of Monday, 10 January 2005 and overnight. Continuous efforts were made by both farmers and CFS crews to contain the fire within the sugar gum stand.
15. At some time during the course of the Monday afternoon fire traversed the stubble paddocks in an easterly direction from Duck Lake Road across the properties of Christopher Hull and Mr Siegert into a paperbark swamp that was to the north of Yorkies Gully Road and to the west of Settlers Road. The swamp was situated on the property of Messrs George and Les Hull. This property was situated north of Warunda Road. The swamp crossed Warunda Road into the property of Mr Peter Cabot. Mr Cabot maintained stubble paddocks to the west of Settlers Road and to the north of Yorkies Gully Road. For the purposes of the Inquest, and for the purposes of my findings and summary, those paddocks have been referred to as Area A and Area C as depicted on aerial imagery of the location. Mr Cabot's homestead was situated in the north-western quadrant of the intersection of Settlers Road and Yorkies Gully Road. At the western extremity of Mr Cabot's property a hundred line formed the boundary with the property of Christopher Hull. The swamp continued to cut across Christopher Hull's property until it crossed Yorkies Gully Road at a culvert which was known as Yorkies Crossing.
16. The fire that burnt into the swamp penetrated it from its north-western side on the Monday afternoon and evening but did not come through to the south-eastern side.
17. Mr Robert Chambers was the recently elected Group Officer for the CFS Lower Eyre Peninsula Group. His Deputy Group Officers were Mr Robert Maddern, Mr Jeffrey Lock and Mr Russell Branson. Messrs Chambers and Branson attended the fireground on the Monday afternoon. Mr Chambers was in possession of one of the Lower Eyre Peninsula Group's CFS 4WD command vehicles. Ultimately Messrs Chambers and Branson were joined by other members of the CFS and a Forward Command Post was,

for the time being, established at a group of sheds on Christopher Hull's property north of Yorkies Gully Road. That area became known in the Inquest as Christopher Hull's hayshed. In due course Mr Jeffrey Lock, another Deputy Group Officer, attended the scene.

18. Messrs Branson and Lock attempted to circumnavigate the fireground in order to survey it, to identify its boundaries and for the purposes of sectorisation. It had become evident that the fireground was of a significant size and that it extended as far as the property of Messrs George and Les Hull to the north of Warunda Road. Messrs Branson and Lock did not complete their circumnavigation of the fireground because Mr Chambers demanded that they return the CFS command vehicle to the hayshed. It was evident from their circumnavigation of the fireground, albeit truncated, that significant fire had penetrated the paperbark swamp at locations to the west of Area A on Mr Cabot's property.
19. Fire had also penetrated the swamp north of Warunda Road into Messrs George and Les Hull's property and it had also penetrated the swamp in the location where it exists on the property of Christopher Hull.
20. Areas A and C on Mr Cabot's property and to a lesser extent on Christopher Hull's property largely remained unattended by firefighting resources during the course of the Monday afternoon and evening and overnight into the Tuesday morning. There was some firefighting activity conducted in the early hours of the morning in the swamp to the north of Area C and in the vicinity of the hundred line that divided Mr Cabot's property from Christopher Hull's.
21. Mr Chambers declared the fire contained at 8:54pm on the Monday evening. By then the unfavourable weather conditions for firefighting had abated. The fact that the fire was said to be contained carried no implication that the fire was extinguished. In fact the fire was still active in the sugar gums and in the swamp.
22. During the course of the afternoon on the Monday, volunteers at the CFS base at Port Lincoln (Lincoln Base) and paid staff of CFS Region 6 Headquarters situated in Port Lincoln were having difficulty in obtaining information from the fireground, particularly in relation to fire progression, location and size. Mr Simon Vogel was on that day the

Regional Duty Officer for Region 6. Ms Sonia Post, another CFS Regional Officer, was also on duty that day in Port Lincoln. The Regional Commander, Mr Neil Ellis, was in Adelaide attending a meeting at CFS State Headquarters. Attending the same meeting was Mr Robert Maddern, the Lower Eyre Peninsula Deputy Group Officer 1. Mr Maddern had left the second CFS command 4WD vehicle at the airport.

23. Mr Ellis remained in Adelaide overnight. Mr Maddern returned to Port Lincoln early on the Monday night and proceeded to Region 6 Headquarters. There he was asked by Mr Vogel to go to the fireground and seek information and ensure that a proper incident management structure had been put in place. At about the same time it was decided that the hall at Wanilla would be used as an Incident Control Centre. Also at around that time, initiatives were taken to engage a relief Incident Management Team to take over from Messrs Chambers and his colleagues later that night. A Ms Angela Whillas, who was the Greenpatch CFS Brigade Captain, was chosen as the Incident Controller for the overnight shift.
24. Ms Sonia Post and Mr Maddern travelled out to the Wanilla Hall. Ms Post set up the hall as an Incident Control Centre. Mr Maddern proceeded to Christopher Hull's hayshed where he advised those present, including Messrs Chambers, Lock and Branson and a number of police officers, that the Incident Management Team would be moving to Wanilla Hall.
25. Following that, Mr Maddern and the other gentlemen proceeded to the Wanilla Hall where an incident management structure was set up.
26. Meanwhile Mr Peter Cabot and his son-in-law, Mr Treloar, conducted a backburning operation on the edge of the swamp to the north of Area C.
27. Mr Cabot's backburn was conducted without the approval, assistance or knowledge of the CFS. Mr Cabot conducted the backburn because he believed that with the weather conditions forecast for the Tuesday morning the fire would come out of the swamp and proceed into the stubble paddocks to the south in Area C. Mr Cabot essentially wanted to eliminate as much flammable material at the edge of the swamp as he could. Mr Cabot did not conduct any backburning in Area A because of the presence of canola stubble on the edge of that swamp. Canola stubble is difficult to light but once alight is

very flammable. He also did not have the resources to manage a backburning operation on that section of his property.

28. The backburn that Mr Cabot conducted on the edge of the swamp at Area C penetrated the swamp. Mr Cabot and Mr Treloar believed that after they had conducted the backburn the fire that they had lit had been completely extinguished and that the area was safe.
29. Mr Cabot did not have any contact with the CFS on the Monday night.
30. The weather forecast for the Tuesday morning was very unfavourable for firefighting. The forecast was the subject of a CFS and Bureau of Meteorology joint teleconference on the Monday afternoon. At that teleconference the weather was described in terms that suggested that the Tuesday was going to be, for the whole of the State, a very difficult day for firefighting. Total fire bans for the whole of the State were put in place. A weather forecast obtained in relation to the fireground late on Monday afternoon suggested that there would be very high temperatures on the Tuesday and strong north-north-westerly winds in the morning. This would naturally prove problematic for firefighting, particularly in an existing fireground that had a south-eastern perimeter in relatively inaccessible swamp country. During the course of the night, the very unfavourable weather forecast was confirmed. The forecast suggested that there would be extreme conditions existing at 10am. Also predicted was a westerly change in the course of the late morning, early afternoon. That change would also not be favourable for firefighting and would put any person on the eastern flank of a running fire in great danger on the change of the wind.
31. At Wanilla Hall Mr Lock plotted the fireground on a map. It was clearly understood that there was fire in the swamp along its length from Warunda Road to the south-west.
32. At Wanilla Hall Mr Chambers articulated an Incident Action Plan that was not reduced to writing but which was that the fireground would be blacked out to a distance of 30 metres. This was subsequently altered to a distance of 60 metres at some point in time.
33. The fireground was sectorised into a number of sectors. The relevant sectors for the swamp were the Swampy Sector and the Yorkies Crossing Sector. The Swampy Sector

at first encompassed that part of the swamp north of Warunda Road on the property of Messrs George and Les Hull, but did not encompass Area A or the swamp to the west of Area A in Mr Cabot's property. The Yorkies Crossing Sector encompassed the fire perimeter north of Area C on Mr Cabot's property and on Christopher Hull's property. This meant that there was a gap in the sectorisation of the fireground which consisted of Area A and the swamp to the west of Area A. A Sector Commander was appointed for the Swampy Sector and a Sector Commander was not appointed for the Yorkies Crossing Sector. In due course the boundary of the Swampy Sector was extended to encompass Area A and the swamp to the west of it. However, this extension was not communicated to the Sector Commander either for the first shift or the second shift being the overnight shift.

34. When Mr Chambers devised the Incident Action Plan to black out, he had not examined the fireground.
35. No other containment measures for the south-eastern perimeter through the swamp were devised. Other than Mr Cabot's backburn there was no other backburning operation conducted on the south-eastern perimeter of the fire. Nor were any bare earth fire breaks created in the stubble paddocks to the east and south of the swamp, either in Mr Cabot's property or Christopher Hull's property.
36. No aerial firefighting resources were sought or organised for the Tuesday morning to guard against the eventuality that the fire might flare-up and break away from the swamp under the influence of the predicted strong north-north-westerly wind.
37. Neither Area A, nor the swamp to the west of Area A, were attended by the CFS during the course of the Monday night and Tuesday morning. It is to be inferred that one reason for that was the fact that the Sector Commander for that area was unaware of his responsibility in relation to it. In any event, no containment work was implemented in the paddocks of Area A nor in the swamp itself to the west of that area and that remained the position until a breakout of fire eventually occurred there on the Tuesday morning.
38. As far as Area C was concerned, no appliances attended in that location or the swamp to the north until about 3:30am on the Tuesday morning. Christopher Hull had requested the presence of an appliance in the vicinity of the hundred line. Blacking out work took

place there. Mr Branson also arranged for CFS attendance at the site where Mr Cabot had backburnt. The Karkoo appliance performed blacking out operations on the edge of the swamp at that location.

39. Without any other supporting containment measures and without detailed information as to the nature and accessibility of the terrain in the swamp, the plan to black out was a facile solution to a complex problem. The plan was flawed in its execution. No resources were applied to one of the most vulnerable areas (Area C) until the early hours of the Tuesday morning. In the other very vulnerable location (Area A), no resources were in place at all.
40. In addition, there was an imperfect assessment of risk at the time the Incident Action Plan was devised. It failed to take into account the very grave risks posed by the weather forecast for the Tuesday morning.
41. For some reason for which there is no clear explanation, Mr Chambers left the Wanilla Hall that night at a time before the oncoming Incident Controller, Ms Whillas, arrived. When Mr Chambers left Wanilla Hall this left the Incident Management Team without an Incident Controller for a substantial period of time. Mr Maddern, although a very experienced firefighter and incident manager, did not regard himself as a member of the Incident Management Team except in a minor capacity as a scribe. There was confusion as well about the role of Mr Lock.
42. Ms Post, a paid officer of the CFS, had been advised by Mr Vogel, the Regional Duty Officer, not to become involved in incident management issues. She therefore gained a very limited understanding of the situation as it applied to the fire and did not in any sense scrutinise or validate the Incident Management Team's plan of containment.
43. Ms Whillas, the Greenpatch Brigade Captain and incoming Incident Controller for the overnight shift, had participated in an incident management course in 2004. She had no experience in the management of an incident of this complexity. Her incident management experience was limited to incidents involving only a few appliances. To my mind Ms Whillas' appointment as the Incident Controller for the overnight shift on this large and complex fireground was not appropriate. Mr Branson continued in his role as the Operations Officer.

44. Ms Whillas remained at Wanilla Hall overnight. Her knowledge of the fireground was very limited. Any risk assessment that she performed was superficial.
45. Mr Branson proceeded out to the fireground where he made an inspection. In Area C he caused some appliances to conduct some work including that performed by the Karkoo appliance to which I have already referred. However, nothing was undertaken in Area A or to the west of Area A in the swamp.
46. However, much work was conducted overnight in relation to the sugar gum area that was still burning. A number of CFS appliances and farm appliances remained at that location throughout the night and blacking out and other firefighting activity took place there.
47. In the daylight hours of the Tuesday morning, a change of shift occurred and this involved the implementation of a new Incident Management Team. Mr Chambers returned as Incident Controller and Mr Maddern became the Planning Officer.
48. District Council of Lower Eyre Peninsula grader operators had left their plant and equipment at the fireground overnight. That equipment had been engaged in containment activity on the northern part of the fireground on the Monday. When the plant operators reported at Wanilla Hall on the Tuesday morning they were told their services were not required. This meant that no bare earth containment work was undertaken in the areas to the east and south of Areas A and C. I find that there was a clear opportunity for plant and equipment to have been used to create or attempt to create bare earth breaks in those locations.
49. Mr Simon Vogel had remained at Region 6 Headquarters until 1am on the Tuesday morning. Ms Post had remained at the Wanilla Hall also very late. Mr Vogel and Ms Post were back on duty early on the Tuesday morning. Ms Post travelled directly to Wanilla Hall. Mr Vogel commenced his duties at Region 6 Headquarters in Port Lincoln.
50. At 7:45am at Wanilla Hall, Mr Maddern declared that the fire was controlled. This declaration had occurred after a briefing that had been conducted by the outgoing Incident Controller, Ms Whillas, and by the outgoing Operations Officer, Mr Branson. The declaration that the fire was controlled was flawed. A declaration that a fire is

controlled by definition means that the fire perimeter of a fireground is secure and that no breakaways are expected. In my opinion there was no proper foundation for any assertion that the fire perimeter was secure or that no breakaways were expected. This is especially so given the severity of the weather forecast for the Tuesday morning, and the absence of any meaningful containment work to the east and south of the swamp. This meant that communities and assets to the south-east of the fireground were at risk. If that risk was appreciated by anyone on the Tuesday morning it was not articulated. In particular, the police were not alerted to that risk and no warning was given to members of the public. No measures were taken to alert possibly affected communities. Communities and individuals to the south-east of the fireground went about their daily business in ignorance of the risk. Exceptions to that state of affairs were residents very close to the fireground such as Mr Cabot, Messrs George and Les Hull and Mr Giddings who owned premises on Settlers Road known as Beaumont. This property and homestead was on the eastern side of Settlers Road and the east-south-east of Area A.

51. During the course of the Monday evening Mr Vogel had received information from the fireground via Lincoln Base. Mr Vogel had an incomplete picture as to the nature of the incident. He was taken by surprise when he learnt that the fireground had become magnified to an area of 1800 hectares with a south-eastern flank of several kilometres. Mr Vogel learnt of Mr Chambers' declaration that the fire was contained within a few minutes of the declaration. He took it at face value. Mr Vogel did not scrutinise or validate any plan that was put in place to secure the overnight fireground. Mr Vogel had forwarded information that he was receiving from time to time to CFS State Headquarters via facsimile. None of that information, including the revelation that the fireground was 1800 hectares, was actually passed on to anyone in authority at State Headquarters that night. The Deputy State Coordinator, Mr Miller, had not received any of the faxes nor any verbal communication. The last information he had was that the fireground was of about 40 hectares and would likely be contained overnight. He had received that information at the weather teleconference on the Monday afternoon.
52. It was not until approximately 11pm that anyone at State Headquarters gained an appreciation of the size of the fireground being 1800 hectares. As a result of that realisation, junior staff at State Headquarters caused a Significant Incident page to be



sent to senior CFS Officers including Mr Miller and the Chief Officer, Mr Ferguson. Mr Miller did not receive that page. Mr Ferguson received the page but believed Mr Miller would have received it and acted upon it.

53. If Mr Miller had received the necessary information as the fire incident was developing on the Monday night, it is very likely that steps would have been taken to address the incident at a State level. This may have resulted in important resources such as aerial water bombers being made available for the Tuesday morning. Those resources were never put in place. They were not available until well into the Tuesday after the fire had become uncontrollable.
54. On the Tuesday morning, the Incident Control Centre was moved from Wanilla Hall to the Wangary Sports Complex. This proved to be somewhat of a distraction. Mr Nettle was with the Incident Management Team. He was meant to be the Sector Commander for Yorkies Crossing Sector which incorporated Area C but had no knowledge of that. The Sector Commander for the Scrubby Sector did not know that he had responsibility for Area A.
55. No containment work was conducted on the Tuesday morning, nor were there any appliances placed in Area A in anticipation of possible breakouts. In Area C there was spasmodic attendance by CFS appliances.
56. At approximately 9:30am the weather started to deteriorate. It was hot and windy. There was a flare-up in the sugar gums that required the presence of a number of appliances.
57. At about 9:50am two farm firefighters in a utility, Messrs Andrew and Byass, observed fire creeping along the northern side of the swamp in a south-westerly direction towards the narrow part of the swamp on Christopher Hull's property. They witnessed the fire enter the swamp a quite narrow portion and then proceed across it. The fire then entered the paddocks to the south-east of the swamp where wheat stubble caught alight. Appliances and farm units that had been at the sugar gum area attending to the flare-up were brought into that area but the fire in Christopher Hull's paddocks could not be brought under control. At around that time fire also spread into the vegetation in the hundred line that divided Mr Cabot's property from that of Christopher Hull. Some

minutes later, fire emerged from the swamp to the east of the hundred line on Mr Cabot's property. At that location, a large amount of spotting from the swamp proceeded into the stubble paddocks. Ultimately, the fire from the narrow of the swamp, the fire at the hundred line and the fire in the paddocks to the east of the hundred line became uncontrollable. This was in spite of the very courageous efforts of CFS crew members and farmers. Fire that emanated from its various sources in Area C on Christopher Hull's and Mr Cabot's stubble paddocks spread uncontrolled in a south-easterly direction under a strong north-westerly wind. It proceeded across stubble paddocks to the south of Yorkies Gully Road towards the Murrumbidgee Conservation Park. The fire entered the park, traversed the park, crossed Settlers Road and made its way in a south-easterly direction towards the Wanilla Forest. By then the time was a little after 11:30am.

58. Mr Darren Borlase and his wife Natalie Borlase lived on Borlase Road which was just to the east of Wanilla Forest. Mr Borlase was in hospital in Port Lincoln at the time. Natalie Borlase went to work on the Tuesday morning. Her parents, Wayne and Judith Griffith, were visiting from Adelaide at that time and were looking after the Borlase children, Star and Jack. They were in the Borlase home on Borlase Road.
59. Mrs Griffith and the two children perished when they proceeded onto Borlase Road in a motor vehicle. Mr Griffith who was in a separate vehicle survived.
60. The fire that caused the deaths of Mrs Griffith and the Borlase children I find was sourced from Area C being the area encompassing both Mr Cabot's paddocks and Christopher Hull's paddocks to the south of the swamp.
61. At about 10:25am a large flare-up was seen to occur in the swamp to the west of Area A. When this was observed, CFS appliances were sent into Area A in an attempt to combat spotting that was emanating from the swamp. The courageous crews of those appliances unfortunately were not able to contend with the large amount of spotting and eventually a fire front emerged from the swamp that very nearly overwhelmed one of those crews. The fire spread unchecked in a south-easterly direction at first, fanned by a strong north-westerly wind. Sometime shortly after 11:30am, the wind at that location changed to a westerly. Messrs Murnane and Richardson had been at the Beaumont property on Settlers Road assisting other farmers to wet down assets at that property. Messrs

Murnane and Richardson perished when they proceeded in their farm firefighting utility from the Beaumont premises onto Settlers Road. The fire that overwhelmed them I find originated from the swamp in Area A.

62. During the course of the morning and early afternoon fire proceeded across the landscape of the Lower Eyre Peninsula in a westerly direction. The fire was in the main carried by stubble fuels.
63. Ultimately, the fire reached North Shields on the coast. It also reached Poonindie which is a settlement on the Lincoln Highway to the north of North Shields. The source of the fire that crossed the landscape was the fire that had emanated from Area C to the south of the swamp on the properties of Mr Christopher Hull and Mr Peter Cabot.
64. Mrs Helen Castle and her husband occupied a premises on the eastern side of Dorward Road at North Shields. Mr Castle was at work on the Monday. Mrs Castle was on holidays from her job as a school teacher and was at home. Mrs Castle perished in her home at North Shields when the premises was destroyed by fire.
65. Mr and Mrs Kay lived at Hirschausen Road at Poonindie with their two children Zoe Russell-Kay and Graham Russell. Mr Damian Kay that morning had flown to Adelaide for a medical appointment. This left Mrs Jody Kay and the two children at the Hirschausen Road house.
66. Mrs Kay and her children proceeded onto the Lincoln Highway at Poonindie in their car. The vehicle was overwhelmed by smoke and it struck trees off to the side of the highway.
67. As the fire approached Wanilla Forest and then across the Lower Eyre Peninsula landscape, the CFS issued a number of phase warnings advising residents in certain locations about the approach of the fire. The approach of the fire was very rapid. Many of the phase warnings were mis-timed and not particularly appropriate for the locations to which they were directed. There was no evidence that any of the persons who lost their lives were relying on the existence of, or accuracy or otherwise, of CFS phase warnings.
68. A new phase warning system has been implemented by the CFS since this incident. The question of public warnings in a bushfire setting is a difficult one. If the risk that had existed in the uncontrolled fire within the swamp had been identified, either on the

Monday night or on the Tuesday morning, there would have been a significant need for a public warning well in advance of any possible or anticipated breakout. There was a likelihood, if not inevitability, that the fire would break out of the swamp and once out of the swamp, would be uncontrollable. There was an inadequate appreciation of that risk on the Monday night or the Tuesday morning. A heightened level of vigilance by the members of CFS Incident Management Teams, and Region 6 Headquarters and State Headquarters personnel may have identified that risk. If this had taken place, it would have been impossible to justify withholding information about that risk from the general public. In those circumstances a warning would have been inevitable. In the event, the community to the south-east and east of the fireground were unaware of the risk of fire in many instances until it was too late.

69. As to the suggestion that nothing would have stopped that fire, or that nothing could have been done to prevent the fire from escaping from its fireground overnight, one has to view the matter with the disadvantage of hindsight. The fact of the matter was that no adequate measures were put in place or attempted which meant that opportunities to alter the outcome were not taken. Because the risk to the public was never properly addressed or appreciated, none of those measures were ever adequately considered. For the same reason no adequate warning was given.
70. In dealing with the performance of volunteer Incident Management Teams, and that of the individual members of those teams, it has to be borne steadily in mind that one can always find fault in a setting of such complexity. The temptation to criticise the minutiae of every decision that was taken by a group of individuals or by the individuals themselves is sometimes difficult to resist. Whilst one always strives for excellence, excellence is not to be equated with absolute perfection. This is especially so in my view when one considers that many of the individuals concerned, and who have been the subject of very strident criticism, were volunteers who bestowed their time and effort on this very complex problem with no thought for their own self promotion. It has to be also considered that if there had been a favourable outcome in this fire, it is unlikely that the members of the Incident Management Teams would have been accorded accolades in any sense proportionate to the criticism that they have had to endure.

## 1. **The cause of the fire on Monday 10 January 2005**

- 1.1. I deal in this section with the issue of causation of the fire on Monday, 10 January 2005 as distinct from the escalation of the fire on the Tuesday. It is necessary to approach the matter in this way because it has been suggested that ‘backburning’ that occurred on the Monday night was the substantial cause, if not the sole cause, of at least one of the breakout fires on the Tuesday morning, and in particular a breakout fire that is said to have accounted for the deaths of seven of the nine deceased, as well as having resulted in the swathe of destruction that occurred between Wangary and the east coast of the Lower Eyre Peninsula. I am referring here to the breakout said to have been caused by the so-called Cabot backburn, a complicated issue that requires separate evaluation. The analysis here is confined to the cause and point of origin of the fire on the Monday, which throughout these findings I will call the original fire.
- 1.2. For reasons that will become clear, I find that the general location of the origin of the Wangary fire on the Monday was a location on the eastern side of Lady Franklyn Road, north of the entrance to one of the properties owned by Trevor Puckridge. This general location is depicted in Exhibit C50f pictured below<sup>210</sup>.



<sup>210</sup> Please note that in all aerial imagery and mapping depicted in this report, north is to the top of the image or map

The precise location of the point of origin within that general location was a matter that was investigated during the course of the Inquest. The roadside vegetation on the eastern side of Lady Franklyn Road had been video-taped by police around midday on Wednesday 12 January 2005 after that stretch of vegetation had been burnt, but by the time more thorough police examination could be brought to bear on the location, the vegetation that remained on the eastern side of the road had been bulldozed. The bulldozed area ran from the northern side of Trevor Puckridge's gateway to a point approximately 185 metres north of that gateway. The roadside vegetation to the north of the dozed strip had been unaffected by the fire. I add at this point that in my view the possibility that the fire started in vegetation on the opposite or western side of Lady Franklyn Road can be discounted. The only evidence that pointed to this as a possible scenario was given by Shane Nelligan who gave the following evidence:

- 'A. To the west of Lady Franklin Road, yes, I would have thought from memory. It jumped Lady Franklin Road and got into some swampy sort of stuff in here (INDICATES). From the way I was seeing it.
- Q. Let me just suggest to you that we haven't been told of any fire to the west of Lady Franklin Road.
- A. Well, it can't have been then.
- Q. I'm glad we clarified that.
- A. It jumped Duck Lake Road here perhaps (INDICATES).
- Q. You better tell us what, if anything, you saw on the western side of Lady Franklin Road.
- A. I do remember the police were there, they had a short; wheel base grey Land Cruiser pulled up, I don't know whose they were, we didn't take any notice.
- Q. Did you see any evidence of fire on the western side of Lady Franklin Road at any stage.
- A. Look, I always thought I did but obviously there wasn't.
- Q. All you can tell us is what you recall of your observation be it consistent or otherwise with somebody else. But what do you recall you saw.
- A. I always thought it started on the western side of Lady Franklin Road.
- Q. What did you see that led you to that conclusion.
- A. Well, I thought there must have been a bit of a burnt patch on that western side, that would have led me to that impression.<sup>211</sup>

Mr Nelligan was quite vague in his assertions and they are unsupported by other evidence. No witness who observed the fire in its initial stages purported to see any

fire or smoke on the western side of the road. Importantly, Mr Gould, a Bushfire Research Leader for the CSIRO told me that there was nothing that he observed to the west of Lady Franklyn Road that suggested that the area was affected by fire. Mr Gould was retained by the State Coroner's Office and the CFS to undertake an expert investigation into the spread of the Wangary fire. The eastern side of Lady Franklyn Road was to form the western boundary of the entire Lower Eyre Peninsula fireground.

- 1.3. As no scientific evidence is available to establish the precise point of origin, the identification of that precise point is dependent upon an examination of the testimony of eyewitnesses who were present at the scene around the time of the commencement of the fire. Unfortunately no witness claims to have seen the fire actually start, or claims to have made any observation as to the precise mechanism or exact time of its ignition. The first identified person to have observed actual flame, as opposed to having observed smoke from a distance, was Marco Visic. Notwithstanding this lack of eyewitness and scientific evidence, in my view it can be established that the fire originated in the roadside vegetation on the eastern side of Lady Franklyn Road at a point between the gate to Trevor Puckridge's property and a point 120 metres to the north of the gate. In this Finding I will explain why that is so.
- 1.4. Mr Marco Visic, aged 41 years, is a truck driver and was at all material times a resident of Port Lincoln. Mr Visic was called to give evidence in the Inquest. He was also invited to attend various locations with the Court, including the location on the eastern side of Lady Franklyn Road where generally the fire is said to have started. Mr Visic was also interviewed by the police on videotape at that same scene during the afternoon of Thursday, 13 January 2005. The videotape is Exhibit C32d and a transcript of the interview is Exhibit C168b. In addition, a police declaration, being a formal written statement, was taken by the police from Mr Visic that same afternoon. The declaration is Exhibit C32.
- 1.5. The activities of Mr Visic on the afternoon of Monday, 10 January 2005, in so far as they relate to Lady Franklyn Road, have been heavily scrutinised since that day. The suggestion is that his activities that afternoon were the catalyst for the entire inferno. In particular, it has been suggested that the vehicle that Mr Visic had been driving during that afternoon started the fire through its exhaust system. However, whether

his vehicle started the fire or not, I make it plain there is no evidence, nor indeed suggestion, that Mr Visic deliberately started the fire.

1.6. The suggestion that Mr Visic's activities had some connection with the commencement of the fire emanates from a number of circumstances. Firstly, there is little doubt that Mr Visic was in the vicinity of the point of origin of the fire at a time when it conceivably started. Secondly, it has been contended that the state of his vehicle's exhaust system was such that it could have set fire to vegetation on the side of Lady Franklyn Road. Thirdly, it is contended that there is no credible evidence of any other possible cause of the fire. In this regard, it is among other things argued that if there had been some other cause unconnected with Mr Visic's activities, and given Mr Visic's proximity to the fire's origin in terms of time and place, Mr Visic himself would have been able to shed light on that other cause. The fact that he does not, it is said, means only one thing and that is that it was his own activity that started the fire and he knew it at the time. I shall evaluate those contentions in the course of this analysis of the evidence.

1.7. I add here that no-one has suggested that I could positively find on a balance of probabilities any other identifiable cause of the fire, although some entities have urged me to consider alternative possible causes that might cast doubt upon or otherwise undermine the contention that Mr Visic's vehicle started the fire. I will deal with what Mr Visic said to the police and with what he said in evidence at the Inquest. However, I deal firstly with relevant observations made about the fire by others.

1.8. Events leading to the discovery of the fire

On the afternoon of Monday, 10 January 2005 Trevor Puckridge and two other men, Steven Thring and Patrick Camilleri, were involved in the shearing of Mr Puckridge's sheep at a shearing shed on his property near Marble Range. The entrance to the property was on the western side of Lady Franklyn Road, approximately 5 kilometres north of the junction with Duck Lake Road. These three men each gave statements to the police<sup>212</sup>. Mr Puckridge also gave oral evidence in the Inquest. During the afternoon of that day, a man not previously known to them but who introduced himself to them as Marco, approached them at the shearing shed. This man was Mr Marco Visic. Mr Visic asked the men about the location of an old gold mine thought



to have been in the vicinity. There is some divergence in the evidence between Mr Puckridge on the one hand and Mr Visic on the other about precisely what was said between them. However, it is common ground that Mr Puckridge gave him directions to an old gold mine known as the Lady Franklyn Mine which had been situated on land to the south of Mr Puckridge's property and to the west of Lady Franklyn Road. What is disputed is whether Mr Puckridge also directed Mr Visic to another site of interest on another tract of land owned by Mr Puckridge that was on the eastern side of Lady Franklyn Road. Mr Visic has at all times maintained that Mr Puckridge had given him additional directions to this other site referred to as the Moonlight Mine and had specifically directed him to a pile of scattered rocks on the eastern side of Lady Franklyn Road. Mr Puckridge denies that he gave Mr Visic any such additional directions, adding that he would not have given directions to a location on land belonging to him in view of the fire risks that might be engendered by the hot weather. It has to be observed, however, that Mr Puckridge did not seem to have any hesitation in directing Mr Visic to the Lady Franklyn Mine which was also situated on private property, albeit not his. As it was to transpire, the fire in my view originated on the eastern side of Lady Franklyn Road and then spread into a paddock in which such a rock pile exists. As will be seen, there is no doubt that Mr Visic stopped his vehicle at one stage on the side of the road somewhere in the vicinity of the rock pile paddock and made his way on foot into that paddock to inspect the rock pile. Whether he did so as a result of specific directions from Mr Puckridge or whether he did so having independently seen the rock pile from the side of Lady Franklyn Road, in my view, does not matter. The rock pile was only 20 metres<sup>213</sup> from the side of the road and although roadside vegetation may have obscured it from the gaze of passing motorists to a certain degree, there is nothing to suggest that it was completely invisible to motorists. The rock pile can be seen in Exhibit C50f.

- 1.9. Mr Puckridge put the time of Mr Visic's visit at about 2:30pm. He states that Mr Visic stayed for between 2 and 5 minutes. 'Smoko' took place at 3pm sharp and Mr Puckridge stated in evidence that he first saw the smoke of the Wangary fire at about 3:20pm<sup>214</sup>. In his witness statement he states that he first saw the smoke 'about 20-25 minutes past 3pm, when Pat (Camilleri) noticed smoke coming up above the trees'<sup>215</sup>. Mr Thring in his statement places the time of Mr Visic's visit as about 11am. This is

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<sup>212</sup> Puckridge - Exhibit C50 and C50a, Thring - Exhibit C72 and Camilleri - Exhibit C102

<sup>213</sup> Transcript, page 15585

<sup>214</sup> Transcript, page 4902

clearly incorrect as there is no suggestion that Mr Visic was in the vicinity at that time. Mr Thring states that smoke was observed at about 3:30pm after they had just finished smoko. Mr Camilleri says he noticed what he thought was dust in the air, but which turned out to be smoke, at 3:12pm. How he claims to be so precise in that time is unclear. The CFS was notified for the first time by the Captain of the Wangary Brigade, Mr Nettle, who had sighted the smoke from Coffin Bay at 3:15pm, and as a result contacted the CFS Regional Office at Port Lincoln. The time of his call is recorded as 3:20pm<sup>216</sup>. There were other sightings of smoke by other people and various times were given. Mr James Casanova, who witnessed smoke as he drove his SAME tractor north along Duck Lake Road, stated that he saw smoke for the first time at about 3:15pm. Mr Graham Dahlitz, who was one of the first persons to attend the scene and start fighting the fire, said that he observed the smoke at about 3:10pm when leaving Dutton Bay. He states that he arrived at the scene at 3:20pm. At that time there were no other persons present, except that he saw a tractor being operated near the corner of Lady Franklyn Road and Duck Lake Road<sup>217</sup>. Given that no-one who gave evidence before me or who provided a statement to the police claims to have actually seen the fire start, there is no direct evidence as to the exact time and precise location of the commencement of the fire. However it can, in my view, be concluded that the fire started some time between Mr Visic's visit to Trevor Puckridge's farm and 3:20pm when the CFS first received notification of the existence of the fire. No-one claims to have sighted smoke before 3:10pm, and certainly not before or during Mr Visic's attendance at the Puckridge shearing shed.

- 1.10. Mr Mervyn Buddle was another man who had been present at the Puckridge farm on the Monday afternoon. Mr Buddle is a resident of Coultas which is on the Flinders Highway some 19 kilometres north of Wangary. Mr Buddle is Mr Puckridge's father-in-law. He did not see Mr Visic at the shearing shed because he was at all times at the farmhouse with his daughter. Mr Buddle told me that he left the farm just after 2:30pm. He did so in order to get out of his daughter's way as she was preparing the smoko refreshments. He was able to fix this time by reference to the almost religiously observed 3pm smoko. Having left the property, he travelled south along Lady Franklyn Road towards the Duck Lake Road junction and at about 2:45pm saw

<sup>215</sup> Exhibit C50, page 2

<sup>216</sup> Although a time of 3:20pm has been noted, Exhibit C222l, page 69, recorded Mr Nettle's radio transmission as having taken place at 1452 hours on 10 January 2005. It should be noted that all of the radio transmission and telephone communication times quoted in C222l require 28 minutes to be added so that 1452 hours becomes 1520 hours. This error occurred during dubbing of the transmissions in order for them to be transcribed.

a white Toyota 'station wagon style four wheel drive vehicle' parked on the western side of Lady Franklyn Road. This vehicle was that belonging to Mr Visic, and it was situated where Mr Visic had parked it before he had entered the paddocks to look for the Lady Franklyn Mine. At the time Mr Buddle was driving along that stretch of Lady Franklyn Road, there was no fire to be seen. Mr Buddle rejected the possibility that he was on that section of Lady Franklyn Road as late as after 3pm. I accept his evidence on that. Mr Buddle had an identifiable point of reference for time, namely the 3pm smoko, and I can accept his recollections as to times for that reason. It is clear that Mr Buddle observed Mr Visic's vehicle at a time before Mr Visic was to park his vehicle on the eastern side of Lady Franklyn Road. It is also clear that Mr Buddle travelled along this section of Lady Franklyn Road a significant period of time before any evidence of the fire, be it flame or smoke, was sighted. I will return to the involvement of Mr Buddle later, as it has been hypothesised by some, erroneously in my view, that Mr Buddle's vehicle was one possible source of ignition for the fire.

- 1.11. The first identified person to have actually seen the fire was Mr Visic. The circumstances in which he came to see the fire for the first time were the subject of much discussion and debate in the Inquest. The subject of controversy was whether Mr Visic has been entirely frank when he states that he did not know of the fire's existence until he saw its smoke from a position on the Flinders Highway, some 6 kilometres to the south, or whether, as has been contended, he was well aware of the fire at the time he left the Lady Franklyn Road area where it undoubtedly started.
- 1.12. The police spoke to Mr Visic on Thursday, 13 January 2005. He had been out of the district on an interstate haulage trip since the Tuesday morning and had returned at about lunchtime on the Thursday. During that afternoon, Detective Senior Constable George Fenwick and Detective Senior Constable Nicholas Hill of SAPOL took Mr Visic and his father to the Lady Franklyn Road location where they questioned Mr Visic about his activities on the Monday of that week. In this interview, Mr Visic described his movements on the Monday afternoon after he had left the premises of Trevor Puckridge. The interview was videotaped<sup>218</sup> and a transcript of the interview was produced<sup>219</sup>. A proper understanding of what Mr Visic said to the police in my

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<sup>217</sup> Transcript, page 15415

<sup>218</sup> Exhibit C32d

<sup>219</sup> Exhibit C168b

judgment can only be obtained by viewing the video in conjunction with the transcript, but I will do my best to describe accurately what he said.

- 1.13. Mr Visic's movements as described to Detective Fenwick that afternoon conform in general terms with what he said in evidence and with what he indicated at the scene when he attended one of the Court's site visits. I will deal with the detail of Mr Visic's account of his movements shortly, but to summarise he said that after he left Trevor Puckridge's premises, he went to a location where he parked his vehicle on the western side of Lady Franklyn Road and then went looking for the Lady Franklyn mine. He later returned to his vehicle and then travelled a short distance south along Lady Franklyn Road and parked on the eastern side. He then went and examined the large pile of rocks just off the road in the adjacent paddock. He returned to his vehicle and then left the area. There was no fire in the area at that time. He drove to Wangary, firstly along Lady Franklyn Road to its junction with Duck Lake Road, and then turned right along Duck Lake Road. At Wangary, he turned left onto the Flinders Highway heading towards Port Lincoln. At about that time he noticed distant smoke in his rear vision mirror. He executed a U-turn and decided to explore the source of the smoke. He turned back onto Duck Lake Road and drove to its junction with Lady Franklyn Road. He there, for the first time, saw the fire which by then was affecting the quadrant of land between Lady Franklyn Road and Duck Lake Road. He turned his vehicle around and returned to Wangary along Duck Lake Road. At the Wangary store he made a 000 call to the CFS advising them of the fire. Having done that, he returned for the second time to the location of the fire. He drove north along Duck Lake Road from Wangary, turned left onto Lady Franklyn Road and proceeded towards Mr Puckridge's property. He then encountered Trevor Puckridge and Mr Thring who were travelling in a utility south along Lady Franklyn Road. A short conversation occurred. Mr Puckridge and Mr Thring proceeded into the burning paddocks. Mr Visic said that he decided to fight the fire at the side of the road with water and a shovel. After a time, he left the area and drove back to Port Lincoln.
- 1.14. Within that general framework of his movements, Mr Visic also offered a lot of detail. He said that when he left Trevor Puckridge's premises on Lady Franklyn Road he travelled south along that road and then stopped and parked in an area surrounded by vegetation on the western side of Lady Franklyn Road. He then went prospecting in the paddocks to the west of the road, and in particular, went looking for the Lady

Franklyn Mine. He took his metal detecting equipment with him. He spent about an hour, maybe three quarters, prospecting in that general location and then returned to his vehicle. While prospecting, Mr Visic said that he had been aware of the passage of two vehicles along Lady Franklyn Road. The first was a vehicle which he actually saw and believed was a white twin cab four wheel drive, possibly a Toyota. The second he did not see, but he heard it slowing down. This occurred about 15 minutes after he had seen the first vehicle. In a witness statement that Mr Visic gave to Detective Fenwick after their attendance at the scene, Mr Visic said the following in relation to this second vehicle:

'It sounded like the car slowed down where my car was parked. I looked towards where the sound was coming from but I couldn't see my car or the one I could hear because of the scrub. I was concerned that they (the occupants of the car I could hear) might have thought that I wasn't supposed to have been there or that they might have interfered with my car. Because of this I started to make my way back to where my car was parked. I had also had enough of detecting at that time because it was getting too hot.'<sup>220</sup>

- 1.15. Mr Buddle's vehicle was a Ford utility. On Mr Visic's description of the first vehicle it is plain that it was not Mr Buddle's. Mr Buddle was to tell me that when he saw the vehicle parked in the bushes on the western side of the road he had slowed down. This corresponds with what Mr Visic said he heard in relation to the second vehicle. It is therefore highly likely, and I so find, that Mr Buddle saw Mr Visic's vehicle at that time and that correspondingly, Mr Visic heard Mr Buddle's vehicle at the same time. Thereafter, Mr Visic did not see nor hear any other vehicles or indeed any other activity in the Lady Franklyn Road area before he himself ultimately left.
- 1.16. Mr Visic stated that after he heard the second vehicle he decided to stop prospecting and so returned to his vehicle. After having a drink, he proceeded to the second location on Lady Franklyn Road. He parked this time on the eastern side of the road, he says, adjacent to the rocky area which was situated about 20 metres from the fence line. There was no visible fire at that location at that time. There were no other vehicles parked along the road and no other activity. Mr Visic alighted from his vehicle, vaulted the fence and went to inspect the rocky area. He did not take his metal detecting equipment with him on this occasion. He says in effect that he simply went to take a look to see if the rocky area was worthy of further exploration. He states that he turned his vehicle's engine off. There is no evidence independent of Mr

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<sup>220</sup> Exhibit C32, pages 4 and 5

Visic that he did turn off the engine before he ventured into the paddock to inspect the rocky area. He said in evidence that he was only in the paddock at that location for about 5 minutes<sup>221</sup>. In the taped interview at the scene he said that he was in that location for 'less than a minute'.

- 1.17. In his witness statement<sup>222</sup> Mr Visic states that he then walked back to his vehicle, sat in the driver's seat and started the engine in order to activate the air-conditioning. He had another drink before moving off. His statement goes on to say that he would have been stationary at that location with the engine running for about 30 seconds. He then drove off in a southerly direction along Lady Franklyn Road at a speed of less than 10 kilometres per hour. He saw no sign of fire at that location or anywhere else during the entire course of his journey to the highway at Wangary, a distance of about 6 kilometres. Mr Visic does not claim to have seen any other person or vehicle at the location on the eastern side of Lady Franklyn Road at any material time. Nor does he claim to have seen any vehicle travel along Lady Franklyn Road in either direction while he was on the eastern side of the road. He did say to the police that he saw a blue Nissan Navara with surfboards on its roof at some later point in time. As will be seen, Mr Visic was not always entirely consistent about the circumstances and location in which he came to see this vehicle, but it is clear to me for reasons that will become obvious that it had nothing to do with this fire.
- 1.18. Mr Visic stated that he proceeded south along Duck Lake Road to the Wangary Store where Duck Lake Road meets the Flinders Highway. He executed a left-hand turn onto the highway. He described what then happened and what he then observed. In his interview at the scene, Mr Visic is recorded as saying:

'Q136 Yes.

A And um, just was proceeding out to Wangary and um, came to the shop, noticed, when I turned around the corner to go onto the highway that there was a big smoke coming. I looked in my rear view mirror, I could see smoke from the area.

Q137 Yep.

A So I've turned back around, come back and looked at the corner down there and seen big fire, in this area down here, right, big smoke coming from there.'<sup>223</sup>

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<sup>221</sup> Transcript, page 15073

<sup>222</sup> Exhibit C32

<sup>223</sup> Exhibit C168b, page 11

Later in the same interview he said:

Q318 Yep and whereabouts were you when you got to here and made the, and looked in the rear view mirror?

A Oh, I kept going,

Q319 Yes.

A To the intersection and I was going left here, oh, on the road thanks,

Q320 On the road?

A Sorry mate.

Q321 So where did you,

A I looked here and I didn't see any, there was no cars coming,

Q322 Yep.

A So I, so I went up this way,

Q323 Yes.

A And then I proceeded around the corner and check, and looked in my mirror, something made me look and I could see the smoke coming up above those trees there.

Q324 Yes.

A And I, so I've turned around.

Q325 DSC Nicholas Hill states: So did, sorry did you see that in your mirror or when you looked back?

A Yeah, na, in my mirror and then I looked back with my, my head.

Q326 Yep.

A Cause I couldn't believe I, I could've missed that smoke.<sup>224</sup>

In his later witness statement, he said:

'After about ten minutes I reached the intersection of the Flinders Highway and Duck Lake Road, next to the Wangary shop. I turned left to travel towards Port Lincoln. Immediately after I turned left I looked in my rear view mirror and noticed that there was thick dark grey smoke rising from the area from which I had just come. The smoke was rising quickly and was only in a narrow plume.'<sup>225</sup> (my underlining)

- 1.19. Mr Visic says that after seeing the smoke through his rear vision mirror, he drove a little distance and was then able to see the smoke through his car window. He then turned around and returned to the scene. He stopped at the junction of Lady Franklyn Road and Duck Lake Road. He describes observing the fire that had taken hold in the area. His mobile phone would not work at this location so he drove back to the Wangary Store, dialled 000 on the public telephone box and reported the fire to the emergency services. He was given to understand that the CFS had already been made

<sup>224</sup> Exhibit C168b, pages 26 and 27

<sup>225</sup> Exhibit C32, page 6

aware of the fire and were responding. This call is recorded as having taken place at 3:29pm. It is correct that the CFS were already aware of the fire because Mr Nettle had notified them at 3:20pm.

- 1.20. Having made the 000 call, Mr Visic says that he again returned to the scene of the fire where he saw Trevor Puckridge and Mr Thring arriving in their ute. Mr Puckridge drove into the paddock to fight the fire. Mr Visic himself attempted to fight flames along Lady Franklyn Road with water and a shovel. Ultimately he left, as he had to relieve his parents who were looking after his young child.
- 1.21. It will be seen from this recital of what Mr Visic has said that he travelled to Wangary twice having left the Lady Franklyn Road location. The first occasion was the occasion when he saw the smoke through his rear vision mirror at or near the Flinders Highway at Wangary. The second occasion was when, having returned and witnessed the fire, he dialled 000 from the Wangary Store payphone.
- 1.22. Mr Visic was also asked to reconstruct his journey in the company of Mr Simon Cox, a scientist and forensic consultant who performed certain scientific examinations in respect of this matter. This reconstructed journey took place on 24 October 2005. In general terms it conforms to Mr Visic's account to the police.
- 1.23. The common theme in Mr Visic's accounts to the police and to Mr Cox is that he was not aware of the existence of any fire in the area at any stage of his journey from the Lady Franklyn Road location until he had turned, or was in the process of turning, left onto the highway, a distance of some 6 kilometres from that location. In each of those accounts he stated that he first observed the fire through his rear vision mirror. Mr Visic gave no reason for looking through his rear vision mirror in either account given to the police, and Mr Cox has not recorded any such reason either. I observe here that if there was a particular reason for performing what for many people would be an instinctive act, the reason might not be remembered. However, it is to be observed that in the interview at the scene on 13 January 2005, three days after the incident, he stated specifically that he saw no cars coming when negotiating the Duck Lake Road, Flinders Highway junction.

'Q321 So where did you,

A321 I looked here and I didn't see any, there was no cars coming<sup>226</sup>,

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<sup>226</sup> Exhibit C168b, page 27



It is plain from my viewing of the video tape from which the transcript derives that when Mr Visic said that there were no cars coming he was referring to the lack of traffic on the highway from the right.

- 1.24. Mr Visic gave evidence on two occasions during the Inquest. The first of these occasions occurred between 7 and 9 August 2006, some 19 months after the events with which this Inquest is concerned. The second occasion on which Mr Visic gave evidence was on 27 November 2006, just over 22 months after those events. On the first occasion Mr Visic attended at certain relevant locations during a Court site visit. In assessing the reliability of Mr Visic's evidence in Court, I take into account the length of time between the events with which the Inquest is concerned and the occasions on which he gave evidence. However, I also take into account the fact that he had been asked by police to recollect those events in some detail very shortly after those events had occurred and that this had provided Mr Visic with an early opportunity to focus on the detail of the events.
- 1.25. In August 2006 Mr Visic, in conformity with his statements to police, said in evidence that he had not noticed any smoke until he had reached the vicinity of the junction of Duck Lake Road and the Flinders Highway. However, on this occasion he was able to offer an explanation as to how and why he had seen the smoke in the rear vision mirror of his vehicle. He said that when he had executed his left turn onto the Flinders Highway he had noticed a vehicle coming from his right. The vehicle was approaching his position quickly. Mr Visic said that he turned ahead of this vehicle and having executed the turn, looked in his rear vision mirror to check the vehicle's position relative to his. It was then that he noticed, through that mirror, the smoke that was emanating from the Wangary fire. The evidence as to this emerged in Counsel Assisting's examination of Mr Visic:

'Q. Are you able to say about how far you'd gone before you saw the smoke.

A. 100 m or 200.

Q. How is it that you saw this smoke.

A. When I turned onto the highway there was a vehicle approaching from the west of Wangary, heading towards Port Lincoln.

Q. I'm a bit confused. On Flinders Highway, this vehicle.

A. Yes. I turned left but I noticed a vehicle coming from this same direction I was heading. Anyway, it was catching up pretty quick.

Q. He was travelling south towards Port Lincoln.

A. Yes.

Q. You turned ahead of him.

A. Yes.

Q. So that he was then travelling in the same direction as you were but behind you.

A. Yes.

Q. Go on.

A. Anyway, I checked my mirrors to see how close he was catching up to me and that's when I saw the smoke.<sup>227</sup>

Mr Visic described his reaction to this sighting in the following manner:

'I sort of got a bit of a shock you know, the smoke, and the car was coming, and I kept going, so I just sort of went in front of the car and then kept going a bit, and I noticed it was catching me, and I noticed the smoke in the rear view mirror, and I sort of kept going and I looked around.'<sup>228</sup>

Mr Visic then said that he proceeded along Flinders Highway some distance, made an observation of the smoke through the window, executed a U-turn and proceeded along Duck Lake Road again to the Lady Franklyn Road junction. Mr Visic said that at that stage he had not associated the smoke with any of his earlier activities at that location, but had returned to the location to do the proper thing and to have a look in case anyone had been injured in a motor vehicle accident.

- 1.26. Mr Visic vehemently denied the suggestion that the truth of the matter was that he had seen the smoke for the first time when he had been at the Lady Franklyn Road location.
- 1.27. This account needs to be compared with what Mr Visic had said to the police on 13 January 2005. When questioned by the police, he was not asked what it was that had caused him to look in his rear vision mirror. He had volunteered to the police that something had made him look without specifying what it had been. The observation can be made that after only a few days it might be difficult for a motorist to reconstruct what, if anything in particular, had caused him to look in the internal mirror given that it is an activity that motorists instinctively perform. Similarly, if after several months a person was asked to explain what had caused that person to look in a rear vision mirror while driving there would be nothing particularly

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<sup>227</sup> Transcript, page 15078

surprising about an inability to do that. However, in his evidence in August 2006 Mr Visic sought to explain why he had performed the relatively straightforward and routine activity of looking in the rear vision mirror by recourse to the presence of another vehicle which he now said had been on his right as he had executed his turn. The explanation involved him describing the vehicle's movements in some detail. He said it was behind him after he had executed the turn and was 'catching up' on his vehicle. This previously ungiven explanation appears to have been offered to reinforce Mr Visic's assertions as to how it was that he had seen the smoke at that location for the first time and why it was that he had returned to the Lady Franklyn scene.

- 1.28. Although it would have been understandable if Mr Visic had said he could not remember what caused him to look in his rear vision mirror, Mr Visic has offered an explanation for this that contradicts what he had said to the police. Mr Visic's assertions that the presence of this other vehicle caused him to see the smoke through his rear vision mirror is contradicted by his answer to question 321 in the police interview at the scene on 13 January 2005 as set out above<sup>229</sup>. He stated there that there were no cars coming at the junction when he looked for traffic as he, like any other careful motorist, would no doubt have done before executing a left turn onto a major road. Mr Visic was questioned about this apparent discrepancy when he gave evidence in August 2006. He said that his failure to mention to the police that the presence of another vehicle had caused him to look through his rear vision mirror was explained by it having slipped his mind. In his evidence, Mr Visic was asked to explain his assertion to the police that there were no cars coming. This following exchange took place between Counsel Assisting and Mr Visic:

'Q. And if we start at p.26 down the bottom of the page, question and answer 316 talk about going 4.98 kilometres from apparently Lady Franklyn Road down Duck Lake Road to the junction there at the highway or the Wangary store, and then 318 you were asked 'And whereabouts were you when you got to here and made the - and looked in the rear view mirror? A. I kept going to the intersection and I was going left here on the road. On the road? Sorry mate, so where did you -. I looked here and I didn't see. There were no cars coming.'

A. There was a car coming.'<sup>230</sup>

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<sup>228</sup> Transcript, page 15144

<sup>229</sup> See paragraph 1.23

<sup>230</sup> Transcript, page 15151

Mr Visic was also shown that part of the videotape of the interview. The discrepancy between his version to the police that there were no cars coming and his account in the witness box that there was a car coming is brought into sharp focus by this question and answer.

- 1.29. There is no doubt that Mr Visic's assertion in his police interview that there were no cars coming is a reference to the non-presence of a vehicle in a position and in circumstances where he now says that there was such a vehicle and that these statements are in direct conflict with each other. As to this inconsistency, Mr Visic said in evidence:

'There was a car coming down that road, and it is not in this statement, you know, at that time I was like getting interviewed by CIB and there was a lot of death and destruction right, and I couldn't remember everything that I did that day exactly to a tee but now that I remember going back and looking back over all this time, I can recall seeing the top of a car coming and I quickly ducked down onto the road, got going quick and by that time the car was more in view in my rear view mirror, right, that's when I noticed the smoke and I kept going with my foot down because the car was catching me and I didn't want to slam on the brakes or anything to let the car go past but I slowed down eventually, the car went passed, I turned around and went back.'<sup>231</sup>

- 1.30. Mr Visic thought that the car that he had seen was silver coloured<sup>232</sup>. He said that he thought the vehicle was travelling at 'highway speed'<sup>233</sup> and his recollection was that when he first observed the approach of the vehicle, he could see the top of the vehicle and that it had been a sufficient distance away to enable him to safely execute his left turn onto the highway. Mr Visic has thus moved from a position on 13 January 2005 when he volunteered to the interviewing police officer that there were no cars approaching from his right at the time he executed his left turn, to a position in August 2006 when he was able to describe in some detail a vehicle that was approaching from his right. This latter assertion forms the basis of an explanation as to how it was that he noticed the smoke from the Wangary fire in his rear vision mirror causing him to return to the scene of the fire. Despite the pressure which Mr Visic may have been enduring when he was being questioned by police on 13 January 2005, it is obvious that his recollection of the fine detail of events at that time would have been more complete than when he was giving evidence to the Inquest in August 2006. Moreover, Mr Visic's original assertion to Detective Fenwick that there were no cars coming was made spontaneously and not in response to any question that

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<sup>231</sup> Transcript, page 15152

<sup>232</sup> Transcript, page 15152

Fenwick asked. I have given careful consideration to whether this inconsistency should be viewed as trivial and immaterial. In my view it is neither. Mr Visic's assertion that he looked at his rear vision mirror because of the presence of other traffic on Flinders Highway is fundamental to his explanation as to how it was that he fortuitously saw evidence of the Wangary fire from a location that was sufficiently proximate to the scene of the fire so as not to deter him from returning to that scene. I find that I am unable to accept Mr Visic's evidence that he saw another vehicle and that this had caused him to look in his rear vision mirror having executed his turn onto the Flinders Highway.

- 1.31. Other evidentiary material that was adduced after Mr Visic gave this evidence tended to contradict Mr Visic's assertions that he could have seen smoke through his rear vision mirror after he had turned onto Flinders Highway. I am referring here to experimentation conducted by a police crime scene examiner Senior Constable Tully, concerning the likelihood or otherwise of Mr Visic's assertion that he was able to view the smoke of the Wangary fire in the circumstances he described, namely through the internal rear vision mirror of his vehicle having executed a left-hand turn onto the Flinders Highway. I now deal with this issue.

- 1.32. The Tully experiment

After Mr Visic had given evidence in August of 2006, Senior Constable Tully, a police officer attached to the Physical Evidence Section of SAPOL, conducted certain tests to determine whether Mr Visic could have seen the smoke from the Wangary fire from the position where he claimed his vehicle had been located at the time he saw that smoke through his rear vision mirror.

- 1.33. As seen, Mr Visic gave evidence for the first time in August 2006. As well, he had been asked to point out various things at the junction of Flinders Highway and Duck Lake Road at Wangary during one of the Court's site visits. In evidence he said that he had executed the left turn on to the highway and headed south towards Port Lincoln, building up speed to the speed limit. He said that he had travelled some 100 or 200 metres along the Flinders Highway before he noticed the smoke, which he at first noticed in the rear vision mirror. He said he travelled some distance further and

was then able to see the smoke through the side window of the vehicle. He continued for a short distance, executed a U-turn and returned to the Lady Franklyn Road location.<sup>234</sup> At the view, Mr Visic indicated a range of positions along the bitumen surface of the highway. He confirmed in the witness box that the range of distance that he had indicated along the highway south of the Duck Lake Road junction was his best estimate of his vehicle's position on the road at the time he saw the smoke through his rear vision mirror<sup>235</sup>.

- 1.34. It is not necessary for me to go into the methodology of Senior Constable Tully's experimentation in any great detail. Having placed a vehicle similar to Mr Visic's in a certain position relative to Flinders Highway in the vicinity of the Duck Lake Road junction, and having taken certain photographs using the vehicle's rear vision mirror, it is clear in my view that Mr Visic could not have seen the smoke from the Wangary fire through his rear vision mirror if his vehicle had been positioned where he said it had been positioned on the highway having executed the left turn from Duck Lake Road. Senior Constable Tully's evidence in relation to that aspect of his experimentation went largely unchallenged. That said, none of what Senior Constable Tully did could eliminate the possibility that Mr Visic saw the smoke above trees when in the process of actually executing the turn from the dirt surface of Duck Lake Road onto the bitumen surface of the highway, a left turn of approximately ninety degrees. However, it has to be observed that the evidence of Mr Visic as to the position of his vehicle on the highway having executed the turn was unequivocal. Indeed, the sighting of the smoke through the rear vision mirror had, in his evidence before me, involved the further embellishment that it was the vehicle situated behind him on the highway that had caused him to look at his rear vision mirror. Moreover, the description that he gave in evidence of the position of his vehicle on the highway at the time he saw the smoke through the rear vision mirror is in my view totally in keeping with what he said to Officers Fenwick and Hill on Thursday, 13 January 2005, three days after the event.

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<sup>234</sup> Transcript, pages 15078 and 15079

<sup>235</sup> Transcript, page 15221

1.35. Senior Constable Tully gave evidence in September 2006 about his experimentation. In the light of that evidence, Mr Visic was recalled to the witness box. This took place on 27 November 2006. On this occasion Mr Visic was asked:

'Q. Where do you say you were when you saw the smoke.

A. I had just gone on the highway or was just turning on the highway because those trees were visible in my rear-view mirror and I could see the smoke coming over the top of the trees.<sup>236</sup>

Mr Visic was then asked:

'Q. I thought you were looking in your mirror to check on how close that car was to you.

A. It may have been the case that I noticed the smoke over the trees and then I saw the car approaching me in the mirror as I actually executed the turn.

Q. What, and not further down the road when you were on the highway.

A. Yes.

Q. Well, were you fully on the bitumen when you looked in the mirror.

A. I can't recall.

Q. If you were fully on the bitumen do you accept that you would be unable to see smoke that may be emanating from the Lady Franklin Road area in your rear-vision mirror at a position 30 m or so south of Duck Lake Road on the main highway.

A. Yes.

Q. You accept that that would be impossible.

A. No. I wouldn't say impossible, but I said improbable.<sup>237</sup>

Essentially Mr Visic now says that all he knows is that he saw the smoke over the trees in the vicinity of the junction and that this sighting was through his rear vision mirror. He says in effect that he should not be held to account for any inconsistency concerning the precise positioning of his vehicle – suffice it to say, it was in a position relative to the junction and the trees to have enabled him to see the smoke above those trees through his rear vision mirror. As indicated earlier, Senior Constable Tully's tests did not exclude the possibility that smoke could be seen above the trees if a vehicle such as Mr Visic's had been in the process of executing the turn. I have been

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<sup>236</sup> Transcript, page 20216

<sup>237</sup> Transcript, pages 20218 and 20219

asked to find that is what Mr Visic was essentially endeavouring to convey to the police when he told them at A136 of Exhibit C168b:

'And um, just was proceeding out to Wangary and um, came to the shop, noticed, when I turned around the corner to go onto the highway that there was a big smoke coming. I looked in my review mirror (sic), I could see smoke from the area.'<sup>238</sup> (my underlining)

The underlined portion of this statement is said to reflect Mr Visic's then belief that he had seen the smoke while in the process of executing the turn and not after. Mr Visic was not at the Flinders Highway junction when he made this statement. Later in the interview, when reconstructing the turn onto the highway from Duck Lake Road, it is clear that he was intending to convey to the officers that he had not seen the smoke until after he had executed the turn and in such a position where, on Senior Constable Tully's evidence, that would not have been possible. I here refer to A323 of Exhibit C168b. This is confirmed in the witness statement taken later that same day where he said:

'After about ten minutes I reached the intersection of the Flinders Highway and Duck Lake Road, next to the Wangary shop. I turned left to travel towards Port Lincoln. Immediately after I turned left I looked in my rear view mirror and noticed that there was thick dark grey smoke rising from the area from which I had just come. The smoke was rising quickly and was only in a narrow plume.'<sup>239</sup>

- 1.36. What Mr Visic there told the police in January 2005 was in essence the same as what he originally told me in August 2006 insofar as he said that he looked into his mirror after, and not during, his turn onto the highway. It has been contended that I should find that, when confronted with evidence that rendered what Mr Visic had said as highly unlikely, he modified his account to allow for the possibility that he saw the smoke through his vehicle's rear vision mirror from a different location. It has been urged upon me that this inconsistency also renders his evidence about the circumstances in which he came to see the smoke for the first time as unreliable. On this issue, I bear in mind the following. Despite the inconsistency as to the precise position of his vehicle, Mr Visic has always been consistent about his claim that he saw the smoke at a position relative to the trees in the vicinity of the junction of Duck Lake Road and Flinders Highway at about the time he executed his left-hand turn. The inconsistency is a matter of detail, and has to be examined in the context of Mr Visic's describing what he saw from a moving vehicle. It is also to be borne in mind

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<sup>238</sup> Exhibit C168b, page 11

<sup>239</sup> Exhibit C32, page 6



that in Mr Visic's reconstruction journey with Mr Simon Cox, a scientist, he is recorded as indicating to Mr Cox that he saw the smoke '*as he turned onto the bitumen*',<sup>240</sup>. The inconsistency between his original account in evidence where he said that he saw the smoke through his mirror having travelled 100 or 200 metres along the highway and his later account in which he thinks it is possible that he may have noticed it as he turned the corner is not the only inconsistent aspect of his story. What troubles me more about Mr Visic's accounts of this incident is his claim that what caused him to look in his rear vision mirror was the presence of the vehicle heading south along the highway. Mr Visic demonstrated an inconsistency in detail about the circumstances in which he came to see the smoke of the Wangary fire for the first time that gave me considerable pause. The revival of a recollection that there was traffic along the highway which he was able to describe in some detail, having originally told the police that there was no traffic in existence, was in my view remarkable. This inconsistency, relating as it does to Mr Visic's reason for looking in his rear vision mirror, thereby enabling him to see the smoke of the Wangary fire, caused me to have a reluctance to accept Mr Visic's evidence as to the circumstances in which he became aware of the fire. I have reservations about whether Mr Visic was being truthful when he has said that he made two journeys to Wangary. I have no doubt that he made the call to the CFS from the Wangary payphone, but I am not convinced by Mr Visic's evidence that he made the two journeys to Wangary. I am also not convinced that he was being truthful when he says that he saw the smoke of the Wangary fire for the first time from the highway. In saying this, it does not mean that I have made any finding that Mr Visic saw the fire for the first time when he left the location immediately after he had examined the rock pile on Lady Franklyn Road. This suggestion was put to him and he rejected it. It simply means that I am not persuaded by Mr Visic's evidence that he saw the smoke of the fire for the first time in the circumstances he described. It also means, however, that in respect of other issues that are reliant on Mr Visic's uncorroborated testimony, I have a similar reluctance to rely on that testimony. I have in mind here Mr Visic's assertions as to the precise location where he parked on the eastern side of Lady Franklyn Road at the time he examined the rock pile.

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<sup>240</sup> Exhibit C268e

1.37. Weather conditions on Monday, 10 January 2005

The precise point of origin is a matter that requires the evaluation of eyewitness evidence. Aside from Mr Visic's description of the fire in its initial stages, there is evidence from a number of other witnesses who were at the scene shortly after its commencement. Before dealing with that evidence, it is necessary to examine what is known about the weather conditions at around the time of the commencement of the fire. What is known about those conditions is in the main gleaned from the observations of persons in the vicinity, as well as from data collected at the Coles Point and Port Lincoln automatic weather stations.

1.38. Both sources of evidence suffer from some inadequacy. The eyewitness observations as to wind speed and wind direction are estimates. In addition, they are not entirely consistent and in some cases are difficult to reconcile. The data from the automatic weather stations has an imperfect significance owing to their distance from the Lady Franklyn Road area. The weather data recorded at those locations is not necessarily exactly reflective of the conditions at the Lady Franklyn Road area. However, two things are clear. Firstly, at all material times on the Monday afternoon the weather was hot. While it is not possible to precisely state the temperature at the Lady Franklyn Road location at times between say 2:30pm and 3:30pm, suffice it to say the temperature was in excess of 30°C. Secondly, at all material times there was a wind in existence at that location. In addition, no-one has suggested that at the Lady Franklyn Road location there had been an easterly component as far as wind direction is concerned. The various estimates as to wind direction suggest that the wind was coming from a direction in the north-western quadrant of the compass.

1.39. Mr Visic said to the police on 13 January 2005 that at the time he had returned to the scene on the second occasion, and had witnessed the extent of the fire, the wind would have been less than 10 knots and '*more or less*'<sup>241</sup> coming from the south-west. He indicated to the police at the scene that it was travelling in a north-easterly direction. He supposed the temperature was 35°C plus. In evidence, he gave a similar estimate concerning temperature<sup>242</sup>. He said that the fire was burning in a northerly direction, but that there was not much wind. What wind there was seemed to be coming from a south-westerly direction, but added that he could not be sure about that.

- 1.40. The first people on the scene, arriving separately, appear to have been Mr Graham Dahlitz and Mr James Casanova. Mr Dahlitz had seen smoke from the Dutton Bay area, about 8 to 10 kilometres from the fire. He believed that at that point the smoke was being driven by a westerly wind to the east. He arrived at Wangary between 3:20pm and 3:30pm. I infer that he would have arrived at the Lady Franklyn Road location a few minutes after that. He described the wind at that location as coming from a westerly direction and he described it as being quite strong, 25 to 30 knots approximately<sup>243</sup>.
- 1.41. Mr Casanova was driving a SAME tractor with a square set dozer blade at the front. He was travelling in a northerly direction along Duck Lake Road, that is towards the fireground, when at about 3:15pm he saw smoke suddenly arise a few kilometres ahead and to his left. When one looks at the juxtaposition of Duck Lake Road and the Lady Franklyn Road location in question, Mr Casanova's observations as to the source of the smoke would appear to be quite accurate. He was familiar with Trevor Puckridge's property at the Lady Franklyn Road location and the observations that he made from a position a few kilometres to the south led him to assume correctly that the fire at that stage was in the general vicinity of the Duck Lake Road and Lady Franklyn Road junction. The time given by Mr Casanova of 3:15pm when he first noticed the fire is on his admission an estimate. He took the time from the fact that it had been about 3pm when he had driven his tractor past the tennis courts at Wangary. His tractor is only capable of travelling at about 25 kilometres per hour and so the journey from Wangary to the scene of the fire was by no means a rapid one. Mr Casanova in evidence made the observation that the smoke appeared to grow in volume. He said that for the first 5 minutes it was fairly consistent in size, but he describes it as then growing quite quickly. Mr Casanova says that he arrived at the Duck Lake Road, Lady Franklyn Road location at about 3:30pm. Leaving aside what some entities have suggested Mr Visic may already have seen, Mr Casanova appears to have been the first person who saw evidence of the beginnings of the fire. His attention was drawn to the smoke when he was travelling north along Duck Lake Road. His attention would have been focussed in a northerly direction generally, and to my mind it is clear that he saw the smoke of the Wangary fire pretty well at, or very soon after, the time that the fire ignited. It can be inferred that Mr Casanova and Mr

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<sup>241</sup> Exhibit C168b, page 18

<sup>242</sup> Transcript, page 15058

<sup>243</sup> Transcript, page 15417

Dahlitz arrived within a very short time of each other because Mr Dahlitz states that he saw a tractor in the vicinity of the Lady Franklyn Road, Duck Lake Road junction at the time of his arrival<sup>244</sup>.

- 1.42. Mr Casanova in his statement<sup>245</sup> states that there had been a hot north wind blowing for most of the day but by the time of his arrival at the scene, the wind had swung around to the north-west or west-north-west direction and was still reasonably windy. However, in his evidence he described the wind in these terms, '*quite warm, blowy north wind*'<sup>246</sup>. In any event, it appears that the impression that Mr Casanova gained was that the wind was not coming from a due west direction as has been suggested by others, including Mr Dahlitz, at the time of his arrival at the scene.
- 1.43. As it transpired, Mr Casanova was to spend a good part of what remained of the afternoon creating bare earth firebreaks with his tractor blade. Mr Casanova made an assessment of where the fire was and where it was travelling and did this with a view to putting in what he thought might be effective bare earth breaks. He states that as far as he could tell there were no other farm appliances or any other firefighting units in the area when he first arrived. He therefore took the initiative to prevent, or at least limit, the spread of the fire and in doing so had regard quite clearly to the prevailing wind conditions at the time. Mr Casanova states that he observed that on the eastern side of Duck Lake Road, north of the Lady Franklyn Road junction, the fire was moving in a south-easterly direction. This of course would be in keeping with the fire moving under the influence of the north-west wind that he said he observed upon his arrival at the scene. Mr Casanova also observed that the fire was working its way south along Duck Lake Road itself. He commenced putting in a firebreak with his tractor blade in an endeavour to halt the progress of this fire along the eastern side of Duck Lake Road. The break, which was put through a clump of sugar gum trees and other vegetation on the eastern side of Duck Lake Road, became known in the Inquest as the 'Casanova break'. In the course of the afternoon, Mr Casanova was to put in a number of other bare earth breaks on the property to the east of Duck Lake Road. The break that was placed through the trees on the eastern side of Duck Lake Road, that is the 'Casanova break', was undertaken by him as a measure to halt the fire's progress in a southerly direction along the road. As he was doing this, the wind changed to just

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<sup>244</sup> Exhibit C258, page 2

<sup>245</sup> Exhibit C182

<sup>246</sup> Transcript, page 1605

south of west. He states that he later observed the wind change to a south-westerly. I return later to the significance of Mr Casanova's observations as to wind direction because it appears that his observations may well be the earliest observations of the Wangary fire smoke. Notwithstanding the fact that others may have observed the wind coming from a due westerly direction at a later time, Mr Casanova's observations, made as they were earlier than the observations of others, very much suggests that when the fire commenced the wind contained a significant northerly component at that time. The northerly component of the wind at the time the fire commenced, as we will see, has some significance in terms of its initial progress in the paddock adjacent to the point of origin on Lady Franklyn Road and may carry some implication in terms of the precise point of origin along the 120 metre or so stretch of Lady Franklyn Road where the fire undoubtedly started. I return to this issue in due course.

- 1.44. Mr Trevor Puckridge, the owner of the paddocks just to the east of the Lady Franklyn Road location, arrived with Mr Thring at about the same time that Mr Visic arrived back at the scene after he had made his 000 call at Wangary. Mr Puckridge stated in his second statement<sup>247</sup>, given to the police on 6 December 2005, that when he and Mr Thring arrived at the scene, the fire was of a considerable size as it had been pushed by a strong westerly wind. He said that the conditions were fairly warm at the time.
- 1.45. Mr Thring said in his statement<sup>248</sup> that at the time he had first noticed the smoke from Mr Puckridge's shearing shed, some 3 kilometres to the north, the wind was gusty from the north. This description of the wind direction would fit with Mr Casanova's in general terms.
- 1.46. Mr Russell John Giddings, otherwise known as John Giddings, owned a property that bordered Trevor Puckridge's paddocks on the eastern side of Duck Lake Road. Some time between 3pm and 3:30pm he observed smoke arising from a location south of his homestead. He said that at that time the wind was westerly at about 10 to 15 knots. He estimated the temperature to be between 30 and 40°C.
- 1.47. Mr Mervyn Buddle, the man who had been visiting his daughter at Trevor Puckridge's farm, and who saw Mr Visic's vehicle at about 2:45pm when it was parked on the western side of Lady Franklyn Road, said in his statement dated 1

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<sup>247</sup> Exhibit C50a

February 2005<sup>249</sup> that at that time it was sultry, very warm and the wind was more than a breeze from a north-westerly direction.

- 1.48. Mr Steven Nettle, the Captain of the Wangary Brigade of the CFS, had notified Region 6 Headquarters in Port Lincoln as to the existence of the fire. He proceeded to the Wangary CFS shed and prepared the CFS appliance. He and two other CFS members then travelled to the Lady Franklyn Road, Duck Lake Road scene. The Lincoln Base occurrence sheets for the afternoon of 10 January 2005, which are contemporaneous hand-written records of events relating to a particular incident,<sup>250</sup> records that at 3:45pm the Wangary appliance advised that it had arrived at the scene and that the crew had given a description of the fire and its location. Mr Nettle in his statement<sup>251</sup> said that the fire had already gone across Duck Lake Road at the time of their arrival and was burning in a general north-easterly direction. He described the wind as quite strong and could have been about 20 kilometres per hour.
- 1.49. There were a number of other observations made by people who arrived at the fireground to fight the fire. These people in the main arrived at a time probably after the arrival of the persons I have already recited, and at a time after the wind had shifted from a north or north-westerly around to the west or south-westerly. I am here speaking of, for instance, a Mr Brenton Plane<sup>252</sup> who said that the wind was a reasonable breeze mainly from the west but fluctuating around to the south-west causing the fire to burn at times in a north-east direction. He said that around 4pm to 4:30pm the sea breeze normally comes in from the south-west. Others made that same observation. Mr Wayne Hull, who said that he arrived at something like 3:45pm, said that the fire appeared to be heading in a north-easterly direction under a south-westerly breeze<sup>253</sup>. In his statement<sup>254</sup> he said that when he first arrived, the wind was from the west and then shifted to the south-west. Mr Darryl Puckridge describes the area receiving a south-westerly sea breeze at about 4pm each day<sup>255</sup>. As he travelled towards the fireground that afternoon he noted the weather conditions, with a temperature in about the high 30s, with '*reasonably strong northerly westerly*

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<sup>248</sup> Exhibit C72

<sup>249</sup> Exhibit C71

<sup>250</sup> Exhibit C219a

<sup>251</sup> Exhibit C193

<sup>252</sup> Exhibit C259

<sup>253</sup> Transcript, page 3166

<sup>254</sup> Exhibit C188

<sup>255</sup> Exhibit C70

winds, with deviations to North Westerlies<sup>256</sup>. He said that there appeared to be a plume of smoke heading in a south-easterly direction, which of course would be in keeping with a north-westerly wind. When he reached the fireground he met John Giddings and Phillip Puckridge and at that stage the fire was heading in a general south-easterly direction. His statement reveals that he noticed that the wind had changed and had become gusty and was now travelling from the west in an easterly direction.

- 1.50. When Mr Phillip Puckridge arrived at the Lady Franklyn Road location, and noticed Mr Visic using a shovel trying to put out the fire, the fire was heading towards Duck Lake Road in an easterly direction across stubble into swampy vegetation on both sides of Duck Lake Road. He testified that he thought the wind that afternoon had been *'sort of in a westerly, south-westerly direction'*<sup>257</sup>. He said the temperature would have been in the mid to high 30s. Mr Puckridge resided in the Coultas area some 19 kilometres north of Wangary and on the other side of the Marble Range.
- 1.51. Mr Neville Parker who was the First Lieutenant of the Coultas CFS Brigade and who also lived in the Coultas area claims that his knowledge in relation to both the Coultas and Wangary areas is good and that when his attention was first drawn to the fact that there was a fire, the wind was breezy and coming from the north. It was not overly hot but warm<sup>258</sup>. He and other members of the Coultas CFS, including Mr Peter Doudle who was the Coultas CFS Captain, met at the Coultas CFS shed and took the appliance to the Wangary fireground. Mr Parker says that having arrived at the fireground, and having attempted to put out spot fires in the stubble in the paddock on Mr Christopher Hull's property, he observed that by then the wind had started coming from the west and was reasonably strong.
- 1.52. The Captain of the Coultas appliance, Mr Peter Doudle, says in his witness statement<sup>259</sup> that when they arrived with the Coultas appliance at the fireground he observed that by then there was a westerly wind blowing at about 15 kilometres per hour and he thought that the temperature was *'maybe 30 degrees at the most'*<sup>260</sup>. Mr Doudle states that the Coultas appliance arrived just after 4pm.

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<sup>256</sup> Exhibit C70, page 5

<sup>257</sup> Transcript, page 793

<sup>258</sup> Exhibit C190

<sup>259</sup> Exhibit C181

<sup>260</sup> Exhibit C181, page 2

- 1.53. There is some divergence between witness accounts in relation to the wind direction. In my view it is probably explicable on the basis that in the main, persons who observed the wind from a north or north-westerly direction made that observation before the wind changed to the west and then the south-west. Conversely, those who speak of a wind from the west or south-westerly direction may well be referring to the wind direction after it had changed from a more northerly direction. The preponderance of evidence in my view suggests very much that the wind direction at the time of the commencement of the fire, particularly if Mr Casanova's evidence is to be accepted, suggests that the wind was coming from a north or north-westerly direction at that time. Mr Casanova was an observant witness. He was familiar with the location. He put in fire breaks that were designed to stop fire coming from a certain direction. He saw the smoke from the fire at a time at, or very shortly, after its commencement. He appears to have been one of the, if not the, first person on the scene. His estimate as to wind direction at or about the time when the fire commenced I think can be given considerable weight. I think the probability is that the fire got underway under the influence of a north or north-westerly wind. It was after the fire had taken hold that there was the change to the west and then south-west.
- 1.54. At 3:32pm the Coles Point automatic weather station (AWS) which is 18 kilometres to the north-west of the Lady Franklyn Road area recorded a wind direction from the north-west with a mean wind speed of 22 kilometres per hour gusting to 28 kilometres per hour. The temperature recorded by the AWS at Coles Point at that time was about 32°C. Clearly the fire was in existence at 3:32pm. It had been reported by Mr Nettle at 3:20pm and by Mr Visic at 3:29pm, and if other observations are correct, the fire may well have been in existence as early as say 3:10pm, or 3:12pm according to Mr Camilleri.<sup>261</sup> The Port Lincoln AWS, situated even further from the fireground and to the east, at 3:34pm records winds from the west at 48 kilometres per hour gusting to 63 kilometres per hour with a temperature of about 38.6°C. However, as observed earlier, there is a limit to the interpretative value of this data as far as the location on Lady Franklyn Road is concerned. A supplementary Bureau of Meteorology (BoM) report states:

'Because of the influencing factors, it is highly likely that the conditions at the fire ignition point were different from either Coles Point and Port Lincoln AWS.

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<sup>261</sup> Exhibit C102



Meteorological knowledge would suggest that the most likely wind direction would have been from between north-west and south-west.

With reference to the other weather elements, the following qualitative assessment of the weather conditions at the ignition point could be made;

In comparison to the weather conditions reported from Coles Point AWS ;

- The temperature would probably have been higher.
- The relative humidity would probably have been lower.

With reference to the weather conditions reported from Port Lincoln AWS, the following qualitative assessment of the weather conditions at the ignition point could be made ;

- The wind speed would probably have been lighter.
- The temperature would probably have been lower.
- The relative humidity would probably have been higher.

It is not scientifically reasonable to attempt to be any more specific on the weather conditions at the point of fire ignition.<sup>262</sup>

1.55. The precise point of origin - Eyewitness evidence

The precise point of origin can only be established by examining the observations of those first on the Lady Franklyn Road fire location, as there is no evidence before me of anyone actually witnessing the fire start. These early observations of the behaviour of the fire in the main emanate from Mr Visic, Mr Trevor Puckridge and Mr Dahlitz.

1.56. Although Mr Casanova may have been at the general location earlier than Mr Dahlitz, it appears that Mr Dahlitz was probably the first person who arrived at the Lady Franklyn Road location adjacent to Mr Trevor Puckridge's property. Mr Dahlitz did not at first make a statement to the police about these matters. The fact that Mr Dahlitz had attended the scene at an early stage was not revealed to this Inquest until early 2006. A statement was taken from Mr Dahlitz on 2 March 2006<sup>263</sup>. Mr Dahlitz also gave evidence to the Inquest on 11 August 2006.

1.57. Mr Dahlitz's assistance to the Inquest derives from the following circumstances. The 23 February 2006 edition of the Port Lincoln Times contained an article that described the evidence that had already been given to the Inquest by Trevor Puckridge. Mr Puckridge had told me that the gate allowing entry from Lady Franklyn Road into the paddock on his property on the eastern side of that road had been inexplicably open at the time of his arrival. Mr Dahlitz states that having read

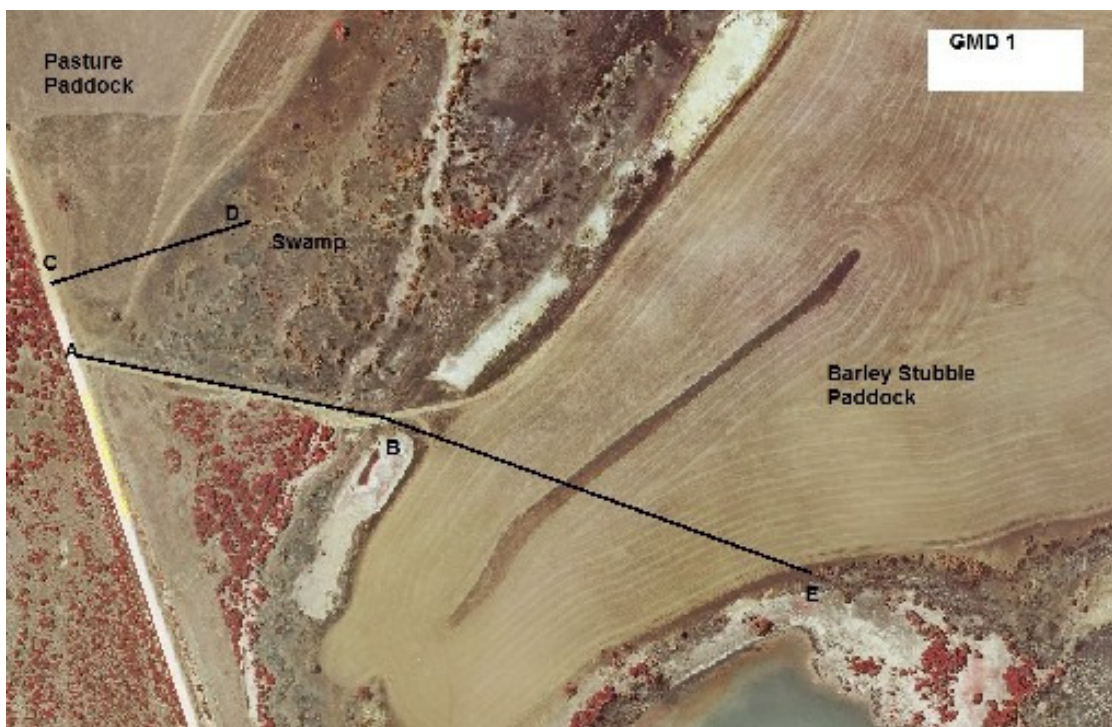
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<sup>262</sup> Exhibit C221a

<sup>263</sup> Exhibit C258

the Port Lincoln Times report, he was reminded that he was the person who had opened that gate on his arrival at the fireground. As a result of reading this report, he telephoned Trevor Puckridge and met him at the gate on Lady Franklyn Road. Mr Dahlitz confirmed that the gate that Mr Puckridge had been speaking of in his evidence, as reported in the Times, was in fact the gate that he had opened on the afternoon of 10 January 2005. This gate is situated on Lady Franklyn Road approximately one kilometre from the Duck Lake Road junction and 120 metres of the rock pile which Mr Visic identified. The gate provides access to the paddock on which the rock pile is situated.

- 1.58. Attached to Mr Dahlitz's statement of 2 March 2006 is an aerial photograph of the Lady Franklyn Road location. It is GMD1 reproduced herein. Point A on GMD1 represents the location of the gateway to which Mr Puckridge and Mr Dahlitz have referred in their evidence. Just to the north of point C and to the east of the road one can see a feature in the paddock represented by a disturbance of the surface of the paddock. This is the position of the rock pile as described by Mr Visic. After the fire had gone through, much of the burnt and unburnt vegetation that had been bulldozed from the eastern side of the road had been deposited into that rock pile. The distance between the gateway and the location on the eastern side of Lady Franklyn Road immediately adjacent the rock pile is 120 metres.



- 1.59. Mr Dahlitz had not had any discussion with the police prior to making his telephone call to Mr Puckridge. Mr Dahlitz said that 2 March 2006, the day that the police statement was taken from him, represented the first occasion that anyone had asked him to recall in detail what he had observed on 10 January 2005. It is against that background that the accuracy of Mr Dahlitz's recollections, particularly when it comes to his description of the position of the fire flanks, has to be assessed. Moreover, when Mr Dahlitz gave his statement to police on 2 March 2006 he had no opportunity to view the Lady Franklyn Road location. He identified various features of the landscape at the location by reference only to aerial imagery.
- 1.60. Mr Dahlitz stated that when he arrived at the gateway the double gates were shut and fastened. He opened both of them in order to gain access to the land to the east of Lady Franklyn Road. He noticed that there was fire in the grass in the vicinity of the gateway and that a gatepost was alight, albeit not intensely so at that time. He spent approximately 30 seconds getting out of his vehicle, opening the gates and getting back into his vehicle. Referring to GMD1, Mr Dahlitz indicated that he travelled along the track to the Point marked B and then across a barley stubble paddock to point E. The fire had reached this point. He endeavoured to extinguish the flames along that line but ran out of water. The line from A to B and then from B to E according to Mr Dahlitz represented the southern flank of the fire which was being driven under a westerly wind at that time.
- 1.61. As far as the northern extremities of the fire is concerned, he observed that there was fire in the roadside vegetation north of the gate. The fire was more intense further towards the north where trees were alight. He said that the northern flank of the fire was only about 50 metres north of the gateway. He opines that the northern flank of the fire at the time he first arrived at the gateway is represented by the line C to D on GMD1. He said that he could not see beyond point D because there was swampy terrain in that location and there was too much smoke.
- 1.62. The rock pile in the paddock can be seen on GMD1 just north of point C. Mr Dahlitz asserts that the northern flank of the fire had not reached as far north as the rock pile, either along the roadside vegetation or through the pasture paddock. Mr Visic maintains, and has always maintained, that his vehicle was stationary on the eastern side of Lady Franklyn Road only at the location immediately adjacent to the rock pile. He claims that his vehicle was never stationary at any point south of that location.

Specifically, he says it was nowhere near the gateway. If Mr Dahlitz's evidence as to the northern extremity of the fire at the time he arrived at the gateway is correct, then Mr Visic's vehicle could not have started the fire at the location at which he said it had been parked adjacent to the rock pile because, according to Mr Dahlitz, that location was not under fire, nor had been burnt, at the time of his arrival.

- 1.63. Mr Dahlitz said that he attempted to fight the fire along the line from Points A to B and B to E and returned to the gateway, having exhausted his supply of water, after about 15 minutes. He then proceeded north along Lady Franklyn Road to the Puckridge homestead to obtain more water. When he did this he said that he did not pay any attention to the position of the northern extremity of the fire.
- 1.64. Mr Dahlitz's claim that the northern extremity of the fire had not reached the rock pile at the time that he arrived at the gateway has to be examined in light of the fact that he was not asked by anyone to recall the precise location of the fire extremities until late February 2006, more than 13 months after the event. In addition, in January 2005 he was totally unaware of the existence of the rock pile in the Puckridge pasture paddock and so was in no position to observe the northern extremity of the fire relative to the position of the rock pile, nor indeed relative to the position of the roadside vegetation immediately adjacent to the rock pile. He only knew of the existence of the rock pile when he attended at that location with Trevor Puckridge over a year later and was there asked by Trevor Puckridge whether the northern flank of the fire had reached the position of the rock pile. This represented the first occasion that he had been asked anything about the fire's position relative to the rock pile. If, as he estimated, the distance from the gateway to the northern extremity of the fire on the roadside vegetation was 50 metres, then that estimate would be consistent with the northern flank of the fire not having reached the rock pile because the rock pile is situated a distance of 120 metres from the gateway. Mr Dahlitz's estimate of 50 metres is in my view not particularly reliable. It was after all an ex post facto impression. Indeed, at one point in his evidence he asserted that it would have been a distance of about 50 to 100 metres. While a distance of 100 metres would still not cover the distance from the gate to the rock pile, it is not that far short of the actual distance of 120 metres. Not having been aware of the existence of the rock pile in January 2005, and not having been asked to even consider the question of how far the northern extremity of the fire was from the gateway until February 2006, in my view only limited reliance

can be placed upon Mr Dahlitz's evidence in respect of this kind of detail. While it is fair to observe that Mr Dahlitz firmly believes now that the line C to D on GMD1 does represent the northern extremity of the fire when he first arrived at the gateway, the following question and answer in his cross-examination seems to sum up the position as far as he is concerned:

'Q. You have indicated those points to Sergeant Schar simply as your best estimate of what your observations were back in January 2005.

A. Yes; that's done 14 months after the fire on a computer screen.

He was then asked:

Q. So, again, you are simply doing the best you can to recollect and provide the best information you can, given the lapse of time, between what you observed on 10 January and what you have recorded in your statement, but that what you have recorded in your statement doesn't refer to any physical features that you were aware of and referenced on 10 January.

A. Correct. On 10 January I was going to a fire and my vision and whatever was to put the fire out; not to take notes or times.

Q. Or measurements.

A. Or measurements.<sup>264</sup>

1.65. In my view, Mr Dahlitz's evidence does not discount the possibility that the northern extremity of the fire had reached, or was by then north of, the rock pile at the time he arrived at the gateway. In addition, in my opinion his evidence does not of itself discount or disprove the contention that the precise point of origin of the fire was in roadside vegetation some distance north of the gateway and adjacent to the rock pile where Mr Visic said he had parked his vehicle.

1.66. The evidence of Mr Trevor Puckridge has to be examined also.

1.67. Mr Puckridge arrived at the location some time after Mr Dahlitz. When he arrived at the gateway on Lady Franklyn Road the gates were open, which led him originally to believe that Mr Visic had possibly opened them. He, like everybody else, did not know that Mr Dahlitz had opened the gates until Mr Dahlitz telephoned him in February 2006. He said that when he arrived at the gateway the fire had spread north along the road and along the fence line as well as across the paddock and that near the gateway the fire had already burnt itself out. It was continuing to burn in a northerly direction along the road and the fence line. As seen earlier, he said that the wind at

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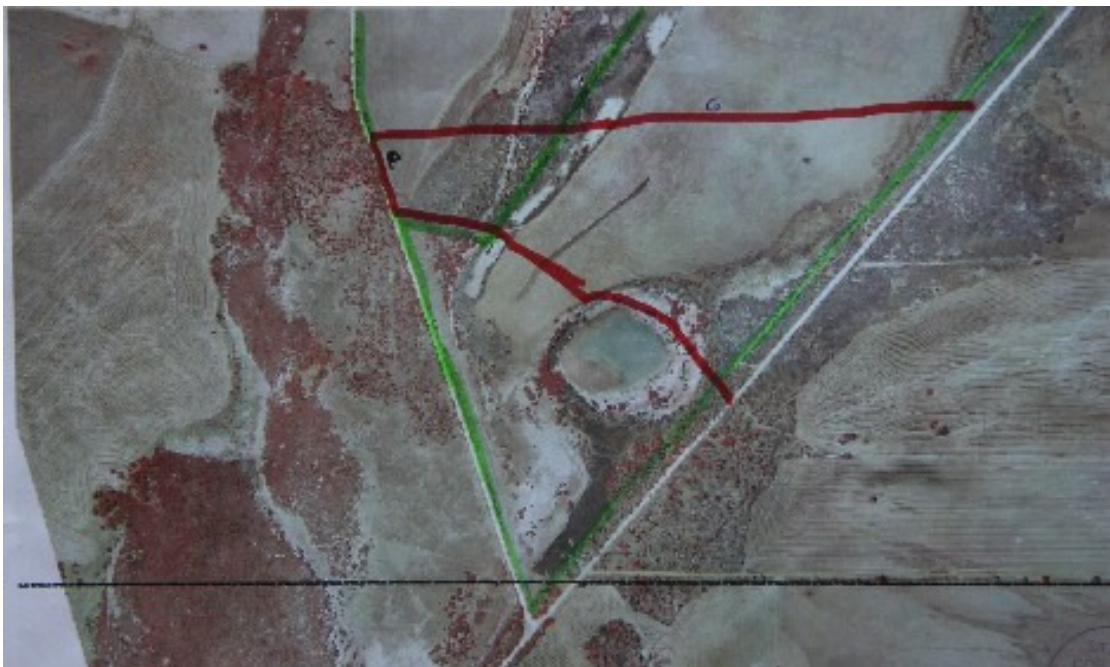
<sup>264</sup> Transcript, pages 15433 & 15434

that stage was from a westerly direction. Mr Puckridge did not observe how the fire started or where it had started.

- 1.68. Mr Puckridge, as seen earlier, thought that he saw smoke for the first time at about 3:20pm. He said that he could state that time fairly accurately because they had been shearing during the afternoon and had stopped for the afternoon smoko which is always at 3pm<sup>265</sup>. Shearing was due to recommence at 3:30pm and it was not long before they started shearing that they noticed the smoke.
- 1.69. As soon as they spotted the smoke he drove down to the road to obtain a clearer view and saw that the smoke was coming from the section of his property on the eastern side of Lady Franklyn Road. He then returned to the shearing shed and arranged for Mr Thring to accompany him. They filled the tank on the back of Mr Puckridge's farm firefighting utility and headed in a southerly direction along Lady Franklyn Road towards the fire. He estimated all of that activity to have taken about 15 minutes.
- 1.70. At that time Mr Puckridge said that the weather conditions were warm with a reasonable breeze from the west.
- 1.71. Mr Puckridge and Mr Thring met Mr Visic in his vehicle on Lady Franklyn Road. Mr Visic was heading north. Mr Visic was later to say that his intention at that stage was to go to Mr Puckridge's property to alert him. They passed each other and stopped. Mr Visic and Mr Puckridge spoke to each other. What Mr Visic said is the subject of further discussion below. Mr Puckridge and Mr Thring then proceeded down to the gateway. Mr Puckridge observed that Mr Visic executed a U-turn and followed them for a distance.
- 1.72. At the gateway there were two gates. One led into the paddock that was to the north and the other gate led to an area to the south. A fence separated those two areas. There was a track on the southern side of the fence line. Mr Puckridge said that the gate on the northern side of that fence line leading in towards the northern paddock on the eastern side of Lady Franklyn Road was open. It was open such as to enable a vehicle to have driven into the area. At that stage Mr Puckridge saw no other firefighting units or appliances in the vicinity. Mr Puckridge was later to make the erroneous assumption that Mr Visic had left the gate open. Mr Puckridge's false assumption was to remain with him for over a year until Mr Dahlitz read of Mr

Puckridge's evidence in the Port Lincoln Times. It is evident to me that this false assumption played some significant part in the view that Mr Puckridge was to form as to the location where the fire had started. I return to this particular aspect of the case also.

- 1.73. Mr Puckridge made his first statement to the police on 12 January 2005. He did not express any view in that statement as to where he thought the fire may have started<sup>266</sup>. However, he made a further statement to police on 6 December 2005. This preceded Mr Dahlitz coming forward. In this later statement Mr Puckridge explained in a more detailed fashion his observations of the fire at the point when he first arrived at the gateway. He said that he believed that the fire had started on the eastern side of Lady Franklyn Road just north of or at the gateway and had spread north along the road and the fence line as well as across the paddock. He stated that it appeared the fire had already burnt itself out at the gateway by the time he had arrived and was continuing to burn in a northerly direction along the road and the fence line to a certain distance north of the gateway. When giving his statement in December 2005, and when testifying in the Inquest on the first occasion that he was called, Mr Puckridge marked aerial photographs of the location. He marked the northern line of the fire as at that time being some distance north of the rock pile that was situated in that paddock. I refer here to Exhibit C50e.



<sup>265</sup> Transcript, page 4902

<sup>266</sup> Exhibit C50

The red lines are intended to signify the boundaries of the area that Mr Puckridge believed had been burnt by the time he arrived. Letter P signifies the position of the rock pile. The gateway is at the southern end of the red line along Lady Franklyn Road. The letter G signifies the position of Mr John Giddings in that paddock when Mr Puckridge saw him for the first time.

- 1.74. When Mr Puckridge gave evidence on the first occasion, which was at a time before Mr Dahlitz came forward, he reiterated his belief that Mr Visic had opened the gate. He told me that at the time of his arrival the wind was coming from the west.
- 1.75. He explained in more detail why he had concluded that the fire had started at or near his gateway. He stated that he found it hard to believe that Mr Visic's vehicle had started the fire in the location at which Mr Visic said he had parked on the eastern side of Lady Franklyn Road directly opposite the rock pile. He gave a number of reasons for expressing that point of view. He said that because of the existence of sheoak trees in the vicinity of where he was meant to have parked, and the short distance between the edge of the road and the fence, Mr Visic would not have been able to park his vehicle off the surface of the road to any significant extent. He also said that the ground cover at that location contained very little grass but a lot of sheoak needles. He said the grass consisted of a small amount of barley grass and silver grass, about 18 inches high. This was to be contrasted with the verge in the vicinity of the gate where there was no sheoak vegetation, but grass, and where there was a greater ability to park off the surface of the road. Mr Puckridge also theorised about the vehicle not being hot enough to throw a spark to start a fire, but Mr Puckridge in my view is by no means an expert in relation to such matters. There were a number of expert witnesses called during the Inquest in relation to a vehicle's ability to start a fire with sparks from its exhaust system. I prefer that evidence to Mr Puckridge's on that issue. Other observations that caused Mr Puckridge to think that the fire had started at or near the gateway consisted of the fact that a wooden fence post forming part of the gateway structure had almost burnt through and that the fire near the gateway had more or less burnt itself out by the time of his arrival, but fire was still burning steadily in a northerly direction along the road and the fence line.
- 1.76. Mr Puckridge said that he would have expected the fire to have spread further to the north than it had by the time he arrived if it had started at a location near where Mr



Visic had said he had parked adjacent to the rock pile<sup>267</sup>. The basis of this view was that if it had started under a westerly wind at the side of the road near the rock pile it should have spread equally to the north and to the south of the point of origin, whereas it had burnt further to the south all the way to the gateway and to the bare earth track that formed an effective fire break to the south.

- 1.77. All this he said led him to conclude that the point of origin must have been at a point further south than the position where Mr Visic said he had parked.
- 1.78. In explaining his theory, Mr Puckridge made specific reference to the fact that the gate was open when it should have been closed<sup>268</sup>. It has to be borne in mind that when giving this evidence he was not to know that Mr Dahlitz would in due course reveal the fact that he had left the gate open.
- 1.79. Mr Puckridge said that although his belief that Mr Visic had left the gate open had formed part of his reasoning why he thought the fire had started at a position closer to the gate, he said that he nevertheless was of the view that the fire should have burnt to a point further north than it had by the time he arrived, given that the fire line was only about 50 metres north of the rock pile location and about 100 metres to the south. In effect, he thought that geometrically speaking the northern and southern boundaries of the fire should have been equidistant from the rock pile if it had started on the verge adjacent to it.
- 1.80. Mr Puckridge also admitted that a major factor influencing his opinion was his belief that it was only a very remote possibility that a vehicle could start a fire<sup>269</sup>. Having said that, he did agree that if one were to drive a vehicle with a faulty exhaust system over stubble or pasture grasses on an extreme fire danger day, one would only be '*asking for trouble*'<sup>270</sup>. Mr Puckridge at various times in his evidence also referred to the undesirability of vehicles being driven around on private property during the summer time because of the fire risk associated with that practice. But, as I have said, Mr Puckridge seems to have held the belief that such was a remote possibility.
- 1.81. When Mr Puckridge gave evidence on the second occasion he had by then been made aware that Mr Dahlitz was responsible for the gates being open and that Mr Visic had

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<sup>267</sup> Transcript, page 4929

<sup>268</sup> Transcript, page 4929

<sup>269</sup> Transcript, page 5001

<sup>270</sup> Transcript, page 5018

not been so responsible. He knew this because, as seen earlier, Mr Dahlitz had approached him after the latter had read about Mr Puckridge's evidence in the local newspaper. On the second occasion on which Mr Puckridge gave evidence he said that although he now knew how the gate had been opened, and although that now effectively removed one plank of his theory that the fire had started near the gate, it still did not change his view as to where the fire had started.

- 1.82. In my view two matters have influenced much of what Mr Puckridge has said. He erroneously believed that Mr Visic had left the gate open and had also obviously believed that Mr Visic had at some point had his vehicle near the gate. There appears to have been an assumption on his part that the fire's origin was somehow intrinsically linked with Mr Visic's presence at the scene. He believed that Mr Visic had been at the gate, ergo, the fire started near the gate. Mr Puckridge's impression that Mr Visic was responsible for the fire would only have been reinforced by what Mr Visic said to him. I will come to that shortly. The other factor influencing Mr Puckridge's thinking is a matter affected by significant uncertainty, namely the direction of the wind. As to this aspect, Mr Puckridge has maintained that the wind was coming from a due westerly direction. It is the direction of the wind that, to him, means that the fire must have started further to the south than the rock pile area. In my view the evidence is by no means clear that at all material times the wind was coming from a due westerly direction. It may well have been coming from a due westerly direction by the time Mr Puckridge arrived at the location, but other evidence that I have already referred to very much suggests that the wind was in the north-western quadrant at the time the fire started. Mr Puckridge may not have arrived at the location until as late as say 3:30pm, whereas the fire could have been in existence from as early as 3:12pm if Mr Camilleri's estimate is correct. Mr Puckridge in fact had a belief that the fire had been in existence for some little time because of the extent of the burning to the gatepost and because of the fact that vegetation appeared to have burnt out to a certain extent in the vicinity of the gateway. I have already referred to the evidence of Mr Casanova who was travelling in a northerly direction along Duck Lake Road when he saw the smoke go up for the first time. He believed that at all material times the wind was coming from the north-west quadrant.

- 1.83. If the wind had been coming from more of a north-westerly direction at the time the fire started, it could, in my view, account for the fire having travelled further to the

south from the location of the rock pile than to the north of it. At the very least, a wind from a north-westerly direction undermines Mr Puckridge's geometric theory to a significant extent. A wind from a north-westerly direction would support the scenario that the fire burnt its way down to the gateway and to the bare earth track, and having burnt out there, then burnt up to the north after the wind change to the west and then south-west.

1.84. Mr Puckridge was cross-examined by Mr Harris about the possibilities associated with a wind more from the north-west. Mr Puckridge in answering Mr Harris' questions about this issue said that he did not believe that the wind could have been a bit north of west as having lived in the location all of his life, he is quite familiar with the directions of the compass. He said it was as close as west as you can get<sup>271</sup>. The following questions and answers were exchanged between counsel and Mr Puckridge:

'Q. In that period of time you are not in a position to say whether or not in that period the wind might have been a bit north of west even though, when you got there and made an observation of the smoke, it might have been from the west.

A. Yes, I mean, I can't say that it definitely wouldn't have - that that wouldn't be a possibility.

Q. No, if the wind had been a bit north of west in that period of time, that half hour before you got there and made your observations, that might be an explanation for why the lateral creep of the fire northwards was a bit less than you thought it might otherwise have been.

A. Yes, but then - I mean, if that is the case, if it was more north-westerly to start with, I would have expected it to have perhaps jumped that track, gone through and spread further south.'<sup>272</sup>

It was put to Mr Puckridge that the lack of south-eastern progression of the fire under a more north-westerly wind was due to the natural firebreak in the form of the track leading from the gateway. Whilst Mr Puckridge appeared to express qualified agreement with that proposition, he added that if the wind had been coming from the north-west he would not have expected the northern boundary of the fire to have been as north as it was<sup>273</sup>. However, if the wind had changed more to the west by the time Mr Puckridge arrived, it seems to me that the northern boundary of the fire if it had started where Mr Visic had parked his vehicle, would be in about the position it was when Mr Puckridge observed it for the first time.

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<sup>271</sup> Transcript, page 4997

<sup>272</sup> Transcript, pages 4997 and 4998

<sup>273</sup> Transcript, page 4998

1.85. There were two further planks of Mr Puckridge's theory that are questionable. As seen, he doubted very much whether a vehicle was capable of starting a fire. Evidence that I will discuss below would very much tend to suggest otherwise. Mr Puckridge seems to entertain a belief that there was some other method by which this fire started, but which nevertheless involved Mr Visic. Mr Puckridge seems to have been fixated for some time on Mr Visic's supposed activities at his gate. The other matter referred to by Mr Puckridge was that there was, in his view, insufficient grass at the side of the road adjacent to the rock pile to have been ignited, particularly by a motor vehicle. He said that the grass was denser near the gate, but that there were sheoaks commencing about 20 metres or so from the gateway and continuing north-west along the side of the road<sup>274</sup>. Those sheoaks were present at the location where Mr Visic said he parked his vehicle. Although the area that had been burnt had been bulldozed by the time the police came to conduct any detailed analysis of the location, the unburnt and remaining vegetation to the north of the burnt area is nevertheless informative. The vegetation on the eastern side of the road to the north of the rock pile area is depicted in two booklets of photographs<sup>275</sup>. Exhibit C54c, photograph 3 depicts Lady Franklyn Road looking north. The northern most edge of the bulldozed area is shown in that photograph, as is the beginning of the roadside vegetation on the eastern side of the road north of the rock pile location.



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<sup>274</sup> Transcript, page 5003

<sup>275</sup> Exhibits C54c and C54d

Exhibit C54c, photographs 4 through 7 depict grass on the eastern side of Lady Franklyn Road. The grass is quite clearly thick and tall. It was also very dry. There is no evidence to suggest that the vegetation on the eastern side of the road opposite the rock pile was any different to what is depicted in those photographs. The location at the side of the road opposite the rock pile is only a matter of some 60 to 70 metres from the southern extremity of that remaining roadside vegetation on the eastern side of Lady Franklyn Road.



Shows the type of vegetation nearest the cleared area on the same side of the roadway.





This small shrub was 40cm in height.



The taller grasses were in excess of 100cms high.





In some areas along this road the dry grass was much thicker and higher.

- 1.86. The evidence of Mr Puckridge and Mr Dahlitz have certain common features. Although they did not arrive at the same time, their evidence is that by the time they independently reached the gateway, the fire had progressed to that location. The other common feature is that the fire did involve the roadside vegetation to the north of the gateway as well as the stubble in the paddock on the eastern side of the road. The major difference between their accounts was that whereas Mr Puckridge said that the northern extremity of the fire was north of the rock pile area, Mr Dahlitz said that by the time he arrived it was still south of the rock pile area. The difference between their versions is arguably explicable on the basis that Mr Puckridge arrived some time after Mr Dahlitz. I will refer again to this difference because Mr Gould commented upon it in a supplementary report that he prepared during the course of the Inquest.
- 1.87. Mr Dahlitz gave evidence after Mr Puckridge. After Mr Dahlitz had given evidence, Mr Puckridge was recalled to the witness box. Mr Dahlitz gave the impression that he was clear in his recollection about the extremities of the fire. For my part, I doubt whether his recollection is reliable. He told me that when he and Mr Puckridge visited the location, Mr Puckridge did not explain to him his theory about where the fire started, leaving one with the impression that any view that Mr Dahlitz had formed about either that issue or about the position of the extremities of the fire, was independently formed. Mr Puckridge on the other hand said that he told Mr Dahlitz

on that occasion about his theory. He explained his theory to Mr Dahlitz in these terms:

'Well basically my theory was that where Mr Visic reckoned he parked, and with the direction of the wind at the time and the spread of the fire, that I would have thought that that northern boundary, northern edge of the fire would have been further up the paddock if Mr Visic - like the fire had started where Mr Visic said he had parked his vehicle.'<sup>276</sup>

Mr Puckridge also said that he thinks he probably told Mr Dahlitz that he believed Mr Visic had parked near the rock pile. It is inconceivable in my view that when Mr Puckridge and Mr Dahlitz had their meeting near the gateway that they would have not discussed Mr Puckridge's theory. Clearly they did and I accept Mr Puckridge when he says they did. I think a lot of what Mr Dahlitz has told me must have been influenced by what Mr Puckridge told him at their meeting at the gate.

- 1.88. Mr Gould, the fire progression expert, was asked to comment on the evidence of Mr Puckridge and Mr Dahlitz. As part of his assessment, Mr Gould refers to the Port Lincoln and Coles Point AWS data that I have already referred to. Much of what Mr Gould has said in relation to this particular issue is undermined by the Bureau of Meteorology's caveat that the data to which I have referred cannot necessarily be relied upon as a guide to the weather conditions at the Lady Franklyn Road location. However, the opinion expressed by Mr Gould suggests that in between the arrival of Mr Dahlitz at the gate and Mr Puckridge's arrival, the fire could have progressed in a northerly direction. This could explain the differences in their observations as to the northern extremity of the fire. I did not find this observation to be particularly helpful. Much of what Mr Gould has said is not only heavily reliant upon the accuracy of the BoM data, it is also reliant upon the accuracy of Mr Dahlitz's and Mr Puckridge's observations. This is not in any way being critical of Mr Gould. It just so happens that any view he might express, as with many expert witnesses, depends on the accuracy of the information he is given. Indeed in Mr Gould's second supplementary report, in dealing with the issue he states:

'Since most of the vegetation around the origin had been disturbed, and without a field inspection of the burn vegetation around the double farm gate it is difficult to ascertain the exact location of the origin of the fire on 10<sup>th</sup> January 2005.'<sup>277</sup>

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<sup>276</sup> Transcript, page 15585

<sup>277</sup> Exhibit C175e, page 4



Mr Gould said in his second supplementary report that *'it is highly likely the fire could have started near the double farm gate'*<sup>278</sup>. However, this opinion is prefaced by the qualification that the description and location of the fire by Mr Dahlitz and Mr Puckridge around the double farm gate is accurate. In addition, another qualifying factor is the accuracy of any estimation as to the time difference between their arrivals at the scene. Mr Gould said that:

'... a fire burning in grass fuel, will respond very quickly in its shape, in its size and its direction of movement with a slight change in wind direction.'<sup>279</sup>

Nevertheless, Mr Gould seemed to be impressed with one common aspect of the evidence of Mr Dahlitz and Mr Puckridge and that was that at the time of their arrival, the fire had reached the gateway area. If this was correct, Mr Gould was of the view that the fire could have started at that location. However, under cross-examination, this passage of evidence took place:

- 'Q. If I can just take you to your opinion or observation on p.4 where you said in the last sentence on p.4 of that report that the fire could have started near the double farm gate. I suggest to you that taking into account the fact that we don't have accurate observations as to the weather conditions, we don't have a precise time of ignition of the fire and that the observations as to the extent of the fire do vary amongst the accounts that have been given to you, which is only to be expected, bearing in mind that we don't actually know the wind conditions leading up to the time that the observations were made by the witnesses, Puckridge and Dahlitz, that you've referred to, would you agree with me that their observations are not inconsistent with the point of ignition of the fire having been at some point north of the farm gate.
- A. By looking at these gentlemen's statements, particularly from Mr Dahlitz, the comment that he saw the northern part of the fire to the north there, so I think we came to a discussion yesterday. The point of origin could be between the north of the farm gate up to where he saw the edge of the fire. I think that that information, intelligence that he provided was accurate but it does open it up, the possibility that we can't pinpoint it exactly on the farm gate. No, we can't but you can move north to a certain distance.
- Q. The extent of that distance might be gauged by the reliability of the information as to the observation of the location of the fire at various times.
- A. That's right.
- Q. But certainly I think you have agreed with me that their observations are not inconsistent with the fire starting at some point north of the farm gate.
- A. Yes.'<sup>280</sup>

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<sup>278</sup> Exhibit C175e, page 4

<sup>279</sup> Transcript, page 17416

- 1.89. I am of the view that the evidence of Mr Dahlitz and the evidence of Mr Puckridge is not particularly reliable as far as their observations of where the northern extremity of the fire was as the time of their respective arrivals at the gate. In any event, a lot of what Mr Puckridge theorised about was premised on the existence of a westerly wind. The evidence is by no means clear that this was the case in the initial stages of the fire. The evidence of Mr Casanova would suggest it was not. There is a strong likelihood that the wind had changed from the north-west quadrant to the west. As Mr Gould states, a fire will respond to quite small changes in the wind.
- 1.90. Mr Cox was also asked to comment upon the observations of Mr Dahlitz and whether in his view they carried any implication in terms of the point of origin of the fire. The following exchange took place in the course of Mr Cox's evidence:

'Q. Can I ask you to assume the following set of facts, that at the point where Mr Visic parked his vehicle in spot 2, that is as you understand it, opposite the mound.

A. Yes.

Q. He parked his vehicle parallel to the direction of the road, pointing towards Duck Lake Road, with his near-side tyres just off the formed part of the road and in such a position that the exhaust system of his vehicle was wholly over the road and that there was no vegetation underneath that part of his vehicle. I would also ask you to assume that the fire at the time an individual arrived within the first 30 minutes of the fire and perhaps 20 minutes, covered the ground from the gatepost that we have spoken of earlier, to a position to the north of the gatepost but not as far north as the mound that we have spoken of. If those facts are true, do you have an opinion as to where the fire may have started.

A. The fire then didn't start at the position where he parked his vehicle. It had started somewhere between there and the gatepost and if you then relate that to the three mechanisms that I spoke about in my report, the ejection of a particle must have occurred, if that was the cause, as the vehicle was pulling away from the parking spot but before it passed the gatepost.'<sup>281</sup>

The opinion there expressed by Mr Cox, namely that the fire did not start at the position where Mr Visic parked his vehicle, is self-evidently accurate if the fire had not reached a position as far north of the gateway as the rock pile, which Mr Dahlitz says was the case. The opinion is thus underpinned by the accuracy of Mr Dahlitz's observation. I have already expressed the view that Mr Dahlitz's observation in this regard is not to be relied upon. Accordingly, Mr Cox's view takes the matter no further.

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<sup>280</sup> Transcript, pages 17533 and 17534

<sup>281</sup> Transcript, pages 16405 and 16406

- 1.91. All this leads me to conclude that to attempt to identify a precise point of origin from the observations of Mr Dahlitz and Mr Puckridge, and from their theorisations, and from their observations about wind direction, is an unrewarding exercise. None of their evidence, nor that of Mr Gould, indicates one way or the other where the fire started precisely, and there is nothing in their evidence to negate the possibility that the fire started where Mr Visic said he parked his vehicle adjacent to the rock pile. Indeed, when one examines the relative probabilities of the matter, nothing in my view can be determined as to whether the fire probably started in one location along that burnt stretch of the Lady Franklyn Road vegetation as opposed to another.
- 1.92. I now deal with the observations of the fire extremities as described by Mr Visic. Mr Visic, of course, maintains that he did not see the fire start. He asserts that he saw the actual fire for the first time on Duck Lake Road when he returned from the highway<sup>282</sup>. At that stage he did not go past the junction of Lady Franklyn Road and Duck Lake Road. It is clear that from his position at the junction he would not have been able to make any accurate assessment of where the northern extremity of the fire was by that time. Mr Visic maintains that it was only after he had returned to the scene, having made his 000 call, that he ventured along Lady Franklyn Road to see where the fire was at that stage. Mr Visic would be in no position to offer any sort of reliable history as to how or where the fire originally commenced, or of its progression after its commencement, if he is to be relied upon when he says that he did not see it start.
- 1.93. When Detectives took Mr Visic to the scene, he was asked to point out the extremities of the fire at the time he arrived back at the scene having dialled 000. The Detectives and Mr Visic walked to a location that was directly opposite the rock pile and where Mr Visic said he had parked his vehicle. Mr Visic indicated to the police that the fire had been heading in a northerly direction and had passed the location of the rock pile. He said that the area to the south had already burned. He said that the wind direction at that stage was *'more or less coming from south-west here and blowing it up that way'*<sup>283</sup>. He indicated that it was blowing to the north. He estimated that the wind speed would have been less than 10 knots. In his written witness statement made later that day Mr Visic did not say anything that was inconsistent with what he had said at the scene.

- 1.94. In evidence, Mr Visic said that when he returned to the scene and saw the fire for the first time from the intersection of Duck Lake Road and Lady Franklyn Road, he could not estimate where the northern extremity of the fire was at that stage, but said that the fire line at its southern end appeared roughly to be in a straight line following the track that leads from the double gateway. Counsel Assisting asked Mr Visic whether at that stage he had entertained any thought as to whether or not the fire might have had something to do with him and his activities. Mr Visic said that he did, and when asked why, he said *'I thought "Jeez, that's the paddock that I was in", you know, "I hope this wasn't my fault".'*<sup>284</sup>
- 1.95. When he returned on the second occasion, having made his 000 call at Wangary, he said that the fire looked like it had only just passed the rocky area where he had originally been situated. He said that he would estimate that the fire was about 20 metres past the rocks and that the northern boundary of the fire was extending in a north-easterly direction.
- 1.96. Mr Visic at no stage suggested that the fire had originated by the gate, or at any other specific location. Mr Visic has maintained at all times that the only location in which he parked on the eastern side of the road was the location directly opposite the rock pile. He said that after he left that location, he drove south along Lady Franklyn Road close to its western verge, that is to say, closer to the side of the road opposite to where he had been parked.
- 1.97. That Mr Visic thought that he may have started the fire is clear. He said as much to Mr Puckridge when he met him on the road after he returned for the second time. He even thought that when he had returned the first time and before he actually took a closer look. Later activities as described in his statement to the police would also bear out the proposition that on the Monday afternoon he entertained the idea that he had started the fire by some method or another. He expressed concern about that to members of his family. Some have urged me to find that Mr Visic knew he had started the fire because he had seen it start for himself. Be that as it may, at the very least it is clear that on the Monday, both when at the scene and later when he spoke to his relatives, he entertained the idea that his activity had possibly started the fire. Mr Visic has said that his activities on the eastern side of Lady Franklyn Road had been

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<sup>282</sup> Transcript, page 15082

<sup>283</sup> Exhibit C168b, page 18

confined to the rock pile and to the verge of the road adjacent to the rock pile. The verge adjacent to the rock pile was the only location where he said his vehicle had been stationary. If it is so objectively clear that the fire did not start where he says he parked his car, then the question needs to be considered, why did Mr Visic entertain the idea that his activity might have started the fire?

1.98. In my view, again as with Mr Dahlitz and Mr Puckridge, there is nothing that Mr Visic observed about the fire's progression which necessarily indicates where it had started. He states that he saw the fire at close quarters at a time when the wind was from the south-west. He stated in evidence that he thought it was from the south-west when he had been there earlier. Other evidence that I have referred to would suggest otherwise in my view.

1.99. When the evidence of the witnesses who saw the fire at its very early stage is carefully examined, in my opinion no conclusion can be drawn about its point of origin other than it occurred in the roadside vegetation to the north of the gateway on the eastern side of Lady Franklyn Road but somewhere to the south of the northernmost fire line in that vegetation. The evidence is insufficient to establish where precisely along that stretch of roadside vegetation the fire started. No specific location along that stretch of roadside vegetation has been shown on a balance of probabilities, to be the precise point of origin. Therefore, in my opinion the precise point where the fire started could have been the location where Mr Visic states he parked his vehicle.

1.100. The condition of Mr Visic's vehicle

There are a number of sources of evidence in relation to the condition of Mr Visic's vehicle. Mr Visic gave evidence about that issue himself. A SAPOL Technical Services Officer examined the vehicle. The vehicle and exhaust system were also examined scientifically.

1.101. The police examined Mr Visic's vehicle for the first time on Thursday, 13 January 2005. The vehicle in question was a white Toyota 1994 Series 80 Landcruiser, registration number (SA) WGZ-293. Senior Constable Tully, who is a qualified mechanic and to whom I have already referred, examined the vehicle. Senior Constable Tully took photographs in and around the vehicle, and in particular of the

engine compartment and the exhaust system. The vehicle was later examined by a scientist at Amdel (Australian Mineral Development Laboratories). By then, however, much of the exhaust system as it existed on the vehicle on 13 January 2005 had been replaced or otherwise altered. The police did not seize the vehicle on 13 January 2005. However, a number of features of the exhaust system were identified which led Senior Constable Tully to conclude that exhaust gases were escaping from the underside of the vehicle. He opined that the extent of the escape of gases was such that they could ignite dry vegetation. In due course, scientific analysis demonstrated that this conclusion was unsupportable. However, the possibility of the escape of burning exhaust particles igniting dry vegetation was an entirely different matter. I return to the scientific evidence later.

- 1.102. Senior Constable Tully's evidence is useful to the extent that it at least gives one an idea of the manner in which the exhaust system had been fitted to the vehicle and of the general state of the system.
- 1.103. Senior Constable Tully's photographs of Mr Visic's vehicle are part of Exhibit C66b.
- 1.104. The features identified by Senior Constable Tully are as follows. The vehicle was fitted with a non-standard set of extractors. The extractors were mounted on the right-hand side of the engine and consisted of six single pipes extending out from each cylinder into two main exhaust pipes, three extractors in each. These two pipes then merged into one such that there was only the one exhaust outlet.
- 1.105. The single pipe extended down and back towards the rear of the vehicle on its right-hand side. The front engine pipe had an outside diameter of 60mm. This was then inserted into what appeared to be a non-standard length of stainless steel flexible pipe that extended for several centimetres where it then joined on to the pipe leading to the rear muffler<sup>285</sup>.

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<sup>285</sup> Exhibit C66b, photograph 53



Photograph 53 Close-up view of the stainless steel after market flexi pipe fitted under the front right seat.

At the engine end of the flexible pipe, the single exhaust pipe leading from the set of extractors was inserted into the flexible pipe. The flexible pipe had an inside diameter of 63mm. This meant that there was play of 3mm between the external surface of the exhaust pipe and the internal surface of the flexible pipe. Although a clamp had been affixed to the outside of the flexible pipe, it failed to perfectly secure it to the flexible pipe. The result was that there was some give both vertically and laterally between the exhaust pipe and the flexible pipe. Senior Constable Tully observed that the smaller front exhaust pipe could move up and down within the play of 3mm and as well, depending on the acceleration of the motor, the two pipes could move laterally between 6mm and 8mm. It was clear that exhaust material could and did leak from this imperfect join.

- 1.106. At the other end of the flexible pipe there was another join to the rear section of the exhaust system. Senior Constable Tully observed evidence of leaking exhaust gases at one section of the flexible pipe. To the rear of that join the exhaust pipe ultimately met a muffler box. This muffler was not a standard Toyota muffler. It was what is sometimes called an 'after market' part. Beyond the muffler to the rear of the vehicle

was further exhaust piping which ended at the rear of the vehicle on its right-hand side.

- 1.107. The flexible pipe to which I have referred was measured to be 43cm off the ground. The rear muffler was measured to be 38cm off the ground.
- 1.108. Senior Constable Tully told me that he detected three separate locations along the exhaust system of Mr Visic's vehicle from which exhaust material could escape. He tested for leaks by running the motor and feeling manually for the escape of gas. The first location was where the extractors joined onto the exhaust pipe. At that location Senior Constable Tully located a crack from which he detected the escape of exhaust gases. The second location involved the imperfect join between the pipe leading from the extractors to the flexible pipe. The third location was along the length of that flexible pipe.
- 1.109. In relation to the rearward end of the flexible pipe, and its join with the exhaust pipe proper, Senior Constable Tully said that there was no evidence of any escape of exhaust gases from that location and that the join was solidly mounted. He said that there was no soot at that location to indicate any escape of exhaust gas.
- 1.110. Further to the rear, he did not detect any further cracking in the exhaust pipe. In relation to the muffler box itself, Senior Constable Tully told me that his examination of the muffler was thorough and that he looked at both sides of the muffler. The muffler and exhaust system in general was on the driver's side of the vehicle. Upon further scientific examination that followed Senior Constable Tully's inspection, a small hole was located on the inward side of the vertically mounted muffler box. Senior Constable Tully told me that he examined both sides of the muffler box and that the hole was not present at the time of his examination. Photographs were taken of the muffler. Unfortunately only the outside surface of the muffler box is visible in any of the photographs. The inward side, on which the hole was ultimately detected sometime later, is not shown in any of the photographs. I return to this issue when I discuss the evidence of other persons who examined this system.
- 1.111. Senior Constable Tully's opinion and his report that the extent of the escape of exhaust gases from the system were such that they could ignite dry vegetation has to be examined against the fact that Senior Constable Tully is not an expert when it comes to the temperatures that might be required to ignite dry vegetation and the



temperatures at which exhaust gases exit an exhaust system of a vehicle. I gave no weight at all to his observations in that regard. This is not to demean Senior Constable Tully. This is an issue that requires specialist scientific analysis and a level of knowledge that Senior Constable Tully would not have.

1.112. Senior Constable Tully told me that as far as he was concerned the vehicle was in good working order, apart from the defects that he identified in the exhaust system.

1.113. Scientific examination of Mr Visic's exhaust system

The vehicle was examined by Mr Monty Luke who is a scientist employed by Amdel. The vehicle came into the possession of Amdel on 9 February 2005. The vehicle had been seized by the police from Mr Visic on 2 February 2005. In the intervening period the vehicle had been in Mr Visic's possession. By the time the vehicle was seized by the police and submitted to Amdel for scientific inspection, the exhaust system had been modified by Mr Visic. While the muffler and connecting pipes that Senior Constable Tully had seen still remained on the vehicle, the extractors and the flexible steel piping that had the imperfect join at the engine end had by then been removed from the vehicle and had been replaced with other parts. However, the removed parts were also seized by the police and provided to Amdel at the same time as the vehicle. Mr Visic had kept those parts notwithstanding the fact that he had replaced them on the vehicle after its inspection by police on 13 January 2005. There is no direct evidence as to whether that part of the exhaust system that remained on the vehicle and the part of the exhaust system that had been removed from the vehicle were in identical condition to the condition they had been on 10 January 2005. The only measure of similarity in the condition of the two parts is to be based on the observations of Senior Constable Tully and the evidence of Mr Visic himself. For instance, the hole in the muffler, as observed by Mr Luke, was not observed by Senior Constable Tully. While that hole may have been a potential source of escaping material from the exhaust system, I cannot safely conclude that the hole was present in January 2005. Senior Constable Tully was adamant that the hole was not present on the muffler on the day that he examined it, and although there is no photograph confirming what he told me, I feel bound to accept his evidence on that issue, there being no evidence to the contrary. Likewise, a crack that was observed at Amdel in the exhaust pipe, just in front of the muffler box, was not identified by Senior Constable Tully and so I place no weight on its existence either.

- 1.114. It is unfortunate that the vehicle, or at least the exhaust system, was not seized by the police in January 2005. By the afternoon of 13 January 2005, an issue as to whether or not the vehicle had by some means started the fatal fire had clearly been identified. Apart from the fact that the exhaust system had already been partially removed, the vehicle was never tested to determine whether it was, at the time of the fire, generating carbonaceous particles of a sufficient size to ignite vegetation. However, there was a body of circumstantial evidence from which a conclusion might ultimately be drawn that Mr Visic's vehicle was so juxtaposed in time and place to the origin of this fire that there was no sensible explanation other than that the cause of the fire was connected to the vehicle. Therefore in my view, notwithstanding the fact that the vehicle had not been seized and immediately examined following the fire, the issue as to whether or not the vehicle was the cause of the fire was still a matter to be investigated. I kept an open mind about that issue until I heard all of the evidence.
- 1.115. Mr Luke of Amdel was able to locate irregularities in that part of the system that had been removed but which had not been detected by Senior Constable Tully. In relation to these irregularities it is not surprising that Senior Constable Tully did not see them as they are not immediately obvious and probably would only have been seen after that part of the system had been removed. Mr Visic, on the other hand, gave clear evidence that in my view establishes that certain defects in the extractor flanges seen by Mr Luke were present on 10 January 2005.
- 1.116. Mr Luke prepared two reports<sup>286</sup>. In Mr Luke's first report, he describes a number of irregularities in the exhaust system that bore evidence of leakage of exhaust material. They are:
- a) 'Exhaust extractor header set consisting of six ports combined to two ports. Header set marked Genie. The exterior of number 2 and 3 header pipes were noted have carbon soot staining associated with pipe cracking at the flange welds, figs 2 & 3. the cracking extended around approximately 50% of the pipe circumferences. Repair compound had been applied to the two cracked pipes. The compound had mostly fallen off.  
  
External carbon soot staining identified a cracked pipe in the tripoint connection of header pipes from ports 4, 5, 6, fig 4.
  - b) Two port header to single exhaust pipe. Circumferential cracking of the rear header was noted adjacent to the flange weld, figs 5 & 6. External carbon soot staining was apparent at this location.

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<sup>286</sup> Exhibit C173a and Exhibit C173b

External carbon soot staining identified leaks in the connection between the exhaust pipe and the associated flexible tube.

- c) Flexible tube element. Multiple leaks associated with carbon soot staining were evident on the external surface of the flexible tube, figs 7 & 8.
- d) Short bent single exhaust tube and attached flange. Evidence of a stain 30mm long identified leaks in the connection between the exhaust pipe and the alternative end of associated flexible tube, fig 8.

Hole 3mm in diameter was found in the exhaust tube adjacent to the flange, figs 9 & 10. Carbon soot staining was associated with the hole.

- e) Bent exhaust pipe leading to muffler box. External carbon soot staining identified leaks in the exhaust pipe, fig 11.

Hole 3mm in diameter was found in the side of the exhaust pipe adjacent to the muffler box weld, fig 12. Extensive corrosion was apparent on the pipe surface.

- f) Non-standard oval muffler box, unlabelled. Hole 4mm in diameter was noted in the side of the muffler box, fig 13. The central portion of the external surface of the muffler box was heat stained, fig 13.

- g) Tail exhaust pipe welded to spigot from rear of oval muffler box.<sup>287</sup>

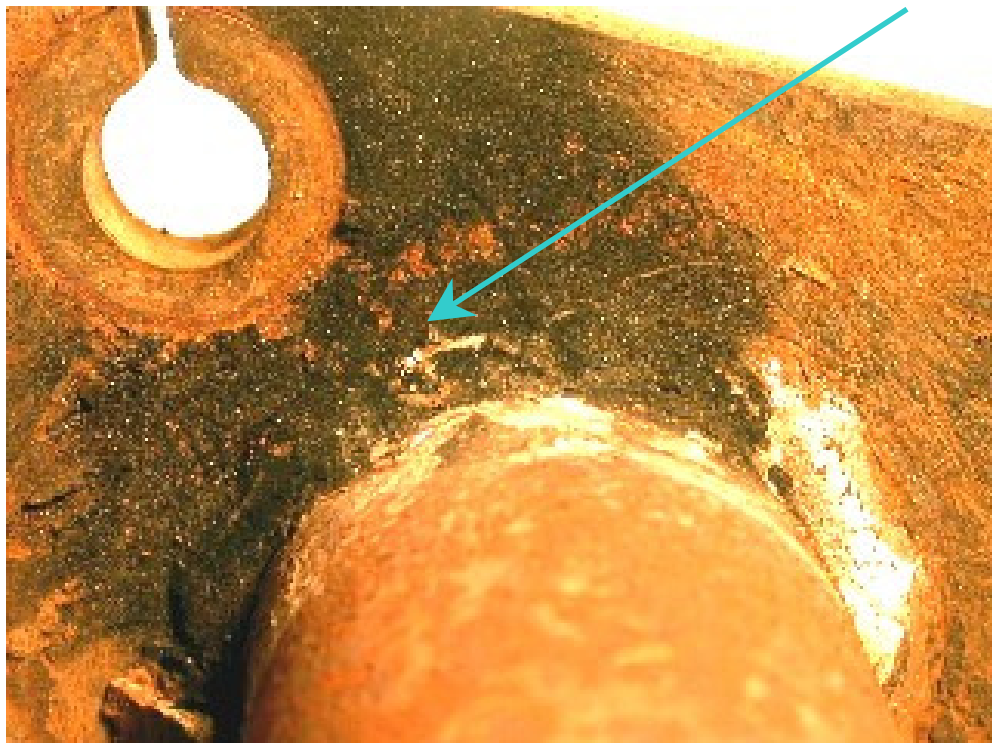


Figure 2 Detail of extractor engine flange and associated pipe showing carbon deposits, cracking (arrow) and remnant putty.

<sup>287</sup> Exhibit C173a, pages 3 and 4

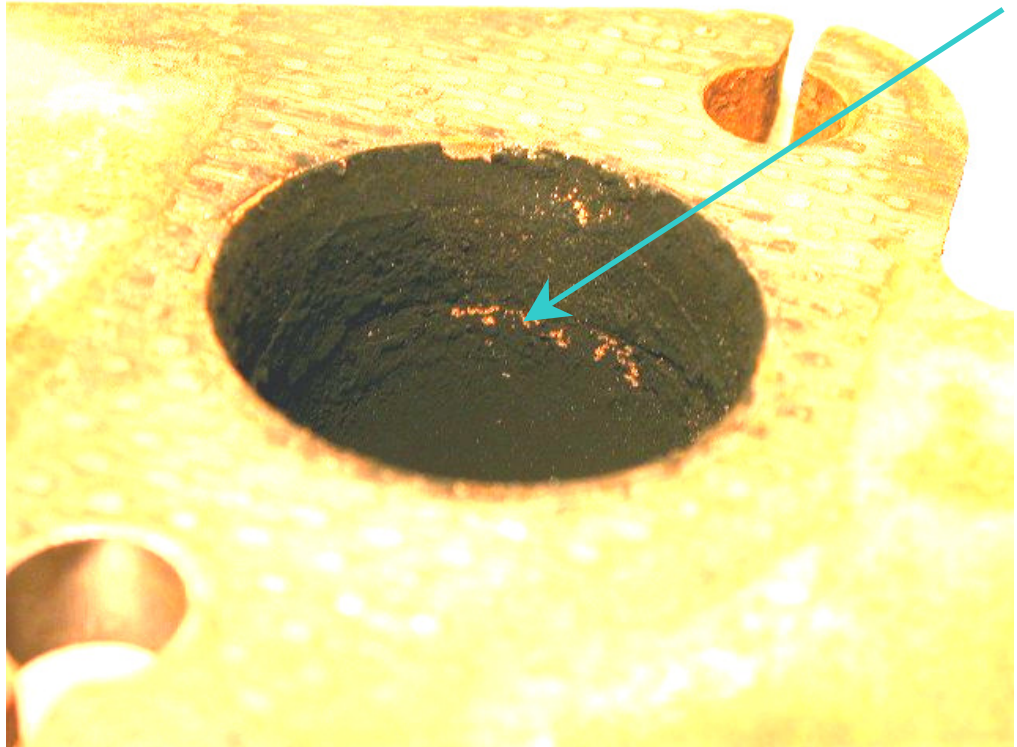


Figure 3 Internal view of extractor pipe at engine flange showing carbon coating and pipe cracking (arrow).



Figure 4 Detail of extractor tripoint connection showing carbon trail and cracked pipe (arrow). Note extensive corrosion.

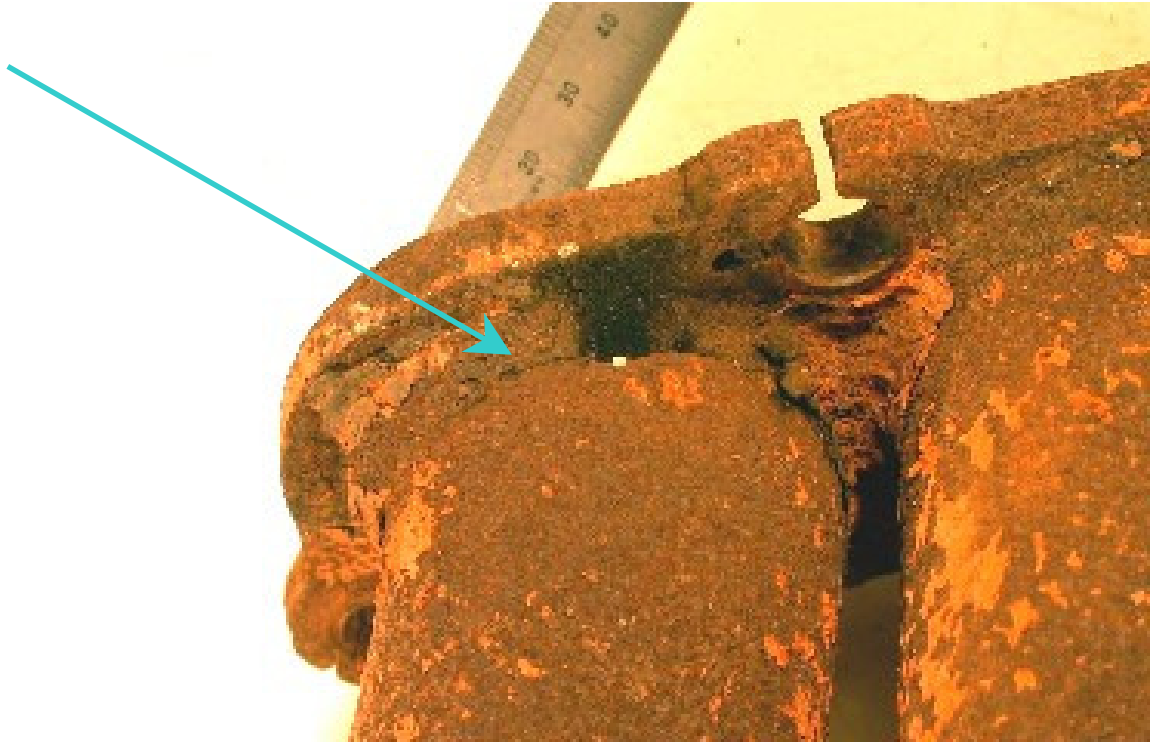


Figure 5 External view of duplex connector tube flange showing carbon deposits and cracking (arrow). Note extensive corrosion.

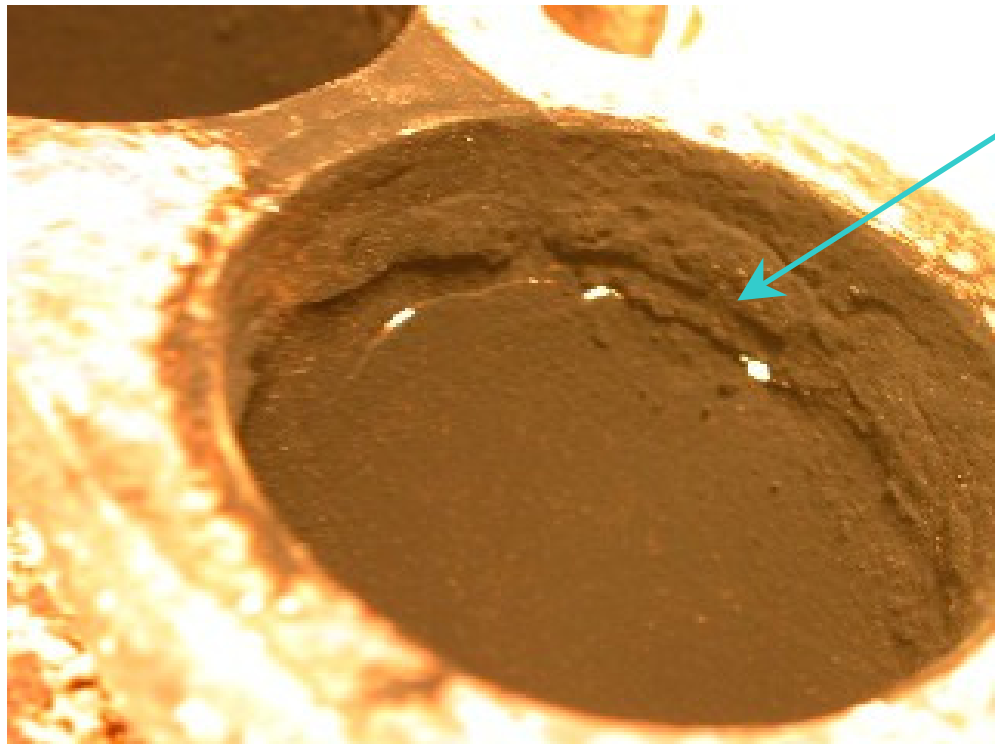


Figure 6 Internal view of extractor pipe at duplex flange showing carbon coating and pipe cracking (arrow).



Figure 7 Detail of flexible tube showing carbon soot deposits associated with tube elements.



Figure 8 Detail of exhaust pipe and flexible tube connection showing carbon deposits.



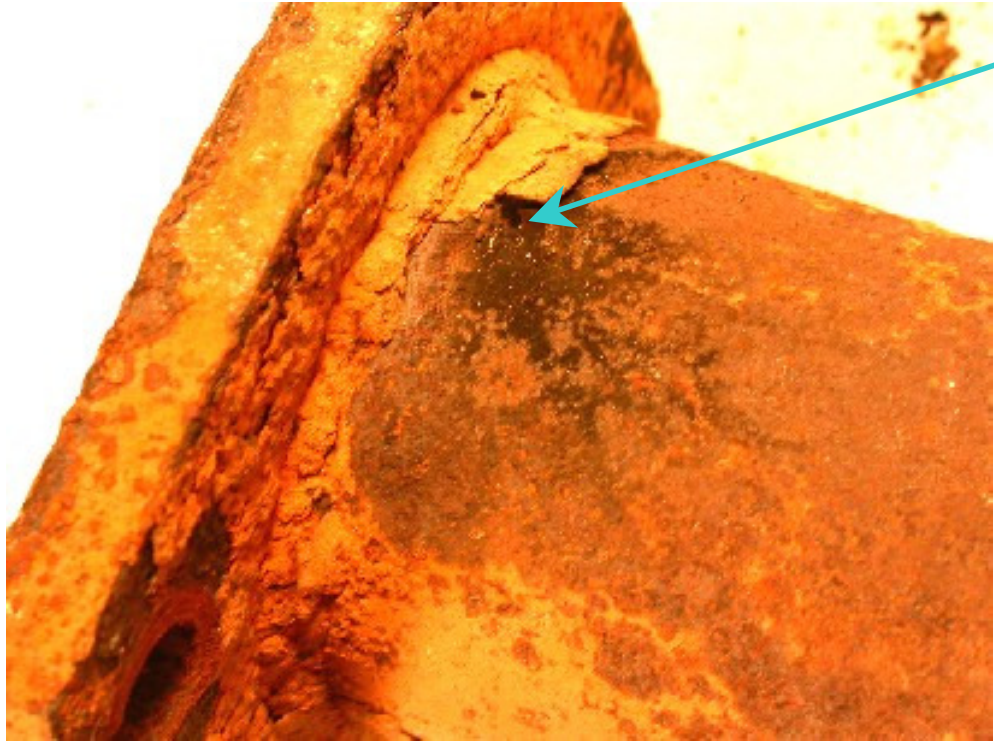


Figure 9 External view of single exhaust flange showing carbon deposits and hole (arrow). Note extensive corrosion.

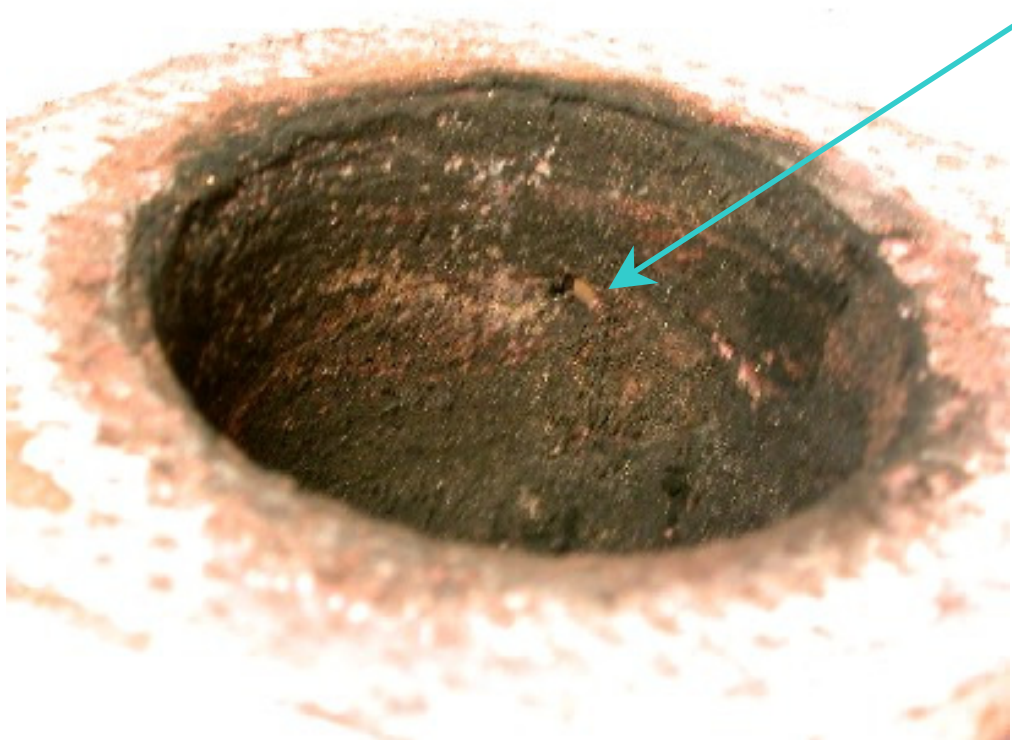


Figure 10 Internal view of single exhaust pipe at flange showing carbon soot coating and pipe hole (arrow).



Figure 11 Detail of carbon trail associated with leak on main exhaust pipe adjacent to chassis rail. Thermocouple channel #4 was located on exterior of exhaust pipe at lower right of image.



Figure 12 Location of leak on main exhaust pipe immediately adjacent front of non-standard muffler box (arrow). Note condition of weld and extensive corrosion deposit. This hole was used to locate thermocouple channel #5 in exhaust stream.



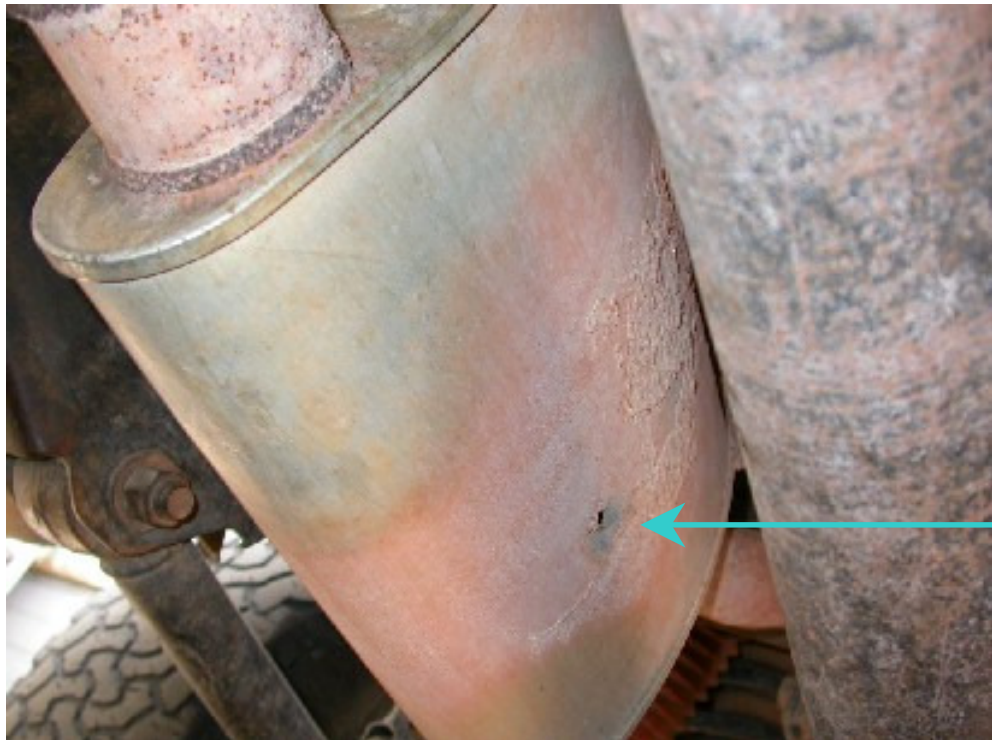


Figure 13 Location of leak in non-standard muffler box (arrow). This hole was used to locate thermocouple channel #3 in exhaust stream.

- 1.117. The defects referred to in paragraphs e) and f) above were not observed by Senior Constable Tully. In fact he said that those defects were not present when he examined the vehicle in January 2005. As I say, I act upon Senior Constable Tully's assertions in that regard.
- 1.118. The after market muffler that had been present on Mr Visic's vehicle in January 2005 was x-rayed by Amdel and was discovered to consist of three internal chambers. The muffler contained a direct exhaust flow path between the inlet and the exhaust openings. On x-ray analysis no evidence of carbon soot build up was observed in the muffler box. Mr Luke makes the observation that the muffler box fitted to Mr Visic's vehicle was non standard. This observation was later confirmed by other witnesses, including a representative of Toyota. Evidence that I will later discuss suggests that the standard, or OEM, muffler for this particular vehicle was a much more sophisticated device. Mr Luke also made the observation that the muffler actually fitted to Mr Visic's vehicle contained no spark arrestor within it. However, Mr Luke purported to identify what he believed to be a spark arrestor in the internal workings of a standard Toyota muffler that, for the purposes of his examination, was purchased from Toyota. Evidence that was later given would suggest that mufflers, be they

standard or otherwise, for this particular type of vehicle did not contain a spark arrestor as such, but that the standard Toyota muffler, because of its more complex internal configuration, was much more efficient in terms of preventing burning carbon particles, otherwise known as sparks, from leaving the exhaust system through the rear tail pipe. Other evidence also suggests that a spark arrestor is a device that is in the main utilised for stationary internal combustion engines, such as generators, that might emit sparks from the exhaust. In those circumstances a spark arrestor usually consists of some sort of mesh device which will physically intercept the passage of burning carbon particles of a certain size.

1.119. I not only heard evidence from Mr Luke about exhausts and burning particles. I also heard about those topics from Mr Simon Cox, to whom I have already referred, from a Toyota representative by the name of Mr David Lewis and from an engineer by the name of Mr Graeme Burton. In addition, Mr Peter Story, a Port Lincoln mechanic whose evidence I will refer to later, gave relevant evidence during the course of the Inquest about the characteristics of exhaust systems and mufflers in general.

1.120. Can a vehicle exhaust system cause a fire?

The totality of the evidence leads me to conclude that there are a number of different ways in which the exhaust system of a motor vehicle could potentially set fire to dry vegetation. There are three mechanisms that are relevant here, namely:

- 1) Exposure of the dry vegetation to hot exhaust gases from an exhaust system;
- 2) Direct contact between a hot surface of the exhaust system and dry vegetation;
- 3) The expulsion of exhaust particles from the exhaust system and their subsequent contact with dry vegetation.

1.121. Mr Luke considered the possible effects of mechanisms 2) and 3) above.

1.122. Mr Luke expressed a number of conclusions in his first report. I set out those conclusions as follows:

'The vehicle exhaust system examined contains numerous holes and leaks. The leaks are associated with loss of carbon soot material.

The exhaust system fitted to the vehicle at the time to the fires does not contain a spark arrestor.

It is considered possible that the exhaust system may have been able to supply a source of ignition through one of the leaks.

Alternatively the exhaust system may act as an ignition source by direct contact. Surface temperatures measured during testing are considered sufficient to ignite dry cellulose material.'<sup>288</sup>

1.123. Mr Luke also prepared a further report<sup>289</sup> that was intended to address the issue as to the likelihood of Mr Visic's vehicle, in the particular circumstances in which it had been used on 10 January 2005, having started the fire. In preparing that report Mr Luke was provided with a number of witness statements including Mr Mervyn Buddle's statement and Mr Visic's record of interview with SAPOL. Mr Luke also considered the statements of mechanics who normally serviced Mr Buddle's vehicle. Mr Luke was also provided with some aerial imagery of the Lady Franklyn Road location.

1.124. Mr Luke expressed the following conclusions in his second report:

'Toyota Landcruiser WGZ-293 appears to be the most likely source of the fire ignition on Lady Franklyn Road. Ignition may have occurred by contact with vegetation or ejection of hot sparks. On the balance of probabilities it is more likely that the fire was ignited due to contact of hot exhaust surfaces with vegetation, in particular during the time the vehicle was apparently parked between points D and E.

No alternative ignition sources have been found to be associated with the site of fire origin on Lady Franklyn Road. Overhead power lines, machinery, haystacks, or compost heaps were not found near the location of the fire origin.

Alternative vehicles were possibly on Lady Franklyn Road near the time of the fire ignition. It is possible that material ejected from one of these vehicles may have ignited the fire. However it is considered that this option is significantly less likely than the parked Toyota Landcruiser WGZ-293.'<sup>290</sup>

Points D and E referred to above are references to a point along the roadside vegetation. Point D is approximately 100 metres from the northern gatepost of Mr Puckridge's gateway. The point E is 120 metres from that location. The distance between point D and point E is about 20 metres and roughly represents the area of roadside vegetation along Lady Franklyn Road that is adjacent to the rock pile (or gravel pit as it is sometimes referred to) in Mr Puckridge's paddock.

1.125. Much of what Mr Luke has expressed in these conclusions are matters for me. Mr Luke's conclusions seem to have been based upon an analysis of the evidence in its entirety, as divorced from a scientific and expert examination of vehicles. I placed

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<sup>288</sup> Exhibit C173a, page 7

<sup>289</sup> Exhibit C173b

<sup>290</sup> Exhibit C173b, page 7

little weight on conclusions that appear to have been based upon an analysis of the entirety of circumstantial evidence. However, as I say the task of analysing the whole of the evidence is a question for me, based upon all of the evidence including the scientific observations and opinions given by Mr Luke and the other scientists as well.

- 1.126. As it so happens, the conclusion expressed by Mr Luke in both of his reports to the effect that the fire was probably ignited by contact between the hot exhaust surfaces of the exhaust system and vegetation was in reality not made out. In the event, both Mr Luke when he gave evidence, and Mr Cox, who gave evidence after Mr Luke, ultimately agreed that the temperatures on exhaust system surfaces that would have been generated by the use of the vehicle as described by Mr Visic would be unlikely to be high enough to ignite dry grass by contact. It is to be noted that this view of the matter, insofar as it was expressed by Mr Luke, flew in the face of the conclusions expressed in his reports. Mr Luke acknowledged this in the course of his evidence. For my part, I found a lot of what Mr Luke said about this particular issue to be confusing. All that needs to be said, however, is that if Mr Visic's vehicle was parked with the engine off for about an hour or so at the first location on Lady Franklyn Road, that he then drove it only a short distance to the second location where he switched off the motor for about a minute and then re-started the vehicle and let the motor idle with the air conditioner on for another 30 seconds before he drove off, there would not have been enough heat generated in the exhaust system to set fire to dry grass. There is no evidence that Mr Visic's vehicle was driven in any other manner. Mr Luke tested the vehicle when it was in his possession at Amdel and subjected it to an examination of the temperatures generated by the vehicle in its exhaust system using various parameters. In the main, those tests were conducted in circumstances which in my view were quite unrealistic. For example, one test involved the vehicle's engine being accelerated to its highest rev range whilst the vehicle was not in gear and was stationary. There is no evidence that the vehicle was used in any such manner at the Lady Franklyn Road location. However, it is clear to me on the evidence that I have heard that it is highly unlikely that temperatures sufficiently high to ignite vegetation from contact with the exhaust system would have been generated by Mr Visic's vehicle, given its pattern of use that afternoon. No entity in the Inquest has urged me to find that the fire started as a result of an exhaust system coming into contact with dry grass. In any event, the conclusion that I have reached is that such a scenario is highly unlikely and is to be dismissed.

1.127. Mr Luke did not deal with the possibility of the vehicle starting the fire through the escape of hot exhaust gases as opposed to burning carbon particles or sparks. Mr Cox, however, did address that question. Mr Cox concluded through his testing that the maximum temperature of exhaust gases that would have been generated by the vehicle in the circumstances in which it had been used, would have been insufficient to ignite dry vegetation in the assumed conditions, either from the tail pipe or from leaks in the system. I accept that evidence. No-one urged me to conclude otherwise. In my view the possibility of Mr Visic's vehicle having started the fire through the escape of exhaust gases, either through the tail pipe or through leaks, is to be dismissed. That leaves the issue of whether or not his vehicle could have ignited dry vegetation by the emission of a spark. I now deal with that issue.

1.128. The emission of sparks from a vehicle exhaust system

Mr Cox in his report<sup>291</sup> cited a number of scientific publications that all recognised the possibility that hot carbonaceous exhaust particles could ignite vegetation and other combustible materials. These particles originate in areas of an engine such as the exhaust ports, exhaust valves and piston heads and they can vary in size from fine granules to large irregular chunks or flakes. The scientific material that has been cited suggests that particles of 0.6mm or larger would be required to ignite such material. According to one scientific citation to which Mr Cox referred, deposits can form in the combustion chamber of an engine when incomplete combustion of fuel in the chamber leads to soot which combines with polymeric resins formed by oxidation of the lubricant. Thermal shock and vibrations during operation of the engine then cause these deposits to break off as particles. Mr Cox told me, and this proposition was supported by other witnesses, that the emission of carbon particles from a diesel motor is many times greater than that from a petrol driven motor. Mr Visic's vehicle had a diesel motor. Mr Cox told me that some literature that he had read spoke of the likelihood of a diesel motor emitting carbon particles as being one thousand times greater than that of a petrol motor. Mr Burton, the engineer, made one additional and pertinent observation as to the mechanism by which carbon particles might be created and/or dislodged. He said that in the event of carbon particles coming from the chamber of the engine, he would expect there would be more likely to be carbon deposits building up in the exhaust manifold than in the combustion chamber itself<sup>292</sup>.

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<sup>291</sup> Exhibit C268

<sup>292</sup> Transcript, page 21248

If the combustion process is as efficient as it should be, then there ought not be significant carbon deposits built up in the combustion chamber. Mr Burton said that it is more likely, from his observation, that carbon will be deposited within the exhaust system in the exhaust manifold. He also referred to the possibility of carbon building up in cracks in the manifold near the engine block and becoming incandescent when exposed to the high temperatures generated by the running engine. The accumulated carbon may become dislodged and travel down the exhaust tract. Mr Burton suggested that this was not a fanciful possibility but a real possibility. Mr Burton gave the following passage of evidence on this issue:

- 'Q. What I'm trying to work out is whether the theory that you have posed might have worked in the practice of this particular piece of equipment. Now if there is a build up of carbonaceous material inside an extractor system, where does that carbonaceous material come from and how does it build up.
- A. The carbon material is a by-product of the combustion process and for it to build up it needs to get an initial hold on the surface of the metal. I was asked to compare a cast iron manifold with a fabricated extractor system. In my opinion the configuration of a cast iron manifold, because it is less free flowing is in a pristine manifold more likely to provide somewhere for the carbon to lodge. In the case of an extractor system which is in good condition and has no cracks, it is less likely to provide a point for the carbon to lodge. However, if the extractor is in poor condition and has cracks in it, then those cracks provide a point of lodgement for the initial particles and as I commented earlier there then is the potential for the ongoing accumulation to form a deposit.
- Q. That can form what, inside the crack itself.
- A. Initially inside the crack, but then because like attracts like, the carbon would attach to itself and could extend beyond the crack and most likely inwards to the manifold as opposed to outside because going outwards it has got to cool - the gases and carbon will have cooled and therefore it is less likely to actually attach itself to another carbon.
- Q. So you'll get a build up in the crack itself, is that right.
- A. Yes, some accumulation in the crack.
- Q. And a build up on the inside of the crack as well.
- A. On the inside of the pipe, yes.
- Q. What about on the outside.
- A. On the outside I would expect there to be a sooty deposit, but I wouldn't expect them to adhere to one another as much because as it exits the crack and is in contact with the air, a number of factors will occur. One is that it will cool quite rapidly even though still in a warm environment, it's nowhere near the temperature that it experiences inside the exhaust system. Also of course there is more oxygen present so the fuel that might be present in the carbon particle will be consumed and it will

be deposited as a sooty deposit because it will be a much finer particle of carbon than it may have been.

Q. Let's just deal with one situation at a time. You have got this scenario where you have got say cracking in an extractor system and perhaps a build up of carbonaceous material in the crack and internal to the crack. What if anything is going to cause that carbonaceous material to heat up to the point of incandescence, dislodge and then go through the exhaust system.

A. What would cause it to occur?

Q. Yes.

A. Simply that the exhaust gas temperatures are sufficient to get it to incandescence.'

<sup>293</sup>

1.129. Mr Luke observed a number of defects to the exhaust system that involved a build up of soot and carbon. One of the 6 extractor flanges, which is the component where the extractor bolts onto the engine block and where exhaust gases initially enter the exhaust system from the engine block, bore a crack. Mr Luke noticed some remnant putty that had been applied to this surface in order to cover the hole and to stop gas leaking from that location. Mr Visic told me that he had placed the putty over the crack as a make shift measure of repair. Parts of the putty had been dislodged by the time Mr Luke examined the item. The cracking was around 50% of the circumference of two of the header pipes. Daylight could be seen in these irregularities and the holes were about 1mm in size. Carbon deposits were observed from the outside of the flange, and the inside of the flange also bore carbon coating. Mr Luke said that burning particles could be ejected from the holes<sup>294</sup>, and I infer from the size of the hole that a particle of up to 1mm would be capable of exiting the holes.

1.130. The next irregular feature of the exhaust system involved one of the tripoint connections where three of the extractors converge into one outlet. At that location there was a cracked pipe associated with extensive corrosion. Although Mr Luke could not see any holes associated with that irregularity, he could see soot being emitted from the location. Mr Luke said that particles were clearly being ejected at that location, but he was unable to comment on their possible size.

1.131. Further along the exhaust system there was cracking at the duplex connector tube which is essentially the last point of the extractor system before it bolts onto the rest

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<sup>293</sup> Transcript, pages 21293 to 21295

<sup>294</sup> Transcript, page 16186

of the exhaust system. There was a crack adjacent to the position where the flange and the pipe meet and associated with that were a number of holes through which gas and particles could be emitted. While the crack would not allow for the ejection of burning particles, there were two quite large holes about 2mm in diameter which could. There was soot on the outside of the system in the vicinity of at least one hole, indicating the escape of carbon material. An interior view of the extractor pipe at that point also showed carbon coating. Mr Luke said that there did not appear to be any solid matter attached at this location so he inferred that the carbon deposits were from escaping gas with fine carbon in it. Because of the absence of particles adhering to that location, there was no way of knowing whether they were actually coming out at that location. When he was asked whether it was possible that solid particles had been emitted via the holes but had not attached themselves to that part of the system, Mr Luke said that they would be unlikely to attach and be more likely to have been blown away.

- 1.132. In the flexible tube to which I have already referred Mr Luke identified a number of holes of various sizes. He said there was evidence at a number of locations of a gas leak associated with black soot marks. At the areas between the two adjacent pipes, there was evidence of gas leakage as well. As to the holes in the flexible piping, Mr Luke said that none of the holes were actually visible because they were all hidden within the convolutions of the flexible pipe. However, he believed that whatever the size may have been, on close inspection they appeared to have been of a sufficient size to eject burning or glowing particles. He arrived at that conclusion because of the evidence of the soot marks on the outside of the pipe. There was evidence that black carbon material had been ejected. Mr Luke said that if the engine were generating that sort of sooty material, then particles would come out of those holes.
- 1.133. Mr Luke examined the ends of the flexible pipe where they attached to the exhaust system proper. One of the joins was rigid. I think Mr Luke was confused as to which end was rigid. In any event, at one end there was clear evidence of carbon deposits. I return to this issue because Mr Cox also considered the significance of any gap that may have existed, or an imperfect connection that may have existed, at the joins. Beyond the flexible pipe towards the rear of the system there was yet another exhaust flange. There was a hole in the pipe immediately adjacent to the connecting flange. The hole was between 1mm and 2mm in size and was therefore big enough to allow



the passage of a burning particle larger than 0.6mm. There was extensive corrosion associated with this defect. There were also carbon deposits on the outside surface in the vicinity of the hole. An internal examination of the pipe at that location showed carbon soot coating in the vicinity of the hole. This flange was in fact the final feature of the system forward of the muffler box and its adjoining pipe. The remainder of the system was still mounted on the vehicle. What I have been describing so far is that part of the system that had been removed by Mr Visic from the vehicle since the fire. It is evident to me that that part of the exhaust system bore extensive corrosion, multiple holes big enough to allow the escape of exhaust gases and particulate matter of a certain size. In addition, there was clear evidence of the deposit of carbonaceous material on the outside of the holes in the exhaust system. The flexible pipe was a rudimentary feature of the system that both in itself, and where it was connected to the other components of the system, was essentially not capable of containing exhaust products within the system.

- 1.134. Mr Luke examined the remainder of the exhaust system. I do not need to deal with that in any great detail because the evidence would indicate that none of those defects were present at the time Senior Constable Tully inspected it on 13 January 2005.
- 1.135. Quite apart from the holes in the exhaust system, there is a question as to the suitability of the muffler for a vehicle of this nature. This was an after market muffler that was not standard to the vehicle. As already observed, there are some significant differences between this type of muffler and the standard Toyota muffler. Mr Luke acquired a standard Toyota muffler from CMI Toyota. He caused the muffler on Mr Visic's vehicle as well as the Toyota standard muffler to be x-rayed. Mr Luke purports to identify the existence of the spark arrestor in the standard muffler in contra distinction to the lack of a spark arrestor in the muffler that Mr Visic had fitted to his vehicle. Mr Luke concluded that Mr Visic's vehicle could have ejected sparks because it did not have a spark arrestor fitted to it<sup>295</sup>. On the other hand, Mr Cox understood that the Toyota muffler did not have a spark arrestor as such. Mr David Lewis, who is a Technical Field Manager for Toyota, also stated that the standard Toyota muffler was not designed as a spark arrestor. Mr Burton, the engineer, pointed out in his evidence that it should be borne in mind that the principal function

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<sup>295</sup> Transcript, page 16180

of a muffler is to reduce noise. He said that road vehicles were not normally fitted with specific spark arresting devices.

1.136. The evidence is clear to me that the standard Toyota muffler which was not on Mr Visic's vehicle did not contain any feature which was specifically designed or intended to arrest sparks or burning particulate material. I reject Mr Luke's evidence that a standard Toyota muffler has a spark arrestor as such.

1.137. However, the evidence was also clear in my view that the standard Toyota muffler, given its more complex configuration and especially given the convoluted passage of exhaust material through its various chambers, would have a greater ability to stop such material going right through it and then out of the tail pipe of the vehicle. Mr Burton, whose evidence I accept, said that Toyota production mufflers would have a greater ability to inhibit sparks when compared to a muffler such as Mr Visic's. He went so far as to say that there was an enhanced possibility of ember transmission through an after market muffler such as was attached to this vehicle. Mr Lewis, the Toyota employee, agreed that particles would be more likely to escape from the non-Toyota muffler, as there are less restrictions and directional changes in such a muffler<sup>296</sup>.

1.138. Thus it is that there are two theoretical possibilities as to how a burning particle may have been emitted by Mr Visic's vehicle. Firstly, there is a theoretical possibility that a burning particle may have exited at one of the defects that have been described. Secondly, there is a theoretical possibility that a burning particle could have travelled through the entire exhaust system and exited the tail pipe. The question is whether there is any likelihood that Mr Visic's vehicle did in fact emit a burning particle. This question involves a consideration of whether Mr Visic's vehicle was capable of generating such a particle, as well as emitting it.

1.139. Did Mr Visic's vehicle have the capability to generate carbon particles

As to this issue a number of the witnesses made various comments. Mr Luke said that if Mr Visic's vehicle was generating burning particles in a significant quantity he would have expected to see evidence of the build up of carbon in the muffler, whereas on radiological examination there was no evidence of any such build up. He said:

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<sup>296</sup> Transcript, page 20376

'There would - even though there is no spark arrester, because of the design of this muffler box there is a central chamber where there is gas relief occurring and if there was particles being generated of sufficient quantities to be ejected out of the rear I would believe there would also be particles collecting in the muffler box.'<sup>297</sup>

1.140. Mr Luke said that if the creation and ejection of a burning particle from Mr Visic's vehicle was a regular occurrence he would have expected to have seen signs of it within the muffler box. However, if this were happening occasionally, one would not necessarily expect to see those signs. He could not discount the possibility that the generation of a burning particle was happening occasionally. What Mr Luke said was that he would have expected to see carbon material in the muffler box if it was being generated by the vehicle 'all the time'<sup>298</sup>. At one point in his evidence Mr Luke suggested that the possibility of a burning particle being ejected from the exhaust system was very small. However, he did concede that solid particles of a sufficient temperature to ignite grass were emanating from the leaks in the exhaust system and did not deny what he referred to as '*the chance of a spark possibility*'<sup>299</sup>. In reconciling this with his earlier statements, he suggested that the amount of material that he saw inside the muffler, which was virtually nothing, suggested that there was not a great deal of particulate matter passing down the exhaust system<sup>300</sup>. He also said that there was nothing particularly significant about the way the engine was running which would necessarily give rise to significant generation of burning particles. However, he said that any vehicle must be considered to be a potential source of ignition because any vehicle that has hot exhaust features has a propensity to emit sparks<sup>301</sup>. Moreover, although Mr Luke suggested that he did not see any evidence that the engine of this vehicle was producing carbonaceous particles that might give rise to the ignition of dry vegetation, he did not discount the possibility that at some stage the vehicle could have emitted such burning particles.

1.141. My assessment of Mr Luke's evidence on this subject is that if the vehicle had been producing burning particles as a regular occurrence, he would have noticed evidence of that in the muffler, but he saw no such evidence. It seems to me that what Mr Luke was saying was that all motor vehicles have a potential to create burning particles and that this vehicle was no different to any other in that regard. What Mr Luke did

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<sup>297</sup> Transcript, page 16181

<sup>298</sup> Transcript, page 16181

<sup>299</sup> Transcript, page 16245

<sup>300</sup> Transcript, page 16246

<sup>301</sup> Transcript, page 16252

confirm in my mind, however, was that there was evidence of carbonaceous material having exited the holes and other defects in the exhaust system. Whether they were particles of the size capable of igniting dry vegetation is another matter entirely, although I did not understand Mr Luke to be discounting the possibility that such material could have exited the exhaust system in that fashion. Certainly, on Mr Luke's evidence there would have been nothing stopping such material exiting the system if it had been generated.

- 1.142. Mr Lewis who not only was the Toyota representative but has had experience in general with racing cars, had no hesitation in telling me that he has seen sparks emitted from both diesel and petrol engines. Mr Lewis was asked in cross-examination whether a diesel engine that runs in a clean fashion was going to be less likely to emit a spark than a diesel engine that was not running in a clean fashion, to which Mr Lewis said that he could not guarantee that both of those engines would not emit a spark or that one would be more likely to produce a spark than the other. He said that you could have a piece of carbon sitting in an exhaust manifold on an engine that is very well tuned and when it is red hot it breaks off. Mr Lewis said that there was potential for both diesel and petrol engines to emit sparks. Mr Lewis suggested that the extractors on Mr Visic's vehicle as illustrated from the photographic material did not appear to be in very good condition. He also suggested that sparks could be caused either by the direct by-product of the fuel combustion or by the breaking away of carbonaceous material from inside an exhaust port.
- 1.143. Dr Kevin Tolhurst, a Senior Lecturer in Fire Ecology Management at the University of Melbourne and an expert in fire science and management, also asserted that carbonaceous particles were emitted predominantly by diesel powered vehicles. Indeed he said that he was not aware of any evidence that they are emitted by petrol vehicles. He suggested that the carbon in petrol vehicles would not build up to a thick enough layer to create such particles.<sup>302</sup>
- 1.144. The preponderance of evidence given by the various witnesses is that a diesel powered vehicle has a greater propensity to generate hot carbonaceous particles. I so find.

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<sup>302</sup> Transcript, page 19329

1.145. When one examines the evidence carefully, in my view it cannot be said that the generation of burning particles by a diesel vehicle is necessarily a rare event. This is not to say that Mr Visic's vehicle was generating huge numbers of burning particles in January 2005. No testing was undertaken in relation to the vehicle to determine whether or not that was the case. The vehicle was not seized at that time. According to Mr Luke, he detected nothing in the running of the engine that would give rise to a suggestion that there had been significant generation of burning particles, and indeed, he suggested that the state of the muffler on radiological examination was not consistent with that scenario. However, the fact remains that this vehicle, being a diesel vehicle, retained a potential for burning particles or sparks to be generated. This vehicle, compared to other vehicles on the road, had less of an ability in my view to contain burning particles or at least to suppress them given the state of the exhaust system when examined as a whole. There were holes in the system through which particles of a sufficient size, namely 0.6mm or greater, could escape. In addition, the vehicle's muffler was less capable of containing burning particles within it than a standard muffler. In this regard, certain tests conducted by Mr Cox were informative. Mr Cox recreated the exhaust system experimentally. He determined that particles could have exited the exhaust system either through the imperfect joint between the flexible pipe and the remainder of the exhaust system or through the tail pipe. His conclusions in this regard are set out in section 11 of his report:

'The following conclusions were reached on the basis of the above investigation and test work, as they relate to each of the matters raised in your letter of instructions.

- The exhaust system fitted to Mr Visic's vehicle was in a deteriorated condition at the time of the fire
- The exhaust system fitted to Mr Visic's vehicle at the time of the fire was capable of starting a fire with the most likely ignition mechanism being the passage of exhaust particles through the muffler and their exit from the end of the tail pipe
- The exhaust particles required to ignite dry vegetation need to be at least 0.6mm in diameter
- It is possible that particles of this size could have escaped from gaps in the joint between the flexible pipe and adapter pipe, or the hole in the muffler. However, the probability of such a particle exiting the system via either opening is far less than the probability of the same particles travelling through the muffler and out the end of the tail pipe
- The deteriorated state of Mr Visic's exhaust system would have increased the probability of an exhaust particle being emitted by less than 5%.<sup>303</sup>

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<sup>303</sup> Exhibit C268, page 13

In reaching these conclusions he made a number of findings. Firstly, he concluded that about 23% of exhaust particles with the potential to ignite dry vegetation would be expected to pass through the muffler that had been installed on Mr Visic's vehicle at the time of the fire. He concluded on that basis that the muffler was not an effective spark arrestor. Mr Cox was of the view that it was unlikely that particles would escape from elsewhere in the exhaust system because, unlike gases that would easily escape through the holes, particles would have to change direction in order to escape through a hole. Mr Cox concluded from testing that he performed in relation to a simulated exhaust system of the type that Mr Visic had on his vehicle that the likelihood of the particle exiting the system increased as the centreline of the hole altered to become parallel to the direction of travel of the particles. It has to be noted however, that some particles were able to escape through holes and that the escape would have involved a change of direction. However, tests that he conducted revealed that a greater likelihood of particles escaping through the system involved them escaping through an imperfect join, such as the join between the flexible pipe with an internal diameter of 63mm to a pipe with an outer diameter of 60mm, as was said to have been the case with Mr Visic's vehicle. From a purely arithmetical point of view, particles were more likely to exit the exhaust system through the tail pipe than anywhere else. That does not preclude the possibility that particles exited through other apertures in the system including the holes and the imperfect join between the flexible pipe and the rest of the system.

- 1.146. Mr Cox also recorded that it was unlikely that particles which passed through any gap between the flexible pipe and the rest of the system would have been propelled beyond the perimeter of the stationary vehicle before reaching the ground. This led him to the further conclusion that the probability of an exhaust particle of sufficient size to ignite dry vegetation exiting a hole in the exhaust system of Mr Visic's vehicle was very low, relative to the probability of such a particle passing through the muffler and exiting from the tail pipe. Therefore, he concluded that if there had been an emission of particles from the vehicle, it was most likely that they emanated from the tail pipe of the vehicle.

1.147. Mr Cox described four different circumstances which would increase the propensity for a diesel engine to generate and emit exhaust particles. In setting out those different circumstances, Mr Cox cited a particular scientific publication:

- 'a. Operating the engine at idle or a small load for a considerable period of time will allow deposits to build up; subsequent operation of the engine at high revolutions will dislodge the deposits due to thermal shock
- b. Operating the engine under high load conditions, such as climbing a steep hill, causes the temperature to rise above the optimum level
- c. When insufficient maintenance and/or wear allows excessive piston ring and valve stem clearance, thereby enabling lubricant to enter the combustion chamber
- d. When excessive heat builds up in the combustion chamber due to loss of coolant or a lean air/fuel mixture'<sup>304</sup>

Mr Cox expressed the view that the actions of Mr Visic in driving slowly along the road looking out for a mine, parking at the first and second parking spots of Lady Franklyn Road and allowing the engine to idle before leaving the second parking spot and then accelerating away from that spot '*would be consistent with the first circumstance described by DeBernado*'<sup>305</sup>. That circumstance is the one described at a) above.

1.148. Mr Cox's experimentation has to be examined carefully. It should not be inferred from Mr Cox's experimentation that Mr Visic's vehicle had a greater propensity to generate burning particles than any other vehicle. Mr Cox's experimentation simply revealed that if burning particles were being generated by Mr Visic's vehicle, then given the state of his exhaust system, and the nature of his muffler, there was a distinct possibility that burning particles could exit the system and set fire to dry vegetation. Of course, as has been previously observed, Mr Cox was of the view that the emission of carbon particles from a diesel motor, such as Mr Visic's, was many times greater than that from a petrol driven motor. One also has to bear in mind again that other evidence that I have referred to suggested that the generation of burning particles by a diesel motor was hardly an unheard of occurrence. In my view, in spite of Mr Luke's reservations, the possibility of Mr Visic's vehicle having generated a burning particle or particles and that those particles exited through his imperfect exhaust system is a very real one. This is not to say that Mr Visic's vehicle was generating sparks in a significant amount, but there is still a significant possibility that

<sup>304</sup> DeBernado 1980 – Characteristics of Internal Combustion Engine Exhaust Products, Exhibit C268, page 12

<sup>305</sup> Exhibit C268, page 12

from time to time it did generate burning particles, and that they exited his exhaust system one way or another.

- 1.149. A Mr Peter Story who is the service manager at Allan Biggs Ford in Port Lincoln, and who gave evidence in the main concerning Mr Buddle's vehicle, evidence that I will discuss below, was shown photographs of Mr Visic's vehicle's exhaust system, in particular those in Exhibit C66b. Mr Story has worked as a motor mechanic since 1963. He told me that if the vehicle was a diesel, which it was, carbon particles might be included in emissions escaping from holes in an exhaust system. When examining the photograph depicting the forward imperfect join between the flexible pipe and the exhaust pipe, he unhesitatingly identified a leak that he described in these terms:

'Well, yes, that's the actual – you can see that's the very front section of the exhaust where it is bolted to the exhaust manifold and there's been, a piece of flexible pipe fitted, non standard, to that exhaust, so yes there would be carbon emissions from that exhaust because its leaking quite badly.'<sup>306</sup>

When challenged on that, Mr Story restated that he thought the emissions would definitely contain particles of carbon. He stated that in a diesel system, one would expect carbon particles to be emitted whereas the catalytic converter on a petrol vehicle would be expected to break them down. Mr Story would have recommended replacement of Mr Visic's exhaust system. Mr Story was a very experienced mechanic whose practical knowledge of things mechanical, including exhaust systems, was readily apparent. He deals with cars, including their exhaust systems, on a daily basis.

- 1.150. Senior Constable Tully, also a qualified mechanic, asserted that a diesel engine was a much dirtier engine than a petrol engine that did not have the same tendency to give off carbon particles. He told me that a diesel engine can discharge unburnt carbons as well as hot burnt carbons and that these can come through an exhaust system. However, he did not detect any carbon emissions when he placed his hands over the leaks in Mr Visic's exhaust.
- 1.151. The conclusion that I have reached is that Mr Visic's vehicle was capable of generating a burning carbonaceous particle or particles. His exhaust system at the time of the Wangary fires was such that such a particle or particles could have been emitted from that system. There is no direct evidence that Mr Visic's vehicle was



generating particles of 0.6mm in diameter. This however does not in itself prevent a conclusion, when the totality of the evidence is examined, that Mr Visic's vehicle was the source of the fire.

1.152. Where was Mr Visic's vehicle in relation to dry vegetation?

One matter that would need to be taken into consideration is the likelihood of a burning particle setting fire to grass either while a vehicle is stationary or when it is in motion. Mr Visic said that he did not park his vehicle entirely off the surface of the road. It was said that it would not have been possible to park entirely off the surface of the road because of the presence of sheoak trees at the location adjacent to the rock pile in Mr Puckridge's paddock. In addition, it was suggested that there was very little grass in that location in any event. I refer here to my discussion earlier about the likelihood or otherwise of grass being present at that specific location and I repeat that in my view there is nothing to suggest that there would not have been grass there, given that only a short distance away there was a proliferation of grass as seen in the photographs that I have already referred to. Mr Visic said in his statement given to the police on the afternoon of 13 January 2005 the following:

'From the road I could see loose rocks to my left, about 50 feet in from a fence next to the road. The rocks were in the middle of a paddock which had cropped stubble on it. Between the boundary fence and the road was a scrub area which was about 10 to 15 feet wide. There was long grass under the scrub. The scrub was not too thick for me to be able to see the rocks. This location was about 100 metres to 150 metres from the first location I had stopped at.

I parked my car parallel with the fence and road line. It was partially off the road but I can't remember exactly how much, about half on and half off. There would have been grass under the car but I didn't think it would be as far under the car as the exhaust pipe which is under the driver's side. I didn't consider that it was a fire risk to park in this location.'<sup>307</sup>

1.153. Earlier that day when Mr Visic was with the police officers at the Lady Franklyn Road location he had been asked about the state of the verge near the rock pile and the following questions and answers were given:

'Q64 And how was the verge, was it the same as we see here, where it hasn't been bulldozed?

A Ah,

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<sup>306</sup> Transcript, pages 15377 and 15378

<sup>307</sup> Exhibit C32, page 5

Q65 With the,

A The verge?

Q66 Ah, sorry the,

A Oh of the scrub and that?

Q67 The section between the fence and the road?

A Yeah, no, very similar.

Q68 The same as this area here?

A Yeah.

Q69 So sort of scrubby?

A Yep.

Q70 Yep, ok.

A Yep.

Q71 DSC Nicholas Hill states: Same sort of grass?

A Yeah, exactly. It was identical all the way down. Like all the way to the corner virtually, maybe a bit short of the corner it started thinning out.

Q72 DSC George Fenwick states: When you say the corner, do you mean this fence line just here?

A Yeah, that corner post there yep.<sup>308</sup>

1.154. Mr Visic was also asked in the earlier interview about where his vehicle had been parked in relation to the verge. When asked whether the vehicle could have been over dry grass he said '*I don't, I don't think so, I honestly don't*'<sup>309</sup>. When asked whether it was possible that he had, he acknowledged that it was possible but did not think he had parked that far off the road.

1.155. In evidence, Mr Visic said that he had parked his vehicle '*virtually on the road, just off to one side*'<sup>310</sup>. He said that the left-hand wheels were off the road but on the verge. He said that between the road and the fence at that location were sheoak trees. There was also tall grass but sparse. It was not green grass. He was asked these questions:

Q. Were you in any way conscious of this grass, in the sense that it posed some kind of risk or danger for you.

A. Yes.

Q. Tell us about that; what were your thought processes on that.

<sup>308</sup> Exhibit C168b, page 6

<sup>309</sup> Exhibit C168b, page 8

<sup>310</sup> Transcript, page 15067

A. I didn't really need to get off the road that far because traffic was virtually none and I thought 'Well, I'll just go for a quick look over here and have a look'. I had a look over there in the paddock and it didn't look suitable for metal detecting.

Q. We'll come to that. I'm asking you why you didn't park off the road.

A. There was really no need.

Q. Did it occur to you that the grass might have been some kind of a danger.

A. Yes.

Q. At the time.

A. Yes.

Q. Why is that.

A. It's a hot day, it's summer and it's dry grass.'<sup>311</sup>

Later he stated that he had not applied his mind to the fire risks at the time<sup>312</sup>.

1.156. In his witness statement, Mr Visic had said:

'I parked my car parallel with the fence and road line. It was partially off the road but I can't remember exactly how much, about half on and half off. There would have been grass under the car but I didn't think it would be as far under the car as the exhaust pipe which is under the driver's side. I didn't consider that it was a fire risk to park in this location.'<sup>313</sup>

1.157. Mr Visic was specifically asked whether any part of his vehicle was standing over dry vegetation at that location and he said:

'I didn't look; I don't think so. It was on the edge of the road on the graded part, that's where I parked my left-hand wheel so if there was grass there I guess I parked on it.'<sup>314</sup>

1.158. It is worthwhile observing that Mr Cox recorded Mr Visic as having told him that at the location on the eastern side of Lady Franklyn Road near the rock pile he had '*pulled off the road*'<sup>315</sup>. At the scene, Mr Visic indicated where he had parked on the eastern side of Lady Franklyn Road and placed his vehicle in what he thought was that position. Mr Cox said that although Mr Visic did this, Mr Visic added that things at the location looked different. No doubt they did. Interestingly, Mr Visic partially positioned the vehicle over verge side grass. Mr Cox photographed Mr Visic's vehicle in the position shown over the page.

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<sup>311</sup> Transcript, page 15068

<sup>312</sup> Transcript, page 15117

<sup>313</sup> Exhibit C32, page 5

<sup>314</sup> Transcript, page 15072

<sup>315</sup> Transcript, page 16361



Figure 2 Parking Spot 2<sup>316</sup>

Mr Cox explained further:

'From what he did on that day, my understanding was that he parked with half of the vehicle on the road and half of the vehicle off the road and that was my understanding of what he was demonstrating to us on that day. The edge of the road shown in figure 2 is different, the rill wasn't there. So what he is demonstrating there could well be exactly as he said, where the rill is was originally part of the road and no vegetation. The line of vegetation goes through the middle of his car and the near side wheel is parked onto vegetation. Now that was my understanding of how he'd parked the vehicle.'<sup>317</sup>

Mr Visic later told me that when he had demonstrated to Mr Cox the position of where he had parked his vehicle on 10 January 2005, he had understood that it was important for him to do so as accurately as possible.

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<sup>316</sup> Exhibit C268, page 15

<sup>317</sup> Transcript, page 16436

- 1.159. Mr Visic in his evidence told me he could not recall having been stationary at the location on the side of Lady Franklyn Road for about 30 seconds with the air conditioner running prior to driving away. However, what he said in his statement is as follows:

'I walked back to the car and got into the drivers seat. I started the engine to get the air conditioner going. I had drink before moving off. I would have been stationary in that location with the engine running for about 30 seconds.'<sup>318</sup>

Whether he had driven off straight away or whether he had let the vehicle idle with the air conditioner on for 30 seconds perhaps in normal circumstances would not have been all that significant in Mr Visic's mind. However, Mr Visic must have been aware of its significance in the context of the issue as to whether his vehicle may have started the fire, an issue that clearly has occupied Mr Visic's mind from a very early stage. I formed the view that Mr Visic was being evasive about that issue in his evidence.

- 1.160. Was Mr Visic aware of the state of his vehicle's exhaust system

I turn now to Mr Visic's own description of the state of his vehicle and its exhaust system as of 11 January 2005. In his statement to the police given on 13 January 2005, he said that he had owned the vehicle for the past 6 years. He had made a number of modifications to the vehicle. These included the fitting of the extractors about 3 years previously and the replacement of the muffler about 2½ years previously. The flexible piece of steel tubing was inserted about 6 months before January 2005. He initiated all of the changes himself. A friend who was a mechanic had helped him with some of the changes. Mr Visic had inserted the flexible tube without any assistance. He had obtained the piece of tubing from his father's shed and he thought it might have originally come from a truck.

- 1.161. Mr Visic said in his statement that he had never noticed any sparks or any heat that was out of the ordinary emanating from his exhaust system. However, about a month earlier he said that he had heard a ticking noise under the bonnet when the engine was first started. He said that the ticking noise had disappeared when the engine warmed up. He thought that the noise had been caused by the two welds around the flange of the extractors having cracked where they bolt onto the cylinder head. He had examined the welds and had seen a small, blackened area indicative of cracking. On

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<sup>318</sup> Exhibit C32, page 6

that occasion he had put some exhaust putty over the welds which he said '*solved the problem*'<sup>319</sup>. He acknowledged that this had only been a temporary fix. On the weekend preceding Monday 10 January, he said that he had noticed that the ticking sound had returned. He had examined the welds that he had repaired earlier, could not see any blackened area and that the putty was still in place. While on the subject of ticking, I was told by Senior Constable Tully that ticking was indicative of the escape of exhaust material. This of course would be in keeping with the state of the extractors as examined by Mr Luke in which he clearly identified holes. Mr Visic told police that he had not had an opportunity to replace the existing system.

1.162. In his evidence, Mr Visic confirmed that he knew that his exhaust had been leaking prior to 10 January 2005. Mr Visic clearly associated the state of his exhaust with the commencement of this fire. He was asked:

'Q. Can I just ask you this: if the thought occurred to you that you may have started the fire, then what activity of yours did you think may have started the fire?

A. My exhaust pipe on my car.'<sup>320</sup>

Mr Visic also described in evidence the ticking sound from the extractors, but unlike his witness statement where he said the putty was still in place, he testified that on this occasion he had noticed that some of the putty had cracked off from where he had originally put it on. Mr Visic was not particularly forthcoming in his evidence about the state of his vehicle. When asked to give more detail about the leaks to his exhaust system prior to 10 January 2005, Mr Visic's repost was '*surely you've read the statement, it's all in there*'<sup>321</sup>. Again, when Mr Boucaut, Counsel Assisting, attempted to explore the nature of the flexible pipe and why it was inserted as part of the exhaust system, Mr Visic's response was to say '*it's pretty self-explanatory, isn't it?*'<sup>322</sup>. Mr Visic did explain this and said that he had to chop a piece out of his exhaust pipe because of a leak and that he had replaced the cut out piece with the flexible pipe. Mr Visic said that he did not replace the cut out piece with a genuine part because he did not have sufficient funds at the time<sup>323</sup>. He said that the seal at the rear end of the flexible piece where it joins onto the rest of the piping was good, but

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<sup>319</sup> Exhibit C32, page 3

<sup>320</sup> Transcript, page 15094

<sup>321</sup> Transcript, page 15094

<sup>322</sup> Transcript, page 15159

<sup>323</sup> Transcript, page 15160

from looking at one of the photographs it appeared that the clamp had come loose at the front end and was not as tight a fit as it had been when originally placed there.

- 1.163. In respect of the ticking noise emanating from his exhaust, he told me that he had put muffler putty around the crack. He said that from his experience it sounded like an exhaust leak and he could see that the extractors were cracked at the weld where the flange and the pipe joined together. He believed that it was only the one extractor that was affected, but when shown a photograph thought that another one may have been repaired as well. The cracking he said was less than 1mm. He said he could tell that there was cracking because soot had accumulated on the crack. He did not think that the cracking might emit a spark. He confirmed that the ticking noise had in due course returned. He said that he noticed that a piece of putty had come off. As previously observed, that contradicts what Mr Visic told the police in his witness statement. When that contradiction was put to him he said that he guessed the putty was in fact still in place but that he now could not recall and had a lot better idea when he made the statement, so that whatever was in the statement was likely to be correct.
- 1.164. When asked whether he had thought that any part of his exhaust system might have been capable of throwing a spark, Mr Visic suggested that perhaps the flexible pipe was a possible source. He agreed he also possessed this belief as at 10 January 2005 and explained that he thought that because the piece was just a temporary fix.
- 1.165. Mr Visic said in evidence that the muffler had been replaced some months prior to January 2005. Some other person had performed that work. He said that he did not think his muffler had a hole in it as of 10 January 2005. As earlier indicated, I do not place any reliance on the existence of this hole as it was not seen by the police when they examined the vehicle on 13 January 2005. Mr Visic also told me that when he had replaced the muffler prior to 10 January 2005 he had gone to the supplier and had simply asked the supplier whether he had anything that could fit onto the vehicle that would work and that would have the right pipe size. He said that he wanted '*just something that he had, anything that he had that would fit on*'<sup>324</sup>.

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<sup>324</sup> Transcript, page 15213

- 1.166. It is against the background of Mr Visic's knowledge of the condition of the exhaust system of his vehicle that certain statements made by him on 10 January 2005 and subsequently made have to be examined.
- 1.167. I am referring here to the statements that he made to Mr Trevor Puckridge on the Monday, statements that he made to members of his family and statements that he made to the police. All of those statements are in my view very indicative of a belief on Mr Visic's part that his vehicle started the fire. Some counsel have gone further and suggest that statements made by Mr Visic on the actual day are consistent with a state of mind whereby Mr Visic actually knew that his vehicle had started the fire.
- 1.168. Before mentioning what Mr Visic said at the scene and subsequently, it is pertinent to examine certain assertions made by him as to his state of mind on the Monday both before and after he said he discovered the fire.
- 1.169. Mr Visic said in evidence that when he returned to the junction of Duck Lake Road and Lady Franklyn Road from the highway the thought occurred to him that the fire was possibly his fault given its location. He said that he thought the fire might have been his fault because he had not seen anyone else around and that he had been parked close to the paddock edge<sup>325</sup>. He drew a connection with the leaking of his exhaust pipe and its showing signs of wear and the fact that he had done some patch up work on the system that was not '*really hanging in there*'<sup>326</sup>. He was clearly referring there to the puttying work that he had undertaken in relation to the extractors. Again, that comment is not consistent with what he said in his statement to the police on 13 January 2005, namely that the putty was still in place when the ticking sound had returned. Mr Visic acknowledged that none of his activity at the Lady Franklyn Road location could have started the fire other than the use of his vehicle<sup>327</sup>.
- 1.170. Mr Visic in his interview with police at the scene on 13 January 2005, spoke of having been in some 'shock' at the time he returned to the scene and spoke to Trevor Puckridge. The evidence that Mr Puckridge gave about that encounter would seem to bear that out. Mr Puckridge says in his witness statement that when Mr Visic stopped him on Lady Franklyn Road by flashing his headlights, Mr Visic said '*I think I might*

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<sup>325</sup> Transcript, page 15093

<sup>326</sup> Transcript, page 15095

<sup>327</sup> Transcript, page 15094



*have started this fire accidentally*,<sup>328</sup>. Mr Puckridge describes Mr Visic as being very distraught and upset at that stage. Later, when Mr Puckridge noticed that Mr Visic was attempting to fight the fire at the side of the road, he approached Mr Visic, whom he described as apologetic. Mr Puckridge said that he could not remember exactly what Mr Visic said, but it was something like *'God I'm sorry'*,<sup>329</sup>. His efforts to put out the fire were in keeping with that state of mind. Mr Puckridge suggested that Mr Visic was still there half an hour later. In his evidence before me, Mr Puckridge confirmed that Mr Visic was very upset and apologetic<sup>330</sup>.

- 1.171. Mr Thring says in his statement that Mr Visic said *'I'm really, really sorry, I think I've started this'*,<sup>331</sup>. He said that Mr Visic kept saying that he was really sorry and that he wanted to help put the fire out.
- 1.172. As to Mr Visic's version of his contact with Mr Puckridge and Mr Thring, in his videotape interview with police at the scene on 13 January 2005, he said that he had said to Mr Puckridge *'I don't know how this has started, it may have been my fault, I don't know'*,<sup>332</sup>. Mr Visic's later witness statement repeats that account<sup>333</sup>.
- 1.173. In evidence Mr Visic was asked whether he had said something to the effect to Mr Puckridge *'I think I may have started this fire accidentally'*. Mr Visic denied that he had said that. His recollection was that he had said *'I don't know how this fire started but I don't think it's my fault'*,<sup>334</sup>. When what he had said in his witness statement was put to him he agreed that he probably had said to Mr Puckridge that *'it may have been my fault, I don't know'*,<sup>335</sup>.
- 1.174. When Mr Visic left the area having attempted to put out the fire at the side of the road, he returned to Port Lincoln where he collected his son who was being cared for by Mr Visic's parents. His statement to the police explains that at that time he was very concerned and worried that he may have started the fire. It states that he had no idea how he might have started the fire but when he left the area the first time there was no-one else around and there was no fire. The fire looked like it had started *'in*

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<sup>328</sup> Exhibit C50, page 3

<sup>329</sup> Exhibit C50, page 4

<sup>330</sup> Transcript, page 4936

<sup>331</sup> Exhibit C72, page 3

<sup>332</sup> Exhibit C168b, Answer 161

<sup>333</sup> Exhibit C32

<sup>334</sup> Transcript, page 15093

<sup>335</sup> Transcript, page 15093

*about the same area where I had been only a short time before and I couldn't think of any other way it could have started'*<sup>336</sup>.

1.175. Mr Visic was so concerned about the possibility of him having started the fire that when he arrived home that day he telephoned his brother and told him what had happened. He explained in his statement to the police that he had told his brother that he was worried that he might have somehow started a fire and that he did not know what he should do next. Mr Visic's concern led to him ringing the police at Port Lincoln saying that he had been the person who had rung 000 in the first instance. He asked whether the police needed any further information from him. Mr Visic said that he made a note of the time that he called the police on a piece of paper. He gave that piece of paper to Detective Fenwick when his statement was being taken. I infer that the purpose behind the causation of that record was to substantiate his assertions that he had spoken to the police.

1.176. Just from those actions alone, one infers that Mr Visic very strongly entertained the belief that he had started the fire. Mr Visic said this to the police in his statement:

'I don't know that I started the fire. I feel terrible about the fact that it may have been me. I am fully aware that fires can be caused by driving cars on dry grass. I didn't think that I had parked dangerously on any dry grass.'<sup>337</sup>

Although Mr Visic asserts that he does not know that he started the fire, he clearly held a belief that it was a strong possibility that he had.

1.177. Mr Visic's belief that he may have started the fire seems to emanate from a number of sources including the fact that he was the only person in the vicinity at about the time the fire conceivably started, that he had parked at the very least near dry grass, if not over it, the fact that it was a hot day and the fact that he had a faulty exhaust system. Added to that is the fact that Mr Visic clearly entertained the belief that he had parked his vehicle at a location consistent with where he believed the fire may have started. All of this suggests very strongly that Mr Visic entertained an actual belief that his vehicle had started the fire. It is also suggested by some counsel that what Mr Visic said to Mr Puckridge in particular amounts to an admission that he knew that his vehicle had started the fire. I reject the submission that Mr Visic's statements can be construed in that fashion. The utterances to Mr Puckridge and subsequent actions and

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<sup>336</sup> Exhibit C32, page 9

<sup>337</sup> Exhibit C32, page 10

statements by Mr Visic are equally as consistent with Mr Visic having formed a strong belief that his vehicle had started the fire. However, the statements made by Mr Visic, as well as indicating a belief on his part that his vehicle had started the fire, also establish that Mr Visic was not aware of any other circumstance that may have given rise to the start of the fire. In this regard, I do not understand Mr Visic to ever have claimed that there was any competing cause of the fire other than his own possible actions.

1.178. Mr Visic's conversation with Johanna Visic

The only material that could be possibly construed as an admission by Mr Visic that he knew that his actions or his vehicle had started the fire consists of a conversation that Mr Visic's mother, Johanna Visic, allegedly had with Detective Fenwick on 13 January 2005 when he attended at the Visic premises. Detective Fenwick gave evidence about this conversation. He told me that he and Detective Hill attended at the premises on Thursday, 13 January 2005 at about 10:17am. Mrs Visic told the officers that her son Marco was expected back from an interstate trucking trip some time between 1pm and 2pm that day. Detective Fenwick has recorded that on this occasion Mrs Visic made certain statements about her son's distress over the Wangary fire and its consequences. Detective Fenwick has recorded in his notes the following:

'States that Marco is very distressed & believes he may have started the fire – he hasn't told her exactly what happened, only that he was parked on the side of the road & when he took off he looked behind and saw smoke where he had been parked.'<sup>338</sup>

Detective Fenwick has then recorded that he advised Mrs Visic that Marco Visic was not in trouble and that the police understood that the ignition of the fire was accidental and that they just wanted to obtain all the possible details. Detective Fenwick testified that his note faithfully records what Mrs Visic told him.

1.179. The statement recorded by Detective Fenwick, if taken at face value, is capable of being understood as reflecting a belief on the part of Mrs Visic that her son had been parked on the side of the road, and that when he had taken off, he had looked behind his vehicle and had seen smoke in the precise location where he had been parked on the side of the road.

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<sup>338</sup> Exhibit C168d

- 1.180. If the above statement accurately reflected what Mrs Visic told Detective Fenwick, and if it accurately reflected what Mr Visic had told his mother, it is clear evidence that Mr Visic knew of the existence of the fire at the time he had left Lady Franklyn Road on the first occasion. For instance, if it could have been shown by direct evidence that Mrs Visic had been told all of that by her son, then in my opinion significant weight could be attached to that statement. What Mr Visic has said to the police, and what he has said in Court about not knowing anything about a fire until he had been out on the highway, would be contradicted by the terms of that statement. This contradiction would be capable of seriously affecting his credit. In addition, if he had in fact told his mother that when he took off from Lady Franklyn Road he looked behind him and saw smoke in the location where he had been parked, it is a statement that he would have been unlikely to have made unless it was true.
- 1.181. For reasons that follow, having considered the matter very carefully, I am not prepared to act upon this statement. Mrs Visic was called by Counsel Assisting in the course of the Inquest and was asked whether firstly she had made the statement to Detective Fenwick, and secondly whether her son had made any such statement to her. Mr Visic was also questioned about this alleged statement to his mother. Mr Visic said that the only member of his family to whom he spoke on the Monday was his brother. He said he told everyone in his family what had happened when he arrived home on the Thursday, but this was after Mrs Visic had allegedly made her statements about the issue to Detective Fenwick. Mr Visic denied that he had said to his mother that he had seen smoke as he had driven away from the side of the road. He said that he might have told her that he thought he had started the fire, but he could not be sure. He also rejected the suggestion that he had in fact seen smoke behind him when he had pulled away from the side of Lady Franklyn Road.
- 1.182. When called to give evidence, Mrs Visic said that she had spoken to her son by telephone sometime on the Tuesday. At that time he was driving to Melbourne and had said something about having seen smoke in his rear vision mirror. This of course is consistent with Mr Visic not having seen any evidence of the fire until, as he says, he was out on the highway. However, Mrs Visic also said that her son had told her that he had been '*there*'<sup>339</sup>. Mrs Visic in evidence was very vague about whether she had probed this particular piece of information, but said that it had shocked her. Mrs

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<sup>339</sup> Transcript, page 19675

Visic denied that she had ever had any discussion with Marco Visic in which he had expressed concern that he may have had something to do with the fire starting. Mrs Visic said that at no stage, whether on the telephone while her son was away or after he had returned and before he spoke to the police on the Thursday, did he tell her that he thought he might have started the fire. When it was put to her bluntly whether Mr Visic had told her that he had parked his vehicle on the side of the road and that when he had taken off he had looked behind and had seen smoke where he had been parked, Mrs Visic denied that her son had said any such thing to her.

1.183. Mrs Visic confirmed in evidence that Detective Fenwick had spoken to her on the Thursday morning and asked her when her son would be back from his interstate haulage trip. She denied that she told Detective Fenwick that her son was very distressed. She denied that she told Detective Fenwick anything to the effect that her son believed that he might have started the fire either accidentally or otherwise. Mrs Visic denied that she told Detective Fenwick what he recorded her as having said to him about Marco Visic's description of the circumstances in which he had discovered the fire.

1.184. Although for reasons that follow I do not need to decide whether Detective Fenwick or Mrs Visic are telling me the truth about the conversation on the Thursday, for the purpose of this discussion I will assume that Mrs Visic did say those things to Detective Fenwick as recorded in his notes. Clearly, in adversarial proceedings, Detective Fenwick's account of what Mrs Visic told him would be inadmissible hearsay. Questions of strict admissibility in a Coronial Inquest have to be examined against the fact that Section 24 of the Coroner's Act 2003 states:

'In holding an inquest, the Coroner's Court –

- (a) is not bound by the rules of evidence and may inform itself on any matter as it thinks fit; and
- (b) must act according to equity, good conscience and the substantial merits of the case, without regard to technicalities and legal forms.'

Although the rules of evidence do not bind me, there is obviously a limit to the weight that I can place upon what some have suggested is at least second hand hearsay in this particular instance. Although it is open for me to conclude, if it were necessary, that Detective Fenwick faithfully recorded what Mrs Visic said to him, in my view it cannot be established with any degree of precision that Mrs Visic necessarily

accurately reflected what if anything her son had told her. There are a number of possibilities that cannot be eliminated. Firstly, Mrs Visic may not have accurately recalled what her son had told her so as to be able to accurately impart that to Detective Fenwick. Secondly, a possibility exists that even if Mrs Visic did accurately recall what her son had told her, it may well be that Mr Visic had only given her a truncated version of the events out at Wangary. Even if I were to reject Mrs Visic's denial of what she allegedly told Detective Fenwick as an outright lie, any dishonesty on her part would not necessarily imply that she was hiding the truth of what Mr Visic had told her. She might still have got it wrong.

1.185. It is true that the statement made by Mrs Visic to Detective Fenwick sits very comfortably with the suggestion made by some in this Inquest that Mr Visic's vehicle started the fire and that he knew it at the time he first drove away from the Lady Franklyn Road location. It would also sit very nicely with Mr Visic's other undoubted statements from which at least a strong belief on his part that he had started the fire can be inferred. However, in my view it would be dangerous to act upon the alleged statement made by Mrs Visic to the police for the reasons that I have given.

1.186. Other possible causes of the fire on Monday, 10 January 2005

Any consideration of whether Mr Visic's activity, or his vehicle, started the fire requires a consideration of whether there is evidence of another possible cause. An absence of evidence of any other possible cause naturally does not mean that Mr Visic or his vehicle started the fire. However, it is nevertheless pertinent to inquire as to what evidence there is of other possible causes.

1.187. Mr Morcombe for Lumley General Insurance has suggested that there were a number of serious shortcomings in the police investigation. In essence he says that a degree of selectivity in what the police were prepared to investigate has meant that evidence as to other possibilities about the origin of the fire has been lost. Those perceived shortcomings can be listed as follows:

- 1) A failure to secure the relevant section of the burnt Lady Franklyn Road roadside vegetation prior to it being bulldozed by the CFS;
- 2) A failure to seize Mr Visic's vehicle at the first available opportunity;

- 3) A failure to identify the vehicle described by Mr Visic as having been seen by him when he was on the western side of Lady Franklyn Road, and a failure to identify its occupants;
- 4) A failure to consider the possibility of the fire having been started by other vehicles such as the vehicle seen by Mr Visic and Mr Buddle's vehicle;
- 5) A failure to mechanically examine Mr Buddle's vehicle for possible defects that could cause a fire;
- 6) A failure to identify Mr Dahlitz as being a material witness;
- 7) A failure to properly consider the possibility of arson, and a failure to investigate the possible involvement of a particular individual.

1.188. There are other alleged shortcomings in the police investigation.

1.189. It has to be kept in mind that Mr Visic saw no activity on the eastern side of Lady Franklyn Road that was consistent with the fire having started by means other than his own activity. For instance, Mr Visic does not claim to have seen any fire or smoke at any stage on the eastern side of Lady Franklyn Road until he noticed smoke from the highway when on his way home. It is inconceivable in my view that if there was a visible fire at the location on Lady Franklyn Road when Mr Visic was there that he would not have seen it. The only activity Mr Visic saw at that location was a vehicle go by. This occurred when he was on the western side of Lady Franklyn Road. Mr Visic says he later saw the blue Navara, which on one account of the involvement of that vehicle, had stopped near the junction of Lady Franklyn Road and Duck Lake Road, presumably for the occupants to look at the fire themselves. In any event there is no suggestion by Mr Visic that the blue Navara travelled along Lady Franklyn Road at any material time. The only other activity that was detected by Mr Visic in the Lady Franklyn Road area occurred at the time he heard Mr Buddle's vehicle slowing down and then drive off. This was some time before Mr Visic left the area.

1.190. If there was no fire in evidence at any time while Mr Visic was at the Lady Franklyn Road location, one competing conclusion other than that Mr Visic's own activity started the fire is that there was some cause in existence before Mr Visic left the area but which had not by then produced any evidence of visible fire or smoke. Another theoretical alternative would be that the fire was caused after Mr Visic had left. Mr

Morcombe has urged me to consider as a strong possibility that Mr Buddle's vehicle may have started the fire. He also suggests the possibility that the other unidentified vehicle being the white 4WD that Mr Visic said he saw, started the fire. Mr Morcombe would also no doubt say that because of the failure of the police to identify that vehicle or to examine Mr Buddle's vehicle an opportunity to demonstrate the possibility that either vehicle started the fire has been lost.

1.191. Mr Visic's account of what took place on the afternoon in fact includes reference to the presence of three vehicles. The first vehicle, that he saw from his location on the western side of Lady Franklyn Road, was described as a white twin cab 4WD, possibly a Toyota. The second vehicle, that he only heard from that same location, was clearly Mr Buddle's. Mr Visic described a third vehicle, namely a blue Nissan Navara with two surf boards in the back. Apart from Mr Buddle's vehicle, the vehicles have not been identified. Mr Morcombe QC for Lumley General Insurance was critical of the police for failing to identify the white twin cab 4WD or its occupants, given its proximity to the location where the fire started on Lady Franklyn Road. I will also deal with the alleged involvement of Mr Buddle's vehicle. For reasons that I shall explain later, in my view Mr Buddle's vehicle did not start the fire. For reasons that I explain now, the blue Navara had nothing to do with it either.

1.192. The Blue Navara

The evidence of the movements of the blue Navara, emanating as it does from Mr Visic, is somewhat confusing. The first reference to the vehicle appears at Q&A236 to Q&A240 of Exhibit C168b. At that stage of the interview, Mr Visic and the two police officers were at the second Lady Franklyn Road location. The reference by Mr Visic to 'here' in A236 has to be examined in that light:

'Q236 Um, did you notice any other vehicles in the area?

A Yeah, I noticed as I was driving out from here, when I left that a vehicle went that way, left at the intersection on Duck Pond Drive.

Q237 So it, what road was it on when it, before it went left?

A It was on Duck Pond Drive, just going past me,

Q238 I see, so you saw it cross,

A Yeah, yeah.

Q239 Um, Lady Franklin,



A Yeah, intersection.

Q240 And, and did it continue north?

A Yeah.<sup>340</sup>

1.193. The picture Mr Visic was creating there was that when he left the Lady Franklyn Road location the first time, that is before he saw the smoke from the highway, he noticed the vehicle approach along Duck Lake Road from the direction of Wangary and go past his location at the junction of Lady Franklyn Road and then continue north along Duck Lake Road. He mentioned nothing about the vehicle stopping. At that point, there was no obvious reason for it to have stopped. The fire, according to Mr Visic, was not in evidence at that time, or at least if it was, he did not see it. Later in the interview, when the officers and Mr Visic were situated near the Wangary Store, this exchange took place:

'Q341 DSC George Fenwick states: Oh, ok, yep. Ah, the video's still going I think. I'll just see. Yeah, still recording, so just ah, there was another vehicle?

A Yeah, there was another vehicle going down Duck Pond Drive,

Q342 Yep.

A When I was heading out the first time when I left the, when I left the gold mine, right.

Q343 Right.

A When I left detecting and I headed out the first time there was, I reckon it was a twin cab Navara with two surfboards in the back of it,

Q344 Right.

A A blue one and I seen him pull over there and I can't remember exactly when I seen it but, I've come out and drove off with no idea of any fire.

Q345 Yes.

A And I got here and I went back, seen the fire, then I came back and on Duck Pond Drive, I came back to the shop here to dial triple 0 and on Duck Pond Drive I seen a blue Navara with two surf boards in the back heading that way, heading,

Q346 Towards the smoke?

A Yeah, heading towards the smoke and,

Q347 Ok.<sup>341</sup>

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<sup>340</sup> Exhibit C168b, pages 19 and 20

<sup>341</sup> Exhibit C168b, pages 28 and 29

Here Mr Visic seems at first to reiterate that he saw the vehicle when he left the area the first time. However, answers 345-347 cast some doubt upon that interpretation. Later that day when Mr Visic gave his signed witness statement, he said:

'I immediately tried to ring triple zero on my mobile phone ... but did not have any service. I turned my car around and headed towards the Wangary shop. As I headed off I saw a blue late model Nissan Navara twin cab four wheel drive with two surfboards in the rear tray travelling north on Duck Lake Road. Just after it passed me I saw it pull over just near the Lady Franklin intersection. I kept going to the Wangary shop where there is a telephone box. When I got there I tried to put money into the phone but it was jammed and wouldn't accept the money. I dialled triple zero without putting money in and spoke to a female. She asked me which emergency service I wanted and I told her "fire". I then spoke to a male operator and said, "There's a fire on the Lady Franklin Road south of Marble Range." He responded by telling me that they already had units on the way.'<sup>342</sup>

This version of events differs from the first version in two aspects. Firstly, in the version set out above Mr Visic says that he saw the vehicle, not when he left Lady Franklyn Road the first time, that is to say at a time before he became aware of the fire, but after he had returned from the highway and had seen the fire from the Lady Franklyn Road, Duck Lake Road junction. He had previously said that he saw the Navara when he had left the Lady Franklyn Road scene the first time. Secondly, he says that he saw the vehicle pass him and stop, whereas his first account very much suggests that it continued north along Duck Lake Road. The account given in Mr Visic's witness statement would suggest that the Navara stopped at that location for the same reason Mr Visic stopped, namely to observe the fire.

- 1.194. Mr Visic appears to have given another account of this vehicle's movements to Mr Simon Cox when they reconstructed Mr Visic's journey. This account generally conforms to Mr Visic's account as already described. During this journey, Mr Cox recorded in note form the various features of the journey as it was reconstructed and also noted what Mr Visic said from time to time. Mr Visic indicated that after he had left the second location on Lady Franklyn Road, that is the location of the rock pile in the paddock on its eastern side, he drove 1.2 kilometres to the Lady Franklyn Road, Duck Lake Road junction and began 'heading home'. He mentioned nothing of seeing the Navara at that stage. However, Mr Cox has recorded Mr Visic as having indicated during this reconstructed journey that at a point 3.5 kilometres into the journey, which is a location some considerable distance beyond the junction, a dual

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<sup>342</sup> Exhibit C32, page 7

cab Nissan Navara overtook him with ‘*two surfboards in the back*’<sup>343</sup>. When recounting to Mr Cox what had happened and what he had seen when he returned to the junction of Lady Franklyn Road and Duck Lake Road, he does not appear to have recounted anything about seeing the Navara at that stage. Although this account does not necessarily accord with either of the accounts he gave to the police about the involvement of the Navara, it accords more with the first version than the second in that it involves Mr Visic seeing the vehicle before he saw evidence of the fire and not after.

1.195. In his oral evidence, Mr Visic stated that he had seen the Navara heading north at the time he was returning to the Wangary Store to make the 000 telephone call<sup>344</sup>. This account is in conformity with the account recorded in his witness statement given to the officers on 13 January 2005.

1.196. It is in my opinion clear that the blue Navara or its occupants had nothing to do with the fire. Mr Visic does not claim that the vehicle was ever on Lady Franklyn Road. On any version of its movements, it was at all times on Duck Lake Road, and apart from what he apparently told Mr Cox, Mr Visic said that he saw the vehicle proceed on Duck Lake Road north of the junction with Lady Franklyn Road.

1.197. Mr Buddle’s vehicle

I accept Mr Buddle’s evidence when he said that he saw Mr Visic’s vehicle at about 2:45pm. He had a reason for remembering the time. He was conscious of the fact that he had left the Puckridge residence some time before the 3pm smoko. The time of 2:45pm would not be inconsistent with the description of events given by Mr Visic himself because Mr Visic said that he heard what was undoubtedly Mr Buddle’s vehicle some time before he went back to his own vehicle. If the possibility that the vehicle that Mr Visic saw or Mr Buddle’s vehicle had started the fire is to be seriously considered, then the obvious question has to be asked: why is it that Mr Visic did not see that fire or any evidence of it when he was there? To this Mr Morcombe postulated that as Mr Buddle’s vehicle travelled along Lady Franklyn Road, it could have emitted a spark that did not ignite the vegetation in a visible way until after Mr Visic had left the area. Mr Morcombe also would urge me to consider the possibility that the other vehicle seen by Mr Visic may have done the same thing.

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<sup>343</sup> Exhibit C268e, page 3

<sup>344</sup> Transcript, pages 15087 and 15088

1.198. Mr Morcombe pointed to a number of matters in support of his theory. Defects in Mr Buddle's vehicle's muffler had already been reportedly identified as at the time of the Wangary fire. Mr Buddle's vehicle was a 1993 XG Ford Falcon utility with a 6-cylinder petrol engine that Mr Buddle believed was the original motor. Mr Buddle had been in possession of the vehicle since 1999. He had not performed any modifications to the vehicle. In his statement, Mr Buddle said that he tried to keep his vehicle in good working order<sup>345</sup>. He regularly had his utility serviced by Alan Biggs Ford in Port Lincoln. Alan Biggs Ford records confirm that assertion. Mr Buddle told me that a Port Lincoln dealer had replaced the muffler in December 1999. The vehicle had last been serviced in December of 2004. It was next serviced in May 2005.

1.199. When the vehicle had been serviced by Alan Biggs Ford on 23 December 2004, the invoice issued at the time stated:

'WILL NEED FULL EXHAUST AND REAR EXTENSION HOUSING SEAL REPLACED BEFORE NEXT SERVICE'<sup>346</sup>

The rear extension housing seal has nothing to do with the exhaust. Mr Buddle told me that he was in the habit of servicing the vehicle every 10,000 kilometres. The fact that he had it serviced in December 2004, May 2005 and then October 2005 at 10,000 kilometre intervals suggests that Mr Buddle was telling the truth about that. In December 2004 he had been told that he would need a full exhaust replacement before the next service. However, he told me in evidence that he examined the vehicle himself in a service pit and had detected nothing wrong with the exhaust system. He said it was making no noise and he had detected no escaping '*air*'<sup>347</sup> from the exhaust. He did not do anything about the exhaust on that occasion because he saw no need to replace it. It has to be borne in mind that the invoice that he had received did not suggest it needed immediate replacement. When the vehicle was again serviced on 12 May 2005 none of the exhaust system was replaced. Mr Buddle obviously did not see any need for replacement on that occasion and presumably no need was identified at Alan Biggs Ford on that occasion either. However, in October 2005 the vehicle was again serviced and the muffler was noted to be in a poor condition. It was replaced on

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<sup>345</sup> Exhibit C71a

<sup>346</sup> Exhibit C257a

<sup>347</sup> Transcript, page 15233

that occasion. Mr Buddle told me that by then he had detected that there had been something wrong with it.

- 1.200. I heard evidence from a number of sources in relation to the state of Mr Buddle's vehicle. I heard oral evidence from Mr Peter Story who was the Service Manager of Alan Biggs Ford in Port Lincoln. I have already referred to his evidence in another context. His statement was also tendered at the Inquest<sup>348</sup> together with some documentation that related to Mr Buddle's vehicle in 2004 and 2005<sup>349</sup>. I also heard from Mr Hagen Zerk who is a mechanic at Alan Biggs Ford. I also received in evidence the statements of Mr Steven Weir<sup>350</sup> who is another mechanic at Alan Biggs Ford, and that of Mr John Little<sup>351</sup> who is the proprietor of Lincoln Exhaust and Mechanical in Port Lincoln. Mr Little replaced the muffler and tail pipe on Mr Buddle's vehicle in October 2005.
- 1.201. As seen, the invoice relating to the service on 23 December 2004 suggested that Mr Buddle's vehicle would need a full exhaust and rear extension housing seal replacement before next service. Mr Zerk was the mechanic on that occasion. His handwritten note of his work would have formed the basis of that invoice note. His handwritten note is identical to the invoice notation except that the word '*soon*' after the word '*replaced*' has been erased and appears to have been substituted with the words '*before next service*'<sup>352</sup>. Mr Zerk had no independent recollection of working on Mr Buddle's vehicle on this occasion. Mr Zerk told me that if he had formed the view that the exhaust system was dangerous and in need of immediate replacement, he would have indicated that the exhaust system needed replacement then and there as part of that service. If he had seen an existing hole in any part of the exhaust system he would have indicated that the system required immediate attention. Mr Zerk suggested that the reason he had written '*before next service*' was because replacement of the system at that time was not urgent and that there was nothing faulty with the exhaust. However, he surmised that something in the exhaust was probably becoming thin and possibly may have involved a crack or a loose baffle in the muffler. He inferred from his note that the system was obviously starting to shown signs of deterioration, but said that he would not have written '*before next*

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<sup>348</sup> Exhibit C257

<sup>349</sup> Exhibit C257a

<sup>350</sup> Exhibit C273

<sup>351</sup> Exhibit C308

<sup>352</sup> Exhibit C257a

*service*’ if he had thought that it needed attention right then and there. If he had detected a leak, again, he would not have written ‘*before next service*’. He would have recommended immediate attention. Mr Zerk conceded that there was no way of telling whether or not the vehicle would deteriorate to the point where holes in the exhaust would begin to manifest themselves before the next service. He anticipated that the next service would have been in perhaps six months time. He said that if the exhaust was not leaking at the time of his inspection then he could not be sure whether or not it was going to be leaking at any time between then and the next service. However, if he had formed the view that the system would deteriorate significantly say in the next three weeks, he would have reported the exhaust system as requiring immediate attention. As to the original use of the word ‘*soon*’, and its replacement with ‘*before next service*’, Mr Zerk said he had no recollection about that. It is to be noted that both Mr Zerk’s handwritten note and the eventual typewritten invoice advised future replacement for both the full exhaust and the rear extension housing seal. Mr Zerk said he could not remember whether the rear extension housing seal was the major issue or whether it had been the exhaust, but said that he had obviously concluded at the time that the important issue was that the parts should be replaced before next service. He said this:

"Soon' is what I would sort of consider is when we get back to the few weeks, 'next service is' he can pay for his service to save up a bit more dollars and get it done in the next three months or by next service, whatever.'<sup>353</sup>

Mr Zerk said that ‘full exhaust’ referred to the part of the exhaust system to the rear of the catalytic converter. This would include the muffler and the tail pipe.

- 1.202. Mr Buddle next had his vehicle in for a service on 12 May 2005. The vehicle had travelled about 10,000 kilometres in the meantime. On this occasion, there was no notation made on the service record in relation to the state of the exhaust system. The vehicle still had the same exhaust system attached as had been attached in the previous December. The Wangary fires had taken place in the intervening period. A different mechanic worked on the vehicle on 12 May 2005. This was a Mr Weir. Mr Weir’s statement dated 6 September 2006 says that he only has a vague recollection of conducting the 12 May 2005 service on the vehicle<sup>354</sup>. Mr Weir’s statement suggests that he would have carried out a bumper-to-bumper check of the vehicle and

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<sup>353</sup> Transcript, page 15918

<sup>354</sup> Exhibit C273

if there had been any serious fault, he would have made a note of it and would have notified the owner of what remedial action was required. Mr Weir stated that he had no recollection whether the exhaust needed attention on that particular occasion. No mention of the exhaust system on the service record implied that it was inspected and had been '*ok at that time*',<sup>355</sup>.

- 1.203. The vehicle was next serviced at Alan Biggs Ford on 4 October 2005, again about 10,000 kilometres later. On that occasion the mechanic's handwritten note makes it plain that the muffler was '*completely shot*' and in '*poor condition*',<sup>356</sup>. The typewritten invoice states that the muffler was in poor condition. Mr Little's firm replaced the muffler on this occasion. The replacement involved the muffler and the tail pipe. Mr Little said:

'I do not specifically recall the state of the exhaust system I took off this ute. If it was broken and patched up in a shoddy way I tend to remember those jobs but I cannot recall anything unusual about this job. It was probably just an exhaust system sufficiently rusted away to need replacement.'<sup>357</sup>

Mr Little did not retain the replaced parts.

- 1.204. Mr Story who was the Service Manager at Alan Biggs Ford confirmed that if an exhaust were found to be in a very poor condition he and his staff would say so. They would tell the customer that the exhaust would require immediate attention. Mr Story inferred that a notation such as Mr Zerk's in December 2004 was meant to be an indication to the customer that:

'He will have to do something. Possibly before the next service in that particular vehicle it was on the 10,000 interval. To monitor it in other words.'<sup>358</sup>

Again, Mr Story told me that if the mechanic had observed holes in the exhaust or muffler, a recommendation that the defective part be replaced immediately would be made. Identifiable leaks would give rise to the same recommendation.

- 1.205. Mr Story interpreted the lack of any notation on 12 May 2005 as reflecting one of two things, either that the system was not inspected at the time or it was not deemed necessary to make any comment as no external leaks were identified. Mr Story told me that Mr Weir was impeccably reliable. Mr Story said the same thing regarding Mr

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<sup>355</sup> Exhibit C273, page 2

<sup>356</sup> Exhibit C257a

<sup>357</sup> Exhibit C308, page 2

<sup>358</sup> Transcript, page 15367

Zerk. Mr Story suggested that Mr Buddle looked after his vehicle very well and that the regularity of his services was consistent with that. I accepted Mr Story's evidence about that. I find it extremely unlikely that the exhaust system was not appropriately inspected on 12 May 2005. I think it more likely that Mr Zerk's casual prediction in December 2004 that the system would need replacing, be it soon or before the next service, had not come to pass.

- 1.206. None of the evidence that I have referred to directly relates to the exact condition of Mr Buddle's vehicle on 10 January 2005. However, I accept the evidence of Mr Zerk that had there been any significant defect in the exhaust system that would have rendered the system dangerous, he would have advised immediate replacement. That, together with the evidence of Mr Buddle himself that he could not detect anything untoward about the exhaust system when it was examined from a pit, leads me to conclude that there was nothing about his exhaust system that would have given rise to the escape of burning particles as at January 2005. The fact that the exhaust system was not identified as needing replacement in May 2005 when the vehicle was next serviced tends to confirm that view. There is nothing in my view that can be inferred from the fact that by October 2005 the system did in fact obviously need replacement.
- 1.207. In short, I had full confidence in the evidence of Mr Zerk and the evidence of Mr Story that if there had been anything untoward noticed in December 2004 and May 2005 in relation to Mr Buddle's exhaust system, it would have been noted and Mr Buddle would have been advised to replace his exhaust system then and there. I am also mindful of the fact that Mr Buddle's vehicle was a petrol vehicle and less likely for that reason to throw sparks. It is also worthwhile observing that Mr Story, having examined some of the photographs of Mr Visic's diesel vehicle, concluded that the system in Mr Visic's vehicle was less than satisfactory and would have required immediate replacement and that is precisely what he would have advised Mr Visic to do. In short, the suggestion that Mr Buddle's moving vehicle was a better candidate to have started the fire than Mr Visic's stationary vehicle parked as it was in close proximity to roadside vegetation at or about the position where the fire started, is to be rejected.

1.208. The incubation period of a burning particle

The question of timing also has to be considered when examining the possible involvement of another vehicle in the origin of this fire. This applies both to the



involvement of Mr Buddle's vehicle or any other vehicle, such as the vehicle that Mr Visic claims he saw when he was on the western side of Lady Franklyn Road. Much time and attention in the Inquest was devoted to a theory that a spark or particle may have been emitted by another vehicle and had, as it were, undergone an incubation period before it set fire to vegetation just in time for Mr Visic to see the fire from the Lincoln Highway, not having observed anything when he had been at the Lady Franklyn Road location. For reasons that follow, I reject that theory.

- 1.209. As I understand the contention, it is that there exists a possibility that a glowing, as opposed to burning, particle was emitted from a vehicle that had passed through the area earlier than Mr Visic's vehicle. This particle could have landed upon or in the roadside vegetation and not immediately have ignited the vegetation. Mr Cox explained the theory of such a process as follows:

'With dry grass material, with perhaps broad leaves, if a flaming particle was to come into contact with a dry grass leaf then there could be direct ignition, direct ignition of flaming combustion. Alternatively, if a glowing particle was to come into contact with, say, a bed of dry grass or a bed of needles or other fine vegetation, it may burrow into that vegetation and continue to smoulder until such time as - well the particle will continue to glow until its fuel is consumed but the material around it will then continue to smoulder for a length of time that's determined by the geometry of the material that it's smouldering on and the wind conditions. There may be a time when the critical velocity of air or wind is introduced to the smouldering or glowing front that will then cause it to transform into flaming combustion.'<sup>359</sup>

- 1.210. I have been invited to consider that the above-described process was possibly taking place at the time Mr Visic was in the general location on the eastern side of Lady Franklyn Road, and taking place without Mr Visic's knowledge. This theory requires the suspension of a large measure of one's credulity. It is premised on a scenario that a vehicle, having parked or having been driven by, emits a glowing carbonaceous particle onto roadside vegetation along the eastern side of Lady Franklyn Road and then leaves the area at a time before Mr Visic arrives. Mr Visic then parks his vehicle on or adjacent to the very stretch of vegetation that the earlier vehicle has thrown a spark into. While Mr Visic remains at that location, the particle continues to burrow into the vegetation, incubates and causes smouldering. Mr Visic detects nothing of this. Mr Visic returns to his vehicle which, coincidentally, like the vehicle that has thrown the smouldering spark into the vegetation, has the same or greater capability. Mr Visic idles the motor in that location for several seconds and then drives away.

Just after he drives away, a fire starts in the exact stretch of vegetation that Mr Visic was parked in or next to. To my mind this scenario as a reasonable possibility is an unattractive one.

1.211. Quite apart from that, the conditions that existed that afternoon were ideal for the immediate or very fast ignition of dry vegetation. Much evidence was given about the type of conditions that would be more suitable for immediate or quick ignition than otherwise. There were said to be, by any number of witnesses, a number of conditions that are relevant to this issue. They include the size of the particle, the heat of the day, the type of vegetation the particle comes into contact with and the dryness of that material. The suggestion was that if a particle landed on dry sheoak needles as opposed to dry grass, there might have been a longer incipient phase of ignition before flaming combustion actually occurred. Mr Cox said for example that if a particle emitted by a vehicle was flaming when it came into contact with a dry sheoak needle and it was able to ignite that needle, then you might have flaming combustion occurring immediately. Alternatively, if it was a glowing particle and it landed onto a bed of sheoak needles, he would expect it to then bury itself, to slowly tunnel into the bed and at some stage there may or may not be a transformation to flaming combustion. Mr Cox suggested that smouldering may take place over a period of time until '*that critical velocity of air*', that is wind, transforms it to flaming combustion<sup>360</sup>. Mr Cox said that the likelihood of a glowing particle immediately igniting a fuel bed into flaming combustion was very small unless there was a substantial wind blowing. Mr Cox stressed that the critical factor was wind velocity. He said that research and experimentation had shown that glowing particles that were dropped onto vegetation would ignite when blown on. Thus ignition by contact with a glowing particle could occur straight away. Whether ignition did occur would depend on the timing of wind coming onto it and the nature of the material the particle fell onto.

1.212. Mr Gould stated the obvious when he said that the stronger the wind, the more oxygen is brought into the equation and that this leads to more ready combustion of the vegetation. However, Mr Gould was of the view that wind is not the critical factor in ignition, but that it is the dryness of the fuel. Mr Gould said the relevance of wind lies

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<sup>359</sup> Transcript, page 16356

<sup>360</sup> Transcript, page 16356

in how the fire propagates once ignition has taken place. Mr Gould also said that the size of the carbonaceous particle is another critical factor. Mr Gould said this:

'I guess I am concerned about what you mean by the time lag, and the time the carbonated (sic) material landed on the sheoak and went flaring up, because it is exposed on the top of the litter layer, which is immediately exposed to air and warmer temperatures, and a humidity much more so than something that is smouldering underneath where it's not exposed to that much oxygen. So, the smouldering kind of that carbonated (sic) material would either burn out fairly quickly itself, without causing ignition source of the sheoak material, or has it kept going with a mixture of the air and stuff, it would make fairly soon. So the time lag, I don't know what you mean by 'sometime later'.'<sup>361</sup>

Mr Gould said also that smouldering material might self extinguish if one of the favourable conditions for ignition abated. Alternatively, it could continue to smoulder until such time as the conditions were right, such as an extra gust of wind or an increase in temperature.

1.213. Dr Kevin Tolhurst suggested, like Mr Gould, that the size of the material was relevant. Dr Tolhurst suggested that although a carbonaceous particle that landed in a carpet of needles might require a period of time before flaming ignition took place, it would have to be quite a large body of material to have enough heat capacity to be able to transfer the heat for a long enough period to initiate ignition. He said:

'...the carbonaceous material, would need to be relatively large to be able to transfer that amount of heat in a windy environment long enough to raise the temperature of the fuel. So it is possible but it would have to be quite a large fragment, which would be quite unusual, I would say, coming from an exhaust. It's possible.'<sup>362</sup>

Dr Tolhurst also suggested that if the fuel was fine enough material, say very fine dead grass, it is more likely to light rapidly than a mat of sheoak needles. In addition, if the conditions were windy, then he would not expect the smouldering process to be a prolonged period. He said:

'I don't think you would get, in windy conditions, a long period of delay in smouldering combustion. So it depends whether it is windy or not and windiness may well be part of the process of getting the ember there in the first place, which is what certainly can happen.'<sup>363</sup>

In other words, what Dr Tolhurst was saying was that if you have wind that was not strong enough to start a fire, then it may not be strong enough to blow the particle

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<sup>361</sup> Transcript, page 17429

<sup>362</sup> Transcript, page 19330

from a moving vehicle into roadside vegetation in any case. In addition, if it was not windy enough to cause flaming combustion, then in Dr Tolhurst's view there is a fair chance that the heat would in any event significantly dissipate. So if the process of heat transfer to the fuel was slow, then heat transfer to the atmosphere is also going to take place and as a result, heat would be lost to the fuel. Instead of the heat going to the fuel, it is going to go into the air and would be ineffective from the point of view of igniting a fire.

1.214. I also heard evidence from Brevet Sergeant Ian Fisher of SAPOL. Mr Fisher is a Fire Cause Investigator with the South Australian Police. He has been a member of the Forensic Services Branch of SAPOL since 1982 and has examined in excess of 1800 fire scenes. Brevet Sergeant Fisher was well aware of the concept of the incipient stage of combustion, being the period before smouldering material might combust into visible flame. Brevet Sergeant Fisher also referred to the size of the particle as well as the amount of oxygen that is available as being relevant to this issue. Like Dr Tolhurst, Brevet Sergeant Fisher suggested that a small piece of carbon is not going to retain its potency for very long compared, say, to a piece of very hot metal that might be emitted by a motor vehicle's exhaust system. Brevet Sergeant Fisher suggested that the hotter it is environmentally the shorter the incipient period. It seems to me that this is to state the obvious. Brevet Sergeant Fisher said:

'Yes, because what you're introducing there, if it's a stinking hot day in the high 30s or low 40s the grass and vegetation is already heated whereas on a cold winter's day the grass is cold and dewy. So once you start introducing other factors, environmental factors, obviously the stages are going to shorten.'<sup>364</sup>

A wind, especially a hot wind would also shorten the incipient period. In very hot and windy conditions Brevet Sergeant Fisher said the incipient period would be a shorter time because you have preheated combustible material, you have plenty of oxygen that would fan the fire and get the fire going very quickly. Brevet Sergeant Fisher did concede however that if the conditions were somewhat less than ideal, that is to say where the ambient temperature is not hot enough and the wind is not strong enough, it might not burst immediately into flame and may smoulder with no visible signs.

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<sup>363</sup> Transcript, page 19332

<sup>364</sup> Transcript, page 16103

1.215. Brevet Sergeant Fisher was asked this question:

- 'Q. Are you in a position to offer to his Honour an opinion as to this particular case if there was a carbon particle emitted from the exhaust of a vehicle, as to which of three it may have been, that is the case of a lengthy incipient stage, a case of reignition or a case of the carbon particle hitting the vegetable matter, spontaneous combination and the fire is away.
- A. Well all those parts form part of how a fire starts and spreads, what you talked about. So if we get a vehicle parked in an area where there is dry vegetation and a hot substance comes out of the exhaust then it will either ignite or it won't ignite that dry grass and you'll end up with a fire. Now depending on the conditions, the weather conditions and the type of fuel as to whether it's a quick fire that takes off and away it goes or whether it's going to smoulder for some time and then the wind pick up and off it goes or whether there is not sufficient fuel there, it's too wet, there is no wind and it just immediately go out.'<sup>365</sup>

1.216. Brevet Sergeant Fisher suggested that when one examined the weather conditions on the Monday, conditions were perfect for a '*fairly substantial fire*'<sup>366</sup>. Brevet Sergeant Fisher pointed to the fact that it was an extremely hot day and that the vegetation in the area was very dry, very flammable and ready to burn. With the wind that existed on the Monday afternoon Brevet Sergeant Fisher would have expected that anything hot emitted from the exhaust of a vehicle straight onto dry vegetation would have caused an ignition to occur fairly quickly. Brevet Sergeant Fisher suggested the conditions were '*perfect for anything that was hot enough to ignite that*'<sup>367</sup>.

1.217. I have already referred to the weather conditions prevailing on the Monday afternoon at the Lady Franklyn Road area. There is no suggestion other than that there was a wind in existence at all material times and the afternoon was hot. Evidence suggested that the vegetation at that time of the year was tinder dry. There was 100% curing of grassy vegetation. While it is theoretically possible that a large enough piece of glowing carbon might give rise to smouldering and then later ignition, in the particular circumstances that prevailed on the Monday afternoon such a scenario is highly unlikely in my view. Either the particle was going to ignite dry vegetation very quickly, especially in the case of dry grass, or it was going to go out. We know that there were both sheoak needles and dry grass along the stretch of roadside vegetation on the eastern side of Lady Franklyn Road. In my opinion, for the reasons that I have set out, the possibility that carbonaceous material from a vehicle that had

<sup>365</sup> Transcript, page 16105 and 16106

<sup>366</sup> Transcript, page 16109

<sup>367</sup> Transcript, page 16109

passed through before Mr Visic parked his vehicle on the eastern side of Lady Franklyn Road had smouldered in dry vegetation all the time that Mr Visic was there in the general location is to be dismissed.

1.218. Other activity at this location

Mr Trevor Puckridge gave evidence that there was no activity in the area that afternoon which could conceivably have given rise to the ignition of a fire in roadside vegetation along Lady Franklyn Road. There were no works taking place and certainly no environmental factors such as lightning that might have contributed to the ignition of a fire that afternoon. There is no evidence of any machinery being utilised in that particular location. There is no evidence of powerlines at that location.

1.219. Mr Morcombe has referred in his submissions to other possibilities that were not in his view properly investigated by the authorities. Here Mr Morcombe spoke of a failure to properly investigate the possibility of arson. He also referred to the failure to investigate any vehicle other than Mr Visic's as being a possible cause, such as Mr Buddle's vehicle. Dealing with that latter submission, although it would have been helpful if Mr Buddle's vehicle had been examined forensically, in my opinion the evidence that I heard in relation to the condition of the vehicle renders Mr Buddle's vehicle as a highly unlikely, if not entirely fanciful, cause of the fire. I say that for two reasons, firstly it did not appear to me to be in a condition that would necessarily give rise to the emission of burning material. Secondly, he was in the area too early for anything that his vehicle might have emitted to account for a fire that was not detected until several minutes after 3pm. This latter consideration also leads me to conclude that the other vehicle that Mr Visic saw, namely the white Toyota, was a highly unlikely cause of the fire and given that it was there even earlier than Mr Buddle's vehicle, an even more fanciful possibility.

1.220. As to the possible involvement of arsonists, Mr Morcombe has urged me to consider a body of material suggesting that at least in the days preceding Monday 10 January 2005 there may have been an arsonist in the region. I received a body of material from the CFS about this. There is also some material suggesting that on the Sunday evening a fire had been deliberately started on Panoramic Drive in Port Lincoln.

1.221. Senior Sergeant Philip Linton who was responsible for the administration of the coronial investigation into the Wangary bushfire gave evidence before me. As well, a

statement signed by Senior Sergeant Linton was tendered at the Inquest<sup>368</sup>. In a nutshell, Senior Sergeant Linton told me that there was simply no evidence to identify any individual who may have been responsible for starting the fire either deliberately or accidentally and that as a consequence no other person apart from Mr Visic was investigated about that issue. In essence, Mr Morcombe suggested that the investigating authorities had a blinkered attitude towards the investigation, and in particular to the issue as to how the fire started.

1.222. Be that as it may, there is no evidence to suggest that an arsonist was in the relevant location at the relevant time. If a person had deliberately set fire to the roadside vegetation on the eastern side of Lady Franklyn Road I think it is a fair assumption that the person probably would have done so with a view to starting a fire either immediately or very soon after. The possibility of the person having attempted to ignite a fire before Mr Visic's arrival at the location gives rise to a scenario wherein the arsonist does something to start a fire at that location but leaves no evidence of that for Mr Visic to see when he arrives at the location. Alternatively, if it is suggested that an arsonist deliberately set a fire after Mr Visic left the location, it is a remarkable coincidence that he, she or they chose the very location where Mr Visic had been situated. I reject either scenario as fanciful.

1.223. I have very carefully considered counsel's submissions about the perceived inadequacy of the police investigation. It boils down to the question of whether there were lost opportunities to gather evidence that may have either indicated another source for ignition of the fire or have exonerated Mr Visic's vehicle as the cause of the fire. I have given careful thought to that issue as well as to the contention that alternative explanations for the ignition of the fire have not been eliminated by virtue of perceived inadequacies in the investigation. For the reasons I have mentioned, to my mind the possibility that an alternative source of the fire would have been identified by a more thorough investigation leading to the identity of, say, the white Toyota and its occupants, or the identity of an arsonist in the region at the relevant time is unrealistic. The fact that the white Toyota and its occupants were not identified and the fact that a person in the region apparently given to lighting a fire in a rubbish bin does not shake my confidence in the conclusion that I have ultimately reached, namely that it was in fact Mr Visic's vehicle that started the fire.

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<sup>368</sup> Exhibit C291

1.224. By what means could Mr Visic's vehicle have started the fire?

In my opinion the evidence is clear that Mr Visic's vehicle could have started a fire in the conditions that prevailed at the Lady Franklyn Road location by the emission of a hot carbonaceous particle from his exhaust system. In addition, the conditions were such both in terms of ambient temperature and wind, that a conflagration would be started very quickly. As to whether the particle was emitted while Mr Visic's vehicle was stationary and whether it was emitted from one of the defects in the exhaust system as opposed to the tail pipe is another issue. Although Mr Cox determined that arithmetically there was a greater likelihood that a hot carbonaceous particle would be emitted from the tail pipe compared with defects in the exhaust system, particles emanating say from the imperfect join at the flexible pipe would be hotter and be more likely to burn once emitted and exposed to the oxygen<sup>369</sup>. However, he did point out that if particles emitted from both sources were all above their ignition temperature, it does not matter where they have exited, as they would both start to flame. Mr Cox's experimentation also revealed that it was unlikely that any particles that passed through an imperfect join in the flexible pipe would be propelled beyond the perimeter of a stationary vehicle before reaching the ground. Of course, this observation has to be examined against the real possibility that Mr Visic's vehicle was parked at least partially over dry grass. A particle exiting the tail pipe, on the other hand, might travel as far as three metres from the rear of the vehicle before it reached the ground. A cross wind would also cause the particle to move to the side of the vehicle as well while stationary or moving, and the greater the wind speed, the further the particle would travel to the side.

1.225. The standard of proof

A finding as to the cause of this fire on the Monday afternoon would require proof on the balance of probabilities. I have been urged by some represented entities in this Inquest to find that the cause of the fire originating as it did on the eastern side of Lady Franklyn Road on the Monday afternoon emanated from Mr Visic's motor vehicle, and in particular by the emission of a spark. I would only make such a finding if I were so satisfied on the balance of probabilities. No-one disagreed with this proposition.

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<sup>369</sup> Transcript, page 16431



- 1.226. The submission that Mr Visic's vehicle caused the fire requires me to consider a body of circumstantial evidence. I have been asked to draw an inference, from facts established to my satisfaction to the necessary degree, that Mr Visic's vehicle was the cause of the fire.
- 1.227. As the standard of proof required here is the balance of probabilities, I do not need to conclude that all other reasonable hypotheses consistent with Mr Visic's vehicle not being the cause of the fire have been excluded, as would be the case if the standard of proof required was beyond a reasonable doubt. When considering the weight of circumstantial evidence in the context of a standard of proof on the balance of probabilities, it is enough if the circumstances appearing in the evidence give rise to a reasonable and definite inference, but they must do more than give rise to conflicting inferences of equal degrees of probability so that the choice between them is a mere matter of conjecture - Bradshaw v McEwans Pty Ltd (unreported, High Court of Australia - Dixon, Williams, Webb, Fullager and Kitto JJ, 27 April 1951) but reproduced in Holloway v McFeeters (1956) 94 CLR 470 at 480-481. If the circumstances are proved in which it is reasonable to find a balance of probabilities in favour of the conclusion sought, then although the conclusion may fall short of certainty, it is not to be regarded as a mere conjecture or surmise - Bradshaw v McEwans, supra. If reasonable hypotheses exist other than that it was Mr Visic's vehicle that started the fire, their existence is a matter to be taken into account in determining whether the fact in issue, namely whether the vehicle caused the fire, should be inferred from the facts proved - R v Doney (1990) 171 CLR 207 at 211 per Deanne, Dawson, Toohey, Gaudron and McHugh JJ. I direct myself in accordance with the above propositions.
- 1.228. It has been urged upon me by those entities who in this Inquest have argued that Mr Visic's vehicle has not been shown to have been the cause of the fire on the Monday that the requisite level of proof for a finding that the vehicle was the cause is the level contemplated by the High Court in Briginshaw v Briginshaw (1938) 60 CLR 336. Although it is clear that nothing said by the High Court in Briginshaw sets a higher standard of proof in civil cases than the balance of probabilities, Briginshaw does contemplate that there are some cases owing to the seriousness of the allegations made, the inherent unlikelihood of an occurrence of a given description of the gravity of the consequences flowing from a particular finding where the tribunal might look

for an enhanced degree of satisfaction. This approach is encapsulated in the following dictum of the High court in Neat Holdings Pty Ltd v Karajan Holdings Pty Ltd (1992) 67 ALJR 170 per Mason CJ, Brennan, Deane and Gaudron JJ at 171:

'The ordinary standard of proof required of a party who bears the onus in civil litigation in this country is proof on the balance of probabilities. That remains so even where the matter to be proved involves criminal conduct or fraud. On the other hand, the strength of the evidence necessary to establish a fact or facts on the balance of probabilities may vary according to the nature of what it is sought to prove. Thus, authoritative statements have often been made to the effect that clear or cogent or strict proof is necessary 'where so serious a matter as fraud is to be found'. Statements to that effect should not, however, be understood as directed to the standard of proof. Rather, they should be understood as merely reflecting a conventional perception that members of our society do not ordinarily engage in fraudulent or criminal conduct and a judicial approach that a court should not lightly make a finding that, on the balance of probabilities, a party to civil litigation has been guilty of such conduct.'

In the instant case it is said that the serious adverse consequences to Mr Visic's financial standing and reputation in his community that would be dealt by a finding that his vehicle caused the fire, are such that I should adopt the Briginshaw approach.

- 1.229. There is no allegation against Mr Visic of gross impropriety or the commission of a serious offence. There is no allegation of serious moral blameworthiness. In addition, there is nothing inherently improbable about a finding that Mr Visic's vehicle caused the fire that in itself would cause me to hesitate before such a finding was to be made.
- 1.230. Thus, it is suggested that I should not lightly make a finding that Mr Visic's vehicle started the fire. I have given careful thought to this submission. I am conscious of the fact that it is said that Mr Visic's vehicle was the catalyst for most, if not all of the destruction that occurred on the Lower Eyre Peninsula in the days following Monday, 10 January 2005. It is not as if it is suggested that Mr Visic's vehicle destroyed one fence post. I am thus mindful of the fact that indeed a finding on the balance of probabilities is a finding that should not be made lightly or made on unconvincing evidence. I have brought to bear on this issue what to my mind is a rigorous assessment of the evidence and I have not made my finding on the issue lightly. My view is that the conclusion that I have reached is made on evidence that is compelling, clear and all pointing in the one direction. The evidence in support of that conclusion is not in any sense unconvincing in my opinion. Although I have made my finding on this issue based upon a weighing of competing probabilities and possibilities, the

factual findings that I have made on this issue are not only findings of facts that in my view are more probable than not, they are findings of fact of which I am completely satisfied.

1.231. Conclusions - Cause of the fire on Monday, 10 January 2005

The fire started in roadside vegetation on the eastern side of Lady Franklyn Road on the afternoon of Monday, 10 January 2005.

1.232. I found Mr Visic to be an unreliable witness as to the events of Monday, 10 January 2005. I have already referred to material inconsistencies in his evidence. I found it to be an extraordinary coincidence that it was Mr Visic himself who perhaps before any other person in the region, had first seen evidence of the fire from a remote location some several kilometres away while driving his vehicle along Flinders Highway, when he was the very person who had only recently left the very scene where the fire had started. I also found it to be an extraordinary coincidence that Mr Visic was one of the first, if not the first person to arrive at the scene and see the fire in existence at close quarters. The juxtaposition of these events gave me pause in relation to whether I should accept Mr Visic's evidence about seeing signs of the fire for the first time from the Flinders Highway. Mr Visic's inconsistency about the circumstances in which he came to witness evidence of the fire, that is to say, through the internal rear vision mirror of his vehicle, reinforced a conclusion in my mind that there was good reason for caution before accepting his evidence. I find that I cannot rely on his evidence that he saw the smoke of the fire for the first time from the Flinders Highway. This, however, does not of itself mean that Mr Visic witnessed the fire for the first time at the precise moment of ignition. However, Mr Visic certainly gives me the impression that he knows more about the manner in which this fire started than he is prepared to divulge. For much the same reasons, I am not prepared to act on his evidence that the roadside verge opposite the rock pile was the exact location, or sole location, where he parked his vehicle on the eastern side of Lady Franklyn Road, although I observe here, that the fire could have originated at that location.

1.233. It is not possible to state with precision the time the fire originated. The evidence has satisfied me that it probably commenced shortly after 3pm.

1.234. The precise point of origin of the fire cannot be determined on the evidence before me. However, it is clear that it originated in the roadside vegetation at a point north

of the gateway into land occupied by Mr Trevor Puckridge and somewhere south of the northern extremity of the fireground at that location, which is a point about 180 metres north of the gateway. In my opinion, it is as equally likely that the precise point of origin was in roadside vegetation directly opposite the rock pile on Mr Puckridge's property as opposed to any other location in the stretch of roadside vegetation I have described.

- 1.235. Mr Visic's vehicle, being a Toyota 1994 Series 80 4WD Landcruiser with a diesel powered engine, was capable of generating a burning or glowing carbonaceous particle. Although it has not been shown that this vehicle had a greater propensity to generate a burning or glowing carbonaceous particle than any other diesel powered vehicle, I am satisfied on the evidence that the state of the exhaust system was such that it had a compromised ability to retain and extinguish such a particle within that exhaust system as compared to a similar vehicle fitted with an intact exhaust system and a standard Toyota muffler.
- 1.236. The weather conditions on the afternoon of Monday, 10 January 2005, both in terms of temperature and wind velocity, were such that a burning or glowing carbonaceous particle of a size of 0.6mm or more, landing in very dry roadside vegetation, particularly grass, along the eastern side of Lady Franklyn Road, would likely have given rise to immediate or almost immediate ignition of that vegetation.
- 1.237. I reject the contention that Mr Buddle's vehicle may have emitted material that either immediately ignited vegetation or did so at a later time. I reject the contention that the white Toyota may have been responsible for the fire.
- 1.238. There is no evidence that a source of fire, such as another vehicle, lightning or machinery existed at or about the time of the ignition of the fire other than Mr Visic's vehicle. I reject the possibility that the fire was caused by such a source.
- 1.239. I am satisfied that Mr Visic parked his vehicle at, on or very near to, very dry and flammable roadside vegetation on the eastern side of Lady Franklyn Road at a location between the gateway to Mr Puckridge's property and a location north of that gateway.
- 1.240. I am satisfied that at one time Mr Visic's vehicle was idling and stationary at that location for a period of several seconds.

- 1.241. I am completely satisfied that a burning or glowing carbonaceous particle or particles were emitted from the exhaust system of Mr Visic's vehicle into or onto roadside vegetation on the eastern side of Lady Franklyn Road and that the particle or particles was or were large enough to cause immediate or almost immediate ignition of that vegetation. I find that such a particle or particles from Mr Visic's vehicle did cause immediate or almost immediate ignition of that vegetation. The inference that Mr Visic's vehicle started the fire in my view is not merely conjecture, or one of a number of inferences that have equal merit. It is absolutely compelling. It is, in my judgement, not only the most probable inference available, but the only sensible inference available. All other reasonable hypotheses to my mind have been excluded. Given Mr Visic's vehicle's proximity to the point of origin of the fire, the state of his vehicle's exhaust system, the existing weather conditions and the timing of the ignition in relation to the presence of that vehicle, it would be a remarkable thing if the cause of the fire was an act or event wholly disconnected from the presence of Mr Visic's vehicle at the location in question. I reject such a hypothesis as offending common sense. In reaching the conclusion that a particle or particles from Mr Visic's vehicle caused this fire, I have given careful consideration to the fact that Mr Visic's vehicle was never properly examined in the condition that it was in on Monday, 10 January 2005. In particular, I am mindful of the fact that there is no direct evidence that the vehicle was capable of or had a propensity to generate particles of a size greater than 0.6mm. However, the circumstances are such that I am satisfied that on this particular occasion it did. The conclusion, from circumstantial evidence, that Mr Visic's vehicle was the cause of this fire is so compelling that the fact that there is no direct evidence that the vehicle was capable of generating a particle of 0.6mm is a matter about which I am not particularly troubled.
- 1.242. In my view, it is more likely that Mr Visic's vehicle emitted this material when the vehicle was stationary or was just moving off from the verge rather than later in its journey adjacent to the roadside vegetation. However, it is not beyond the realm of possibility that it did emit the particle or particles while the vehicle was moving and that the material blew into roadside vegetation and ignited.
- 1.243. It is impossible for me to identify the aperture in Mr Visic's exhaust system from which the particle or particles were emitted. I do not know whether it was emitted from a defect in the system or from the tail pipe. However, I accept Mr Cox's

evidence that it is more likely that the particle emanated from the tail pipe than any other aperture. The possibility that it emanated from an aperture such as that which existed at the imperfect join between the flexible pipe and the exhaust pipe cannot be discounted.

1.244. Recommendations - Cause of the fire on Monday, 10 January 2005

The conclusion that this fire was started by way of a burning or glowing carbonaceous particle having been emitted by a diesel powered vehicle through its exhaust system, and very likely through the muffler, gives rise to a serious question as to whether after-market, non-standard mufflers should be fitted to a vehicle such as this. I am satisfied that a standard Toyota muffler would have possessed a greater ability to trap a burning or glowing particle within it.

1.245. Mr Visic told me that when he purchased the muffler, he thought it was a standard muffler. He had replaced the old one with '*anything that would get me going*'<sup>370</sup>. He said that he could have gone to Toyota and bought one there, but they were expensive and he only had limited funds, so he had just gone to a muffler shop and asked them to '*put something on here*'<sup>371</sup>. When asked as to whether or not the muffler that was fitted had a spark arrestor, Mr Visic said he had just assumed it was a legal Australian Design Rules compliant device. It so happens that the Australian Design Rules are essentially silent on the issue in any event when it comes to spark arrestors on motor vehicles. It is clear to me that Mr Visic gave no thought to the issue as to whether the muffler he was purchasing had any capability in terms of preventing sparks emanating from his vehicle.

1.246. Mr Burton was asked whether in his opinion an after-market muffler such as that fitted to Mr Visic's vehicle was a suitable device for a vehicle of this nature. He said:

'The question is clear, I think there are a number of caveats that I'd have to put on in the response. You asked if it is suitable from a spark transmission or ember transmission perspective, I think to answer that absolutely would require probably a conduct of some rather more complex tests, whereas I've just done a visual inspection and I have applied engineering experience and theory to give the responses I have. I believe as I've said in the report there is an enhanced possibility of ember transmission through the aftermarket muffler. I don't believe I can comment absolutely as to whether it is suitable or unsuitable, because to answer that in an absolute sense would also require I think consideration of the type of service of the vehicle was to be put. Many vehicles despite

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<sup>370</sup> Transcript, page 15176

<sup>371</sup> Transcript, page 15177

the fact that the manufacturer might intend that they be regarded as off-road vehicles never leave bitumen roads. Equally as well of course the vehicle can be travelling down a bitumen road and admit a spark and cause a fire. So I don't believe that I can in an absolute sense answer the question as to whether or not it is suitable. What I've attempted to do is to make comparisons and to answer the questions I was asked to answer in my brief.'<sup>372</sup>

In my opinion, there is more work to be done here. There is a need for research to be undertaken as to whether cheaper, unsophisticated devices such as that attached to Mr Visic's vehicle are really suitable as far as its spark arresting capabilities are concerned. It is to be acknowledged that even the more sophisticated Toyota device was not specifically designed to arrest sparks, and that its primary function is to suppress noise. Mr Lewis, the Toyota representative, said that the Toyota muffler was not designed as a spark arrestor. However, it is clear from the evidence of both Mr Burton and Mr Lewis that the standard muffler has a greater ability to suppress sparks generated by a diesel motor because of its more complex configuration. As Mr Burton in effect stated, it may not matter in the final analysis because most vehicles do not come into close contact with dry vegetation in rural settings. However, many vehicles do, especially diesel 4WD vehicles. I include a recommendation as to this issue at the conclusion of this report.

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<sup>372</sup> Transcript, pages 21254 and 21255

## 2. **Initial responses to the fire**

- 2.1. As seen from the previous section, a number of local citizens with their firefighting appliances, consisting in the main of utilities with a water source and pump on the back, attended the fire scene. Many of those citizens were local farmers who as it so happened were also members of the Country Fire Service (CFS). There was also the very early attendance of Mr Casanova with his SAME tractor with the square blade attached at the front. Mr Casanova was able to put in a number of firebreaks with that tractor.
- 2.2. Mr Nettle, the Captain of the Wangary CFS Brigade used the GRN radio to notify CFS Region 6 Headquarters of his sighting of smoke from the Wangary area. This communication was received at 3:20pm. Mr Simon Vogel, the Regional Officer for Region 6 that afternoon, decided to respond to the incident with six CFS appliances. Mr Vogel recorded the receipt of the information from Mr Nettle on a CFS document known as an initial incident report<sup>373</sup>. The time recorded on the initial incident report is 3:21pm<sup>374</sup>. Mr Vogel communicated with CFS State Headquarters requesting them to page CFS Brigades and as a result of that, Wangary 24, Wanilla 24, Coffin Bay 34 and 14, Coultas 24 and Edilillie 24 appliances attended the fireground.
- 2.3. It is to be noted that the Lower Eyre Peninsula Group Operational Management Plan 2004<sup>375</sup> only requires an initial response of four appliances to such an incident, however Mr Vogel in his evidence said that because of the weather conditions being experienced at the time, he decided to respond with two additional appliances<sup>376</sup>.
- 2.4. At 3:49pm the Group Officer Mr Chambers requested that three additional appliances be paged to attend the fire. Mr Chambers made this request whilst on his way to the fireground, after seeing the large smoke plume from the fire and hearing over the GRN radio that the fire was inaccessible<sup>377</sup>. Lincoln 24, Kapinnie 24 and Mount Hope 24 were subsequently paged by CFS Lincoln Base.
- 2.5. The first CFS appliance to arrive at the fireground was Wangary. Mr Nettle, the Wangary Captain said that when they arrived at the fireground the fire was in the

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<sup>373</sup> Exhibit C228c

<sup>374</sup> Mr Vogel noted the time as 3:21pm however this time appears as 3:20pm throughout the remainder of these Findings

<sup>375</sup> Exhibit C224e, page 9

<sup>376</sup> Transcript, page 12728

<sup>377</sup> Transcript, page 11101



process of crossing Duck Lake Road. Mr Nettle said that there were several private farm units in the area when they arrived.

- 2.6. Mr Damien Puckridge, the Officer in Charge of the Edilillie CFS appliance, said that his appliance arrived at the fireground between 4pm and 4:15pm. He said that on their arrival the fire was over Duck Lake Road and burning in the paddocks on the eastern side of the road. Mr Puckridge thought the paddocks that were burning were those of Mr Troy Siegert, which is the property to the north of Mr Christopher Hull's to the east of Duck Lake Road.
- 2.7. A further request was made for appliances by Mr Branson, the Deputy Group Officer who was in the command vehicle with Mr Chambers, at 4:55pm. This was as a result of information from Mr Pope, the Captain of the Wanilla CFS appliance, that the fire had entered the swamp. As a result of this request, Lincoln Base paged White Flat 24, North Shields 24, Yeelanna 34 and Greenpatch 24.
- 2.8. The fire continued to spread in a north-easterly direction through the Monday afternoon. Mr Branson said Mr Pope reported just before 5pm that the fire had entered the swamp just to the east of the New South Wales paddock. Mr Les Hull said that the fire was at the southern boundary of his property on Warunda Road sometime between 5:30pm and 6pm<sup>378</sup>. Mr Pope, after witnessing the fire enter the swamp, also requested from the Group Officer that a water bomber be sent to assist with the fire. This request was passed on to the Regional Duty Officer Mr Simon Vogel and, as is discussed later in this finding, was not actioned.
- 2.9. At around 5:30pm, the Group Officer of the Tumby Bay CFS Group, Mr Quentin Russ contacted Mr Simon Vogel, the Regional Duty Officer offering to send a strike team to assist at the fire. Mr Russ had rung Lincoln Base earlier but had been advised that their assistance was not required. In this instance, Mr Vogel contacted Mr Chambers and asked if he would like additional appliances, which Mr Chambers accepted. Mr Vogel then advised Mr Russ that a strike team was required and Mr Russ arranged for Koppio 24, Lipson 24, Tumby Bay 34 and Yeelanna 34 and a group vehicle to attend the fire. At around this time, the Lincoln Base also paged the Karkoo 24 appliance to assist.

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<sup>378</sup> Transcript, page 2591

- 2.10. Whilst the CFS appliances and private farm units were attempting to suppress the fire, Mr Casanova had also been assisting by creating bare earth breaks with his SAME tractor. Mr Casanova after witnessing the fire when he was travelling up Duck Lake Road put in several breaks over the course of the Monday afternoon. Mr Casanova initially put in a break on the eastern side of Duck Lake Road in Mr Christopher Hull's property running in a north-south direction in an attempt to give the fire-fighters a line to work off to stop the approaching fire. He then also created a break through the roadside vegetation and sugar gums back to Duck Lake Road, this break was referred to during the course of the Inquest as the 'Casanova break'.
- 2.11. Mr Casanova then spoke to Mr Chambers who asked him to create several breaks in the vicinity of the 'NSW paddock'. Mr Casanova said that while he was putting in those breaks, the main fire front was burning to the north of him in Mr Siegert's property<sup>379</sup>.
- 2.12. Mr Casanova was then requested by Mr Chambers to assist in stopping the northern spread of the fire on Duck Lake Road. Mr Casanova proceeded north through the paddocks on the eastern side of Duck Lake Road but had to turn back after being overwhelmed by smoke and becoming disorientated. He left the paddocks and proceeded up Duck Lake Road itself. He said that both sides of Duck Lake Road had been burnt by the fire and he first encountered active fire in the roadside vegetation at the location of the S bends. Mr Casanova spoke to a CFS member and commenced putting in several bare earth breaks on the western side of Duck Lake Road in the vicinity of the S bends.
- 2.13. Mr Anthony (Tony) Warren who flew over the fireground in a Piper Brave water bombing aircraft was able to get an accurate picture of the spread of the fire from his aerial position. Mr Warren said that at around 6:45pm the fire was not quite at the S bends on Duck Lake Road but was in the swamp on both Mr Cabot's and Mr Siegert's property but still south of Warunda Road<sup>380</sup>.
- 2.14. Machinery provided by the District Council of Lower Eyre Peninsula  
Heavy machinery attended the fireground in an attempt to stop the fire on the Monday afternoon. An informal request for equipment was made to the District Council of

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<sup>379</sup> Transcript, page 1615

<sup>380</sup> Transcript, pages 6160 and 6161

Lower Eyre Peninsula by Mrs Veronica Giddings after her husband, Mr John Giddings, asked her to contact them. Mr Giddings had attended the fireground at about 3:30pm on Monday afternoon and assessed that heavy equipment would be required to halt the fires progress through both the swampy terrain and the sugar gums.

- 2.15. Mrs Giddings made two phone calls to the Council but was advised that requests for such equipment had to be made by a member of the CFS. Mrs Giddings then informed her husband that she was unable to make such a request.
- 2.16. Mr David Hall, the Area Supervisor with the District Council became aware of the fire through Mrs Giddings telephone call. Mr Hall decided to contact Mr Damien Puckridge, the Captain of the Edilillie CFS, and a man well known to him, to see if the CFS required any Council equipment at the fire. Mr Hall had difficulty in reaching Mr Puckridge, but when they did manage to speak with each other, Mr Puckridge requested that Mr Hall arrange to send whatever plant they had available to the fireground.
- 2.17. Mr Hall organised for two graders and a front end loader to attend at the fireground. This equipment arrived at the northern end of the fireground around the 'S' bends on Duck Lake Road around 6:45pm<sup>381</sup>.
- 2.18. Mr Hall and the CFS Captains in attendance the fireground at that stage, then directed the three plant operators to put in various breaks around the fireground. Mr Paul Mickan was operating one of the Council graders and put in several bare earth breaks in the paddocks on the western side of Duck Lake Road in the vicinity of the 'S' bends. Mr Jason Barnes was operating the Council's front end loader and put several breaks in the roadside vegetation on both sides of Duck Lake Road. He also helped clear debris off Duck Lake Road itself to make access easier for vehicles.
- 2.19. Mr Trevor Arnold was operating the other Council grader and was responsible for putting in bare earth breaks on George and Les Hull's property and later on Mr John Giddings property. Mr Arnold also assisted by moving some burning sheoak trees on Lady Franklyn Road.

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<sup>381</sup> Exhibit C212, page 2

- 2.20. The Council operators completed these tasks and left the fireground around 9:30pm. Both graders and the loader were left by the Council at various locations on the fireground overnight.
- 2.21. Backburning operations undertaken by the CFS  
During the early evening, the CFS undertook several backburns in an attempt to stop the fire spread.
- 2.22. Mr Neil Ackland, the Captain of the Yeelanna CFS, decided to conduct a backburn on the western side of Duck Lake Road in the vicinity of the S bends after discussing it with other CFS captains at that location. Mr Ackland directed graders to put breaks in the vegetation on both sides of Duck Lake Road and backburning was initially undertaken on the southern side of Duck Lake Road. Mr Ackland commenced the backburning operation at around 7pm and five appliances were involved in this operation. Following the southern side being burnt, a backburn was conducted in the same location on the northern side of Duck Lake Road. The backburning operation was completed about 9:30pm or 9:45pm<sup>382</sup>. Mr Ackland marked on a map the general area where the backburns were undertaken. The blue lines represent the grader breaks put in to control the backburns and the red shaded areas represent the backburns themselves.



- 2.23. Mr Damien Puckridge, the Captain of the Edilillie CFS appliance undertook the largest of the backburns on the Monday evening. Mr Puckridge was in charge of the Scrubby Sector on the eastern side of Duck Lake Road when he decided to undertake a backburn to the east of the S bends. Mr Puckridge had five CFS appliances in his sector all of whom took part in this operation. Mr Puckridge said that the backburn commenced at around 8pm and they burnt off a grader break which had been put in to the east of the S bends at approximately the level of the circular lake on Exhibit C176b<sup>383</sup>.
- 2.24. Mr Puckridge undertook the backburn as he thought the only way they were going to be able to stop the fire was to remove some of the fuel in front of it<sup>384</sup>. Mr Puckridge estimated that the area that he backburnt was about 30 hectares and only took about half to three quarters of an hour to complete. The vegetation was mainly scrub consisting of mallee and this backburn was clearly effective in stopping the spread of fire as can be seen on the map Exhibit C194b reproduced above. The Puckridge backburn is the black rectangular area burnt on the eastern side of the S bends. There is vegetation further to the east of that, that remains red in the photograph indicating it was not burnt during the fire. The photograph that follows was taken by Mr Mark Modra, a member of the Greenpatch CFS during the backburn:<sup>385</sup>

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<sup>382</sup> Transcript, pages 4264 and 4265

<sup>383</sup> Transcript, page 1096

<sup>384</sup> Transcript, page 1097

<sup>385</sup> Exhibit C207a



- 2.25. Mr Peter Doudle, the Captain of the Coultas CFS appliance undertook two minor backburns on the property of Messrs George and Les Hull. He initially burnt a small section of grass near Mr Les Hull's house and then later with the Wanilla CFS appliance burnt a small section of grass around the house of Mr George Hull. Mr Pope, the Wanilla CFS Captain said that the backburn at Mr George Hull's house was conducted around 8:30pm<sup>386</sup>. Mr George Hull said that the backburn put around his home was very effective as on the Tuesday morning the fire came through that area and because the fuel load had been reduced, his house was never at risk<sup>387</sup>.
- 2.26. Mr Quentin Russ, the Tumby Bay Group Officer backburnt an area of swamp to the northeast of Les Hull's house with the assistance of three appliances. Mr Russ had deemed that the area was inaccessible so should be burnt out rather than trying to extinguish it with water. The backburn took about 45 minutes and burnt about 500 to

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<sup>386</sup> Transcript, page 3828

<sup>387</sup> Transcript, page 2805

600 metres of swamp. Mr Russ said that the backburn was not overly successful as he did not think the backburn made the fire burn out any more quickly<sup>388</sup>.

- 2.27. A very minor backburn was conducted on the southern side of the Casanova break, which was at the northern side of the clump of sugar gums at the corner of Yorkies Gully and Duck Lake Road late on the Monday evening. Messrs Riley and Plane, both on private farm units said that they assisted an unknown CFS appliance burn a small area on the eastern side of Duck Lake Road.
- 2.28. An issue was raised during the Inquest that CFS and farm appliances had difficulty locating water during the firefighting effort on the Monday afternoon. The western side of the Lower Eyre Peninsula does not have a mains water supply so water could only be drawn from farmers properties or from water tankers. Whilst the CFS arranged for water tankers to be sent to the fire, in the initial two hours of fire suppression they were solely reliant on water that could be sourced from the properties around the fireground.
- 2.29. Mr Chris Hull said that he informed CFS of all the water sources on his property and that he did not ever hear of anyone having any difficulty in sourcing water on the Monday afternoon<sup>389</sup>.
- 2.30. Mr Branson said that the Wangary appliance was the only appliance that was aware of local water spots near the fireground and that even then, they were directing appliances to source water from the Wangary sports complex some 6 kilometres away.
- 2.31. There does not appear to be any basis for criticism of the manner this fire was handled on the Monday afternoon and evening.

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<sup>388</sup> Transcript, page 4466

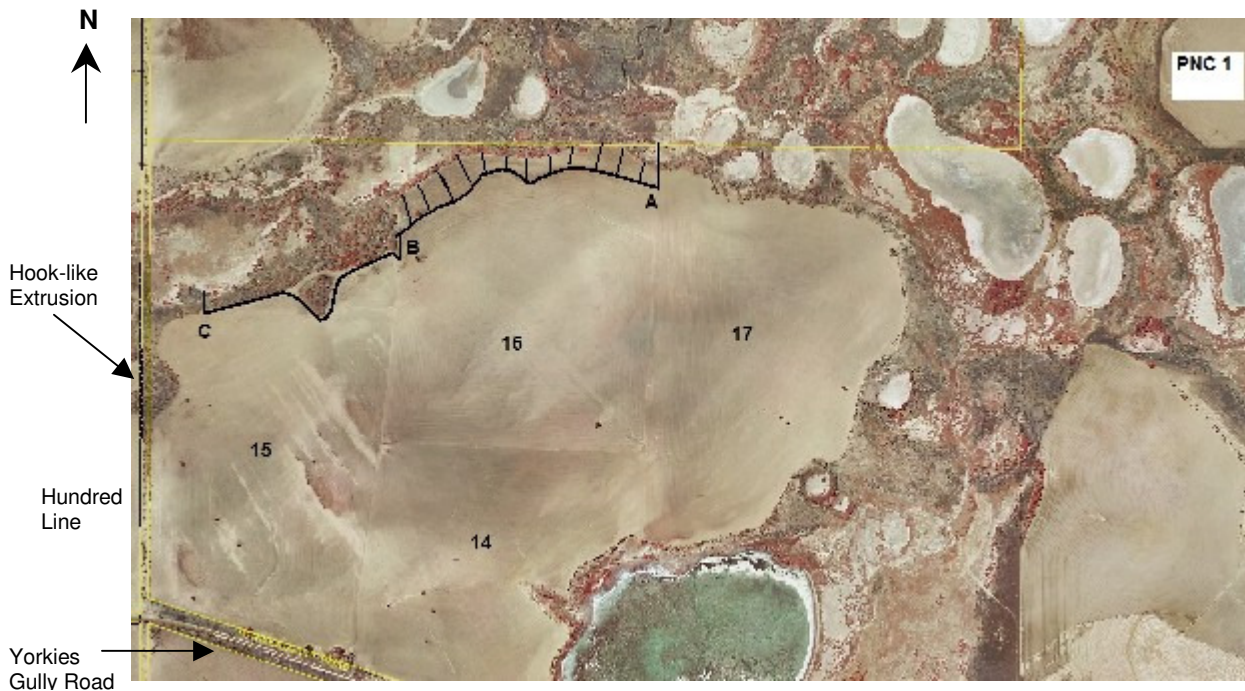
<sup>389</sup> Transcript, page 347

### 3. **The Peter Cabot backburn**

- 3.1. Mr Peter Cabot owns property on which a large section of the paperbark swamp is situated. The boundaries of his property include the hundred line at its western extremity. The hundred line runs in a north-south direction and divides Mr Cabot's property from that of Mr Christopher Hull. The swamp essentially forms the north-western boundary between Mr Cabot's property and the property of Mr Troy Siegert up to the extension of Warunda Road. The northern boundary of Mr Cabot's property then runs along the extension of Warunda Road and then along Warunda Road proper to the east until it intersects with Settlers Road. The eastern boundary of Mr Cabot's property is Settlers Road. The boundary extends from the intersection of Settlers Road and Yorkies Gully Road to its intersection with Warunda Road to the north. The southern boundary of Mr Cabot's property is Yorkies Gully Road from the hundred line to the intersection with Settlers Road. Mr Cabot's homestead is situated in the south-eastern corner of the property, near the intersection of Yorkies Gully Road and Settlers Road. Mr Cabot's property is depicted in the large aerial imagery, Exhibit C176b. For the purposes of the Inquest, the imagery of his property as depicted on Exhibit C176b was marked with three letters depicting three separate areas on the property. They are the areas marked A, B and C as shown on that exhibit. It can be seen from that aerial imagery that a substantial portion of Mr Cabot's property consists of swamp. The swampy area contains a large number of dry salt beds, also known as salt scalds. The salt scalds were for the most part bare of vegetation at the time of the Wangary fire.
- 3.2. With the assistance of other individuals, Mr Cabot conducted backburning in and around the southern edge of the swamp on the Monday evening. That activity has since been referred to in the context of this Inquest as the '*Cabot backburn*'. This measure was intended to burn and eliminate vegetation in or at the southern edge of the swamp. The purpose of the backburn was to create a burnt out area that would act as a firebreak against the outbreak of fire that was felt would occur the next morning under freshening northerly winds.
- 3.3. The area that we are concerned with on Mr Cabot's property is the area marked C on Exhibit C176b. The area is also depicted in a number of other exhibits including the



aerial photograph PNC1 which is part of Exhibit C192a. That imagery is depicted below.



PNC1 which is part of Exhibit C192a

The paddocks to the south of the swamp in Area C and north of the Yorkies Gully Road boundary are marked on the imagery as 14, 15, 16 and 17 respectively. In the main, the Cabot backburn was concerned with the areas where paddocks 15 and 16 border the swamp. Paddock 16 consisted of pasture. Paddock 15 consisted of canola stubble. The hundred line forms the western border of paddock 15. It was said during the course of the Inquest that canola stubble is difficult to set alight, especially in damp circumstances, but once alight has a tendency to burn fiercely. Pasture grasses are relatively straightforward to light and once alight will burn readily.

- 3.4. It can be seen that the hundred line that divided Mr Cabot's property from that of Mr Christopher Hull's property to the west, ran north from the position where Yorkies Gully Road takes a deviation to the south-east. The hundred line runs north through the swamp after passing through a hook shaped plantation of trees to the south of the edge of the swamp. Part of the plantation of trees was on Mr Cabot's side of the hundred line and the remainder was on Christopher Hull's side of the hundred line. In the Inquest, this plantation of trees was referred to as the '*hook like extrusion*' of the swamp. Another relevant feature in the area marked C on Mr Cabot's property is a triangular shaped plantation of trees on the southern edge of the swamp. It protrudes into paddock 15 as seen on PNC1. The plantation of trees to which I refer is

delineated by a deviation in the line between features C and B on PNC1. That plantation of trees was separated from the edge of the swamp by a narrow cleared area. The plantation was referred to in the Inquest as the '*triangular shaped extrusion*' of the swamp.

- 3.5. To the west of the hundred line on Mr Christopher Hull's property, the swamp continues in a south-westerly direction until it intersects with Yorkies Gully Road at a concrete ford and drain. The location where the watercourse crosses the road is known as Yorkies Crossing. At Yorkies Crossing there is a concrete ford, below which is a concrete tunnel. Yorkies Gully Road is a dirt road. The swamp essentially follows a watercourse along its length in a south-westerly direction to Yorkies Gully Road and beyond. At that time of year the watercourse was dry. The watercourse can be seen on Exhibit C176b following the northern edge of the swamp above the area marked C on Mr Cabot's property. The swamp proceeds south-west into Christopher Hull's section of the swamp until it enters what appears to be a bare area. It then continues in the south-westerly direction to Yorkies Gully Road. The bare area, visible in the swamp on Christopher Hull's side of the hundred line, was referred to in the Inquest as the '*kidney shaped lake*'. The lake was dry and bare of vegetation in January 2005.
- 3.6. To the north-west of the swamp on Christopher Hull's property is an area of cultivated land that was said during the Inquest to resemble the shape of New South Wales (the NSW paddock). It can be easily seen on Exhibit C176b. A closer depiction of the NSW paddock is shown over the page<sup>390</sup>. It is bordered by broken black lines. The NSW paddock owes its shape (as seen in aerial imagery) largely to the fact that the stubble within it did not burn during the Wangary fire.

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<sup>390</sup> Exhibit C175c, page 4



To the south of the NSW paddock, and to the west of the ford on Yorkies Gully Road, is the Yorkies Gully Road entrance to Christopher Hull's property. The distance from Yorkies Crossing to the entrance to Christopher Hull's property is approximately 400 metres. The driveway proceeds from Yorkies Gully Road in a northerly direction. On the right-hand side of the driveway, some 100 metres in, are a number of sheds. The sheds became collectively known in the Inquest as 'Christopher Hull's hayshed'. It was the first CFS control point on the Monday afternoon. Christopher Hull's driveway extends past the sheds to the south-western corner of the NSW paddock.

- 3.7. The geographical features on Christopher Hull's property west of the dividing hundred line are relevant because, it is said, the Cabot backburn had certain adverse consequences in respect of the spread of the fire into Christopher Hull's property and beyond on the Tuesday morning. For these purposes it will be noted from Exhibit C176b that on Christopher Hull's property to the south-east of the swamp there is a large right-angled triangular area bordered by the hundred line to the east and Yorkies

Gully Road to the south. The hypotenuse of the triangle is the edge of the swamp. This triangular area consisted of wheat stubble<sup>391</sup>. Wheat stubble burns quite readily.

- 3.8. Mr Cabot was on his property on the Monday evening. He was with one or two other gentleman including his son-in-law Mr Michael Treloar of Cummins. It was apparent to Mr Cabot that the fire had entered the swamp on his property from its northern edge. On the Monday evening the fire had not penetrated any of the paddocks marked A, B and C to the south and south-east of the swamp on Mr Cabot's property. Nor had it penetrated the paddocks on the south-eastern side of the swamp on Christopher Hull's side of the hundred line. In the light of the weather forecast for the Tuesday, Mr Cabot was not unnaturally concerned about the prospect of fire getting out of the swamp and then penetrating Areas A and C. Mr Cabot appears to have been concerned that no-one from the CFS had approached him to determine what measures could be conducted by way of backburning on what would become the lee side of the swamp under the north and north-westerly winds predicted for the Tuesday. During the course of his evidence, Mr Cabot expressed very definite views about the desirability of the CFS implementing backburns on his property to guard against the possibility, if not inevitability, that fire would emerge from the swamp when conditions turned for the worse on Tuesday.
- 3.9. Mr Cabot gave two statements to the police<sup>392</sup>. The first statement taken on 22 April 2005 did not mention anything about him having conducted a backburn on his property on the Monday night. This omission was surprising given the level of detail otherwise contained within this statement. The fact of the backburn having taken place was revealed to the Inquest by Mr Brian Foster of Coultas who on the Monday night had encountered Mr Treloar endeavouring to implement the backburn adjacent to the swamp. During the course of the Inquest, Mr Foster was also a vocal advocate of the strategy of backburning as a fire prevention tactic. In equal measure, he was a vocal critic of the CFS's alleged neglect in failing to conduct backburning along the southern edge of the swamp in Mr Cabot's and Christopher Hull's properties. Mr Foster was also generally critical of the CFS's alleged failure to implement other necessary fire prevention strategies in respect to that section of the overnight fireground.

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<sup>391</sup> Transcript, page 265

<sup>392</sup> Exhibits C192 and C192a

- 3.10. The revelation of the Cabot backburn caused a further statement to be taken from Mr Cabot. That statement was taken on 19 January 2006. Mr Cabot also gave evidence to the Inquest at some length.
- 3.11. In Mr Cabot's first statement he alluded to the fact that on the Monday afternoon fire had penetrated into the swamp. Mr Cabot's strategy at first was to wait for the fire to come out of the swamp so that they could put out the fire along its edge. To this end, Mr Treloar and two other men arrived with a number of farm firefighting units at their disposal.
- 3.12. As seen, Mr Cabot was in the main concerned with the possibility of the fire coming out of the swamp with predicted strong northerly winds for the following day. He formed this belief notwithstanding the fact that he already had what he described as good fire breaks on his property with '*a decent clearing all around the swamp*'<sup>393</sup>. The evidence reveals that Mr Cabot had constructed bare earth breaks separating the edge of the swamp from his paddocks. The breaks had been created through the spraying of poison. Such a break is commonly called a chemical break. In this case they were a matter of only a few feet wide and ineffective to stop an intense fire driven by a strong wind. These types of breaks seem to have been the norm around farmers' paddocks in the region. They provided some measure of protection against the spread of fire, and as well, provided vehicular access, but were next to useless in this particular fire. I return to this issue elsewhere in this report.
- 3.13. Mr Cabot in his second statement revealed that at about 8pm he decided to conduct a backburn along the edge of the swamp north of paddock 15 and 16 on PNC1. The fire had not come to the edge as anticipated. Mr Cabot stated that at that stage the fire was still burning slowly through the swamp and would, on his estimate, take some hours before it would reach the edge. His strategy was to accelerate that process by implementing backburning.
- 3.14. To begin with, Mr Cabot decided to backburn at the edge of the swamp north of paddock 16 on PNC1. As the pasture was reasonably sparse, he decided to implement the burn to a depth of about 50 to 80 metres from the edge of the swamp to a contour line in the paddock. At first, Mr Cabot unsuccessfully attempted to light the backburn with broom brush. He then returned to his home to obtain a firelighter. While he was

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<sup>393</sup> Exhibit C192, page 2

away, Mr Brian Foster and Mr John Myers, also of Coultas, came to the location and spoke with Mr Treloar. Neither Mr Foster nor Mr Myers were acting in any capacity as CFS members at that time, although they were both experienced members of the Coultas CFS Brigade. It is fair to say that Mr Foster and Mr Myers encouraged the implementation of the backburn at that location. Both men were of the opinion that something needed to be done on the south-eastern edge of the swamp on Mr Cabot's property.

3.15. Brian Foster's assessment of the southern edge of the swamp

Mr Foster gave evidence. He told me that the fire front was active in the swamp at that location. Mr Foster's concerns prompted him at that time to phone CFS Lincoln Base. He told them that there was no CFS presence at his particular location and advised that CFS strategic planning needed to take into account the weather expected on the Tuesday insofar as it would affect that location. This telephone call is recorded in the rewritten Lincoln Base radio log as having taken place at 8:28pm. Mr Foster at that time spoke to Mr Gerry Woodroffe. The entry is recorded as follows:

'Brian Foster on phone. Worried about section from 'Wiltoo' to Cabots. GO assured me this well recognised & being taken into account. Phoned Brian back at 2100 ....'<sup>394</sup>

The note encapsulates Mr Foster's concerns. Wiltoo is the property on the western side of Lady Franklyn Road. The concern expressed by Mr Foster related to the southern fire perimeter as it extended from Lady Franklyn Road to Mr Cabot's property. The reference to GO is a reference to the Lower Eyre Peninsula CFS Group Officer, Mr Robert Chambers. There is no suggestion that in any communication involving Mr Foster, Lincoln Base and Mr Chambers, the topic of backburning was discussed as part of any strategy that would allay Mr Foster's concerns. Nor was it revealed by Mr Foster that backburning was actually about to take place at the described location.

- 3.16. At the time of this communication, Mr Gerry Woodroffe was manning Lincoln Base. Mr Woodroffe gave evidence. He recalled Mr Foster telephoning, but had little recollection of the communication beyond the contents of the log notation set out above. Having spoken to Mr Foster, he believed he had then spoken to Russell Branson, one of the DGO's. In any event, Mr Woodroffe agreed that the log entry

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<sup>394</sup> Exhibit C203 – MD35

was reflective of what he was told by way of an assurance that the difficulty was '*well recognised and being taken into account*'<sup>395</sup>.

- 3.17. Mr Chambers, the GO and Incident Controller, acknowledged in his evidence that on the Monday evening he had been made aware via radio that Mr Foster had expressed concerns. He agreed with counsel that the concern expressed by Mr Foster in relation to the southern boundary of the fireground, as recorded in the log, was consistent with his own recollections<sup>396</sup>. He acknowledged, as the log records reveal, that he would have assured the person who had passed on Mr Foster's concerns to him that they were concerns that had been well recognised and taken into account<sup>397</sup>. Mr Chambers was in my assessment quite vague as to the nature of his 'assurance' and vague about what it was that had been well recognised and taken into account. He said:

- 'A. At that stage the wind direction had changed, it was blowing more towards the north-north-east, blowing towards the north-east, not from the north-east and that we were right there on the hayshed, that we could see what the southern sectors of the fire were like at that stage, and then fire appliances in and around that particular area. Most of the fire appliances were at the head of the fire, trying to stop that but we still didn't have appliances down at the sugar gums and there were others, one or two around, plus farm vehicles were along that southern side.
- Q. I want you to assume that when Mr Foster radioed in or telephoned in his concerns that he was standing in paddock C just to the north of the letter C on the edge of the swamp there at about 8.30 p.m. As far as you were aware, were there any appliances in the entirety of the area of C at that stage.
- A. I had seen appliances heading down towards that area so I don't know where they would have been exactly. It would have been the operations officers that would know or should know exactly where the appliances were.
- Q. You weren't in a position to say that there were any appliances at all in area C, were you.
- A. No.
- Q. As far as you were aware, no steps were being taken at that stage to secure area C.
- A. I believed that that area, area C, wasn't a real concern but it was something that we had to watch in the future if the wind changed around to the north.
- Q. It wasn't a concern at that time but it might be if the wind direction changed.
- A. That's right.

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<sup>395</sup> Transcript, page 7387

<sup>396</sup> Transcript, page 11443

<sup>397</sup> Transcript, page 11443



Q. At that stage had you - at 8.28 p.m. when you said that the concern was more recognised and being taken into account - had you put in place any steps to ensure that things were done to protect it if and when the wind direction were to change.

A. That was why, when I changed shifts, that I made the - on the debrief or the briefing - that the southern sector was one of the main areas to look at because of the wind direction that was forecast for the next day.

Q. I'm wanting you to focus first of all at 8.28 p.m. At that stage you hadn't put in place any steps.

A. No, not at that stage.<sup>398</sup>

3.18. The fact of the matter was that even if the difficulty with the southern boundary at 8:28pm was '*well recognised and being taken into account*', as far as Mr Cabot's property was concerned, that level of recognition was never reflected in any action taken by the CFS until well after Mr Cabot had completed his backburning operation. Mr Chambers said in effect that the matter was really not addressed until the change of shifts later that night. If the fire truly had been contained at 8:54pm, there seems to be no reason why the southern flank of the fire could not have commenced being addressed within a reasonable time thereafter.

3.19. Mr John Myers for his part confirmed in evidence that there was fire in the swamp north of the area marked C on Exhibit C176b. Mr Myers said in his statement<sup>399</sup> that the fire was smouldering away inside the swamp some distance from the paddock edge and that it would flare-up at times. Mr Myers said that he could also see puffs of smoke in the swamp on the western side of the hundred line. He reiterated the generally held belief that there was an inevitability about the fire coming out of the swamp if nothing was done to stop it. Mr Myers also confirmed the phone call that Mr Foster made at that point.

3.20. The backburn is undertaken

When Mr Cabot returned with the firelighter, the backburn between points A and B on PNC1 was conducted. The fire was allowed to burn into the swamp and join the original fire line. Mr Cabot said that in some places the controlled burn only had to proceed a few metres to meet the existing fire edge but in other places had to burn considerably further. From the evidence presented to me, it is clear in my view that fire was already in existence in the swamp north of the line marked on PNC1 between A and B. As far as the swamp to the east of point A is concerned, Mr Cabot's

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<sup>398</sup> Transcript, pages 11443 and 11444



thinking was that as the original fire was burning up to the bare salt patches in the swamp at that location, he did not believe backburning there was necessary as the patches acted as a natural barrier. In addition, paddock 17 consisted of heavy wheat stubble and Mr Cabot believed that he simply did not have sufficient resources to conduct a backburn in such prolific vegetation.

- 3.21. Having conducted the backburn between points A and B on PNC1, Mr Cabot decided to implement some burning at the southern edge of the swamp between points B and C on PNC1. The paddock to the south of the swamp at that location, that is paddock 15, consisted of canola stubble. Mr Cabot was reluctant to set fire to the canola stubble itself because of the difficulty associated with igniting it and because of a previous experience where a burnoff in canola had escaped. He did not consider that he had the necessary resources to conduct a backburn in that sort of difficult circumstance. Mr Cabot stated that they instead burnt along the sprayed edge of the paddock where it meets the swamp, and allowed the fire to burn into the swampy vegetation to meet up with the original fire. Mr Cabot made it plain, and was essentially unchallenged on the issue, that there was fire already in the swamp to the north of paddock 15. I accept his evidence on that issue. Mr Cabot did not strike me as a person who would introduce fire into a flammable swamp for the sheer sake of it. Mr Cabot marked Exhibit C192d with a purple line where he believed the fire line was in the swamp on the Monday evening<sup>400</sup>. He conducted the backburn between the locations marked B and C. I am not entirely certain whether or not the backburn went around the triangular shaped extrusion of trees or whether it was confined to the edge of the swamp proper. Mr Treloar has marked on another aerial image, MBT1, a line that would suggest that the triangular extrusion of trees was avoided. The backburn did not extend as far as the hundred line because Mr Cabot believed that the bare salt patch to the north would act as a break at that point. It is contended by some entities that Mr Cabot failed to 'tie down' the backburn at its western extremity and that the following morning this allowed the fire to creep to the west towards and across the hundred line.
- 3.22. There is no evidence that Mr Cabot and Mr Treloar blacked out any of the backburn, but both gentlemen told me that as far as they were concerned, when they left the area at about 10:30pm or 10:45pm, the situation presented no danger. Mr Cabot observed

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<sup>399</sup> Exhibit C200

that when he left the location there were isolated patches of burning deep into the swamp area but in his view they would have burnt out overnight. Mr Cabot told me that the backburn from point A to B on PNC1 certainly met with the original fire line<sup>401</sup>. As far as the burn from B to C is concerned, Mr Cabot said that the burn would certainly have joined the existing fire but could not say at what stage it would have done so. He assumed that it would have met the original fire before they left but conceded that he really he did not know that for a fact. The aim of the exercise was to have the original fire line and his backburn meet so as to reduce or prevent the huge number of embers that might be produced the following day. Mr Cabot said:

'We stayed there until the fire burnt back into the scrub a reasonable distance and by that time the fire had died down along the - inside the bare spray area and we stayed there until I considered that there wasn't any danger at all.'<sup>402</sup>

Mr Treloar also stated that by about 10:30pm they were happy that the area was safe. He said in his statement that the areas that they had backburnt had basically gone out, as had the spot fires within the swamp and in the areas in which they had been working<sup>403</sup>. Mr Treloar told me that they waited at the location until '*everything had gone out*'<sup>404</sup>. Mr Treloar was to return at 7:00am the following morning.

- 3.23. The implementation of these two backburns was heavily criticised by those representing the CFS. The basis of the criticism was that backburning was, in this location, an inappropriate exercise and one which was fraught not only with difficulty in its implementation, but also increased the inherent danger that the swamp presented for the following day. It is said that all the Cabot backburn succeeded in achieving was the introduction of more fire into the swamp. Moreover, as we will see, the suggestion is made that it was Mr Cabot's backburn that initially spread into vegetation in and to the west of the hundred line in the swamp and it was that fire that broke away into Mr Christopher Hull's paddocks on the Tuesday morning. It is also contended that on the Tuesday morning Mr Cabot's backburn accounted for a large measure of spotting into the paddocks on his side of the hundred line which created, along with the fire that escaped from the swamp on Christopher Hull's side of the hundred line, a much more intense conflagration. It is said that these fires, emanating as they did from both Christopher Hull's and Mr Cabot's areas of swamp, accounted

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<sup>400</sup> Exhibit C192d is reproduced as an annexure at the end of these Findings

<sup>401</sup> Transcript, page 3655

<sup>402</sup> Transcript, page 3655

<sup>403</sup> Exhibit C184, page 4

for the deaths (except for those of Messrs Murnane and Richardson) and for much of the destruction that occurred between the swamp and the east coast of the Lower Eyre Peninsula. It is to be observed that none of these criticisms were put to Mr Cabot during his time in the witness box by any entity that sought to agitate them.

- 3.24. Much of the evidence adduced in support of the above contentions emanated from Dr Tolhurst and to perhaps a lesser extent, Mr Gould. Mr Gould was somewhat lukewarm about some of the conclusions that Dr Tolhurst was urging me to draw. Much, but not all, of what underlies these contentions is based on an assertion that the only fire in the swamp north of Area C on Exhibit C176b on Mr Cabot's side of the hundred line was generated by the backburn. This is not in fact the case. I accept the evidence of Mr Cabot that there was fire already in the swamp in the areas north of both paddocks 15 and 16 on PNC1. I also accept his evidence that his intention was to burn the vegetation in the swamp to the existing fire line at both locations. I will return to the mechanism of these breakouts in due course, and indeed discuss the competing possibilities as to the source of the breakaways on the Tuesday morning. However, it is necessary before I do that to discuss fire suppression activities that took place at the hands of the CFS in that general location well after Mr Cabot had conducted his backburn.

3.25. Fire suppression undertaken by the Karkoo CFS appliance

A number of CFS appliances attended the southern edge of the swamp in Area C on Exhibit C176b in the early hours of the Tuesday morning into daylight. In addition, two appliances attended a location in the swamp that was along the hundred line dividing Mr Cabot's property from Christopher Hull's, but just on the western side of the hundred line in the vicinity of the dry watercourse.

- 3.26. The Wanilla Control incident radio logs reveal that at 3:24am the Operations Officer, Mr Branson, tasked the Karkoo and Butler appliances to attend at the 'Yorkey's section'. A situation report authorised and completed by Ms Whillas, the overnight Incident Controller, records that at 3:30am the two appliances were redeployed from the Swampy Sector to the Yorkies Sector, the stated incident objective being to black out edges and ensure containment within the latter sector<sup>405</sup>.

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<sup>404</sup> Transcript, page 15756

<sup>405</sup> Exhibit C225a(6)

- 3.27. Mr Leon Modra was the Captain of the Karkoo CFS appliance on the overnight shift. His appliance was originally tasked to attend at the property of George Hull and to black out at that location. He was later tasked to attend at the Cabot property on the southern side of the swamp. Mr Modra provided a statement to the police which was tendered to the Inquest<sup>406</sup>. Mr Modra also gave oral evidence. Mr Modra made the observation in both his statement and his oral evidence that at the time of the changeover of shift which took place at the Wanilla Hall, he detected no great urgency because, as described in his statement, the *'fire was under control'*<sup>407</sup>. Another circumstance that led Mr Modra to form an impression that there was no sense of urgency at Wanilla was the fact that half a dozen trucks were standing around idle. This is not to say that Mr Modra and his crew acted in any way other than diligently. I simply pause here to observe that that is what Mr Modra, as far as he was concerned, saw the position to be at the beginning of his shift. Mr Modra believes he spoke to Mr Robert Maddern at Wanilla Hall on the Monday night<sup>408</sup>.
- 3.28. Mr Modra told me that his instructions from Mr Branson early on the Tuesday morning were to take the appliance to Mr Cabot's property on Yorkies Gully Road and to *'mop up the southern flank of the fire'*<sup>409</sup>.
- 3.29. Mr Modra told me that the swamp north of Area C on Exhibit C176b had fire within it. He described the burning that was taking place as the remains of a fire that did not appear to be significant at the time. It consisted of burning and smouldering stumps and tree butts. Mr Modra described two areas where fire activity was taking place or appeared to have taken place. He was shown the document PNC1 that was part of Exhibit C192a, the imagery upon which Mr Cabot had marked his backburns. For someone who was unfamiliar with Mr Cabot's property, Mr Modra demonstrated to me a fairly accurate recollection and understanding of the terrain that he had been working in and appeared to have a good mental picture of what he saw and where he saw it. This was in spite of the fact that he was working at night time. Mr Modra's description of what he saw is consistent with the activities as described by Mr Cabot and Mr Treloar. For instance, Mr Modra was able to describe what he thought had been an area that had been backburnt in pasture stubble and an area that was burning in the swamp itself. Those areas conformed to the areas that Mr Cabot and Mr

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<sup>406</sup> Exhibit C187

<sup>407</sup> Exhibit C187, page 2

<sup>408</sup> Transcript, page 2987

<sup>409</sup> Exhibit C187, page 2

Treloar described, namely the backburn in the pasture paddock being number 16 on PNC1 and the burning of the edge of the swamp north of paddock 15. However, Mr Modra had no understanding at the time as to whether or not the fire in the area on the edge of the swamp north of paddock 15 on PNC1 was as a result of a backburn. He said that he discovered that later. Mr Modra also described the area along the edge of the swamp towards the hundred line on Mr Cabot's side as being reasonably bare with no trees and no fire. Again that conforms to the description of the extent of Mr Cabot's backburning as depicted between the areas B and C on PNC1.

- 3.30. I found Mr Modra to be an astute, observant and careful witness, and I accept his evidence in relation to what he says he observed on the southern boundary of the swamp.
- 3.31. Mr Modra was shown PNC1. He indicated that the area between points A and B on that imagery appears to have been the area that had been backburnt. When asked whether there was anything burning along the edge of the swamp between those points he told me that there was not too much from what he could recall but that they actually did not concentrate their activities in that area because there did not appear to be any difficulty or evidence of danger in that location. Mr Modra told me that to the north-east in the swamp he was unable to see flame or evidence of smoke but acknowledged that it was possible that an unseen fire edge could have been in existence in the swamp to the north-east<sup>410</sup>.
- 3.32. The Karkoo appliance worked mainly between B and C on PNC1. At one point the appliance was taken into the swamp to the top or northern end of the hundred line where another unit was working on the other side. The Lincoln and Greenpatch appliances were working there at various stages. Mr Modra indicated on PNC1 that they took the appliance from about point C down into the middle of the swamp to the fence line of the hundred line. Having reached the fence line they turned around and returned, having made sure that nothing was alight in that area. They did not go to the other side of the swamp, confining their activities to about 100 metres into the swamp. The ground that they covered had low-lying swampy material and tufty grass growing but nothing big. Mr Modra said that he thought that some of the material had been burnt, but at the western end of the area marked C, it had not been burnt. The burnt edge appeared to have burnt up to point C and not to the west or north-west of it.

Between points B and C on PNC1 the Karkoo crew patrolled and blacked out anything that was alight. At one point Mr Branson arrived and suggested that they go into the swamp one hose length in order to black out what they could. They did not go any further than the 25 metre length of the hose. Mr Modra said that as far as he could tell, there was no need to go further than that in any event. Beyond that distance of 25 metres however, although there was not a burning front, Mr Modra said that he could tell that the fire had been through. There were only remnants of smouldering stumps '*here or there*'<sup>411</sup>. Mr Modra described it thus:

'Just smouldering, nothing flaming too much but obviously after a fire's been through you get individual stumps and trees that continue burning and that's exactly what that was.'<sup>412</sup>

Towards point C on PNC1 the effect of the burning seemed to have been a bit more broken. In other words it did not appear to have burnt out all of the fuel load towards that location. The situation between B and C is summed up in this passage of evidence from Mr Modra:

- Q. Is this the effect of what you did between B and C is that you patrolled that area.
- A. Yes.
- Q. You would stop and roll a hose out 20, 25 m if you had to.
- A. Yes, whatever was required.
- Q. Spray into the area whatever you were trying to put out.
- A. Yes.
- Q. And then move and patrol a bit more, is that the thrust of it.
- A. Yes.
- Q. And in between B and C there was a combination of burnt and unburnt material.
- A. Yes. Mainly down towards C was more broken area where there was some burnt and some not burnt.
- Q. What about say 50 m in between B and C, did you ever walk in to see what was - say 50-100 m in - could you see what was in there in terms of burnt or unburnt material.
- A. Generally most of that was burnt, particularly towards B more that was burnt back further, basically more of a clean burn.<sup>413</sup>

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<sup>410</sup> Transcript, page 3015

<sup>411</sup> Transcript, page 3012

<sup>412</sup> Transcript, pages 3012 and 3013

<sup>413</sup> Transcript, page 3014

If the burnt area had not been 'tied down' at its western end, or was otherwise identified or perceived as a vulnerable area after Mr Modra and his crew had dealt with it, Mr Modra certainly did not tell me. I take it he perceived no such thing.

- 3.33. Mr Modra said in his statement that they spent several hours at the location during which time they refilled from a water tank on Mr Cabot's property. While they were there, the conditions were very calm with reasonably cool temperatures. They remained there until daybreak, which Mr Modra put at about 7am. At that time he was confident that they had contained the fire. After leaving the swamp edge, the crew took the appliance to a section of higher ground which enabled them to overlook the area in which they had worked during the night. They remained there for an hour or an hour and a half, and nothing untoward was observed except a freshening wind that was raising dust.
- 3.34. Mr Treloar returned to the location at about 7am on the Tuesday morning and, having driven along the area of the previous night's backburns, concluded that the area was safe. At one point Mr Treloar met with the Karkoo CFS crew. Mr Modra observed that at that time a strong wind had started to blow from the north and was raising dust in the areas burnt the previous day. This observation contradicted a report about the weather that Mr Modra had heard given over the GRN to the effect that conditions were calm with little or no wind at that time. Mr Modra said that they left the area at about 8:30am. He and the Karkoo CFS crew travelled to Wanilla Hall for a crew changeover.
- 3.35. The CFS GRN 014 radio log<sup>414</sup> records that at 8:20am the Karkoo appliance was proceeding to Wanilla Control to be relieved.
- 3.36. Observations by Greenpatch and Lincoln CFS crew members  
The Greenpatch and Lincoln CFS appliances had also been working in the swamp overnight, in particular in the vicinity of the hundred line, mainly on its western side. Members of both crews were called to give evidence. I wanted to know whether they saw any evidence of fire at the hundred line where it meets the southern edge of the swamp or whether there was fire along the southern edge on Christopher Hull's property. In other words, had the Cabot backburn migrated south-west from its original location? The Greenpatch crew dealt with some burning logs in the vicinity

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<sup>414</sup> MD36 of Exhibit C203a

of the creek bed towards the north of the swamp. They were using water and rake hoes. At one point the appliance became bogged in the creek bed. I was told that the fire and burnt ground was confined to the northern part of the swamp on Christopher Hull's property. Mr Simon Whillas, one of the Greenpatch crew members, said in his statement that by daybreak the containment of the fire was good and it was reasonably subdued<sup>415</sup>. At that time, according to Mr Whillas, they went to the eastern side of the hundred line to black out any sticks or grass tufts in the swamp. The Greenpatch appliance left the location shortly before 7am to effect a crew change at Wanilla Hall. They left the Lincoln crew at that location, as they were nervous about leaving the area unattended with an adverse weather forecast. While Mr Whillas said in his statement that the containment of the fire was good, he told me in evidence that they could have spent more time there. He was critical of the timing of the crew change. This exchange took place in the course of his evidence:

'Q. When you emptied what was left of your 2,000 litres, were there still logs burning, continuing to burn.

A. They were smouldering, yes.

Q. They were still smouldering.

A. Because we had run out of water to finish the job properly, so we went back and reloaded, and then came back on the southern side of the creek to access it from the southern side.

Q. You said in answer to Mr Cuthbertson a few minutes ago 'We could have spent more time there'.

A. Yes.

Q. But you were called back for the changeover.

A. Yes.

Q. When you say you could have spent more time there, doing what, continuing to blackout.

A. Yes.

Q. So you hadn't completed the blacking out by the time you left.

A. Not 100%, no.

Q. So at the time you left, were there still logs in that area, or vegetation in that area that, as far as you were concerned, could have formed a point of ignition the following day when the wind got up and the temperatures rose.

A. Possibly. We had done our best we possibly could.

Q. In the time you had.

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<sup>415</sup> Exhibit C326, page 3



- A. We were 98% sure, when we left the fire ground, that we were going to be okay.
- Q. By that you mean there wouldn't be an ignition from where you'd been working.
- A. We were fairly confident at that stage but, like I said a few minutes ago, obviously there were still concerns in our mind because of the weather report and because of the CFS's decision to change crew at the time of the morning they had, that we requested Lincoln to stay there to watch. If we didn't have concerns, we would have just let Lincoln come with us. But there was - there were sillier decisions made, and that's why I think we were called off the ground when we were.
- Q. Sorry, there were sillier decisions.
- A. Well, to me, the crew changes were made at an inappropriate time during the morning, and we were changing - it was taking us at least 15 to 20 minutes to drive back to base, so that's a 40 minute turnaround, plus your crew change time over. You're looking at nearly an hour to change one crew. That's an hour the truck's not on the fire ground.' <sup>416</sup>

- 3.37. The Greenpatch crew saw no evidence of fire or burnt material anywhere along the southern edge of the swamp at any time. It does not appear they were aware of the Cabot backburn. I infer from the observations of the Greenpatch crew members that at the time they left the area there was no burning taking place at the southern edge of the swamp in the vicinity of the hundred line and that the vegetation at that location had not yet burnt.
- 3.38. This conclusion was reinforced by observations made by the members of the Lincoln crew who remained after Greenpatch left. I heard evidence and received statements from five of their crew – Messrs Sweet, Bryant, Kotz, Carkle and Napier. Mr Napier was the Officer in Charge. The Lincoln appliance was tasked to attend in the swamp in the vicinity of the hundred line and to perform blacking out work. They entered from the southern edge of the swamp, proceeded around the hook like extrusion of trees on the hundred line and then up the hundred line.
- 3.39. Having heard from these witnesses, it is clear in my mind that there was no fire along the southern edge of the swamp on Christopher Hull's side of the hundred line while the Lincoln crew were present. Nor had the swamp at that location, nor the hook like extrusion, burnt.
- 3.40. Messrs Bryant and Kotz said that they took the appliance to a location to the east of the hundred line on the southern edge of the swamp and drove for some distance along that edge. Mr Carkle has no such recollection and Mr Napier stated that they

did not follow the edge, but later went to one specific location on the edge to inspect a ‘smoker’ that was visible in a part of the swamp that was inaccessible. I was not satisfied as to the accuracy of the evidence given by some of the Lincoln crew members that they drove along the southern edge of the swamp on Mr Cabot’s side of the hundred line. In any event, it does not matter as I find that the Cummins appliance attended at the location at a later time than when Lincoln could conceivably have been present. The observations of certain members of the Cummins crew are to be considered more reliable as to whether there was any burning or smouldering vegetation in the areas of Cabot’s backburn. What Greenpatch and Lincoln establish is that there was no burning or burnt ground on the southern edge of the swamp in the vicinity of the hundred line and no fire, or evidence of the swamp having burnt, along its southern edge on the western or Christopher Hull side of the hundred line. The Lincoln appliance left the area at about 7:45am.

- 3.41. I am bound to say that the lengths that the Inquest went to in order to substantiate whether or not there was any fire along the southern edge of the swamp on Christopher Hull’s side of the hundred line before the breakouts occurred on his property were extraordinary. They were reflective of the fact that the CFS presence in Christopher Hull’s property on the southern side of the swamp was disorganised, spasmodic and ad hoc, a fact that was surprising in itself given the vulnerability of that location to a north or north-westerly wind. If there had been a proper CFS presence along the southern flank of the swamp on Christopher Hull’s property, the issue as to where and when the fire entered that location would have been much clearer. The ad hoc nature of the CFS presence at this vital location is probably reflective of the fact that there had not been a Sector Commander appointed for this sector overnight..
- 3.42. The Greenpatch appliance left the location shortly before 7am. The Lincoln appliance left at about 7:45am. Thereafter, apart from Cummins later in the morning, there were no appliances in the vicinity of the hundred line nor on the southern side of the swamp either on Christopher Hull’s property or Mr Cabot’s property.
- 3.43. The Charlton’s observations on the Tuesday morning  
Mr Graeme Charlton Snr and his son, also Graeme, who resided on a farm at Gerschwitz Road, which is to the south of the fireground, both drove in their

firefighting utility that morning to Mr Cabot's property north of Yorkies Gully Road. Mr Charlton Jnr stated that the time was about 8am when his father picked him up. They travelled north along the hundred line through their property to Yorkies Gully Road and then proceeded north of the road into the paddocks marked C on Exhibit C176b. At that time Mr Charlton Jnr described the morning as being very calm with very little smoke in the air. Although Mr Charlton Jnr remembers driving over some burnt stubble at a location south of the swamp in Mr Cabot's property, there was nothing that he could see that appeared to be dangerous. Mr Charlton Jnr marked an aerial photograph of the location and indicated that he and his father were in the approximate location of the triangular clump of trees that features to the south of the swamp line and to the east of the hundred line on Mr Cabot's property. Mr Charlton Jnr recalled driving past that triangular clump of trees. Mr Charlton Snr agreed that at that particular section of the swamp perimeter on Mr Cabot's property there was no visible fire or smoke. This section of the swamp, it will be remembered, is the second section along which Mr Cabot and Mr Treloar conducted their backburn and which is now said to be the subject of a failure to have it properly tied down at its western end.

- 3.44. Having examined that section of the swamp on Mr Cabot's property, the two gentlemen crossed over into Christopher Hull's property west of the hundred line. They drove north along the hundred line into the swamp and saw no sign of any fire along their route. In particular, there was no fire in the hook like extrusion and there was no indication that it had been burnt at that stage. Some distance into the swamp along the hundred line they encountered the Cummins CFS appliance, the members of which were damping down some small bushes. There was very little burning at that stage and everything appeared to be under control. They exited the swamp along the same route by which they had entered it, that is on Christopher Hull's side of the hundred line, and again saw nothing burning in the swamp as they proceeded south through it.
- 3.45. These events are described in a number of statements that both Charltons gave to the police<sup>417</sup>.
- 3.46. The accounts of Messrs Charlton Snr and Jnr differ in that Mr Charlton Snr has no recollection of them then travelling to Mr Charlton Jnr's cousin's property about 5 kilometres along Duck Lake Road. Mr Charlton Snr's recollection is that after they

emerged from the swamp, having seen the Cummins appliance working there, they travelled along the southern edge of the swamp on Christopher Hull's side for a very short distance. At that stage there was a strong gust of wind from the north-west that sent a shower of sparks into the stubble around their vehicle. On the other hand, Mr Charlton Jnr stated that after they emerged from the swamp there was no burnt stubble outside of the swamp. It was then that they travelled to his cousin's place after which they returned to the corner of Duck Lake Road and Lady Franklyn Road. According to Mr Charlton Jnr, at that time the wind was starting to pick up and blow from the north-west and it was then that they returned to the paddock on the southern side of the swamp on Christopher Hull's property and fought the fire. My view is that Mr Charlton Jnr's account is to be preferred. He appears to have a clear recollection of the events of that morning and Mr Charlton Snr in a subsequent statement does not seek to contradict what his son has said, although he maintains that he has no recollection of going to the cousin's property at any stage.

- 3.47. The material in the statements of the two Charltons leads me to conclude that when they were on Mr Cabot's side of the hundred line, there was no evidence of fire in the swamp along its southern edge. Similarly, when they travelled both north and then south along the hundred line on Christopher Hull's side of the hundred line, there was no evidence of fire except in the location where they met the Cummins appliance who in any event appeared to have matters under control. The other relevant conclusion is that when the Charltons emerged from the swamp having met the Cummins appliance, there was no evidence of fire in the stubble paddocks to the south of the swamp on Christopher Hull's side of the hundred line. Messrs Charltons' observations were made some time after 8am.

3.48. Observations by members of the Cummins CFS crew

I heard evidence from three members of the Cummins Brigade who were present at the location where the Charltons met them in the swamp. Mr Terry Vigar was the CFS Officer in Charge of the appliance that morning. He and his crew arrived at the Wanilla Hall at about 7am and relieved the night shift crew of the Cummins appliance. Mr Vigar said that Grant Shepperd, the Operations Officer for the day shift, tasked the Cummins crew to work on the Yorkies Crossing Sector which took in the group of paddocks marked C on Exhibit C176b. Mr Shepperd made mention of

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<sup>417</sup> Graeme Stuart Charlton - Exhibits C335 and C335a, Graeme James Charlton - Exhibits C336 and C336a

the forecast winds for that day, stating that if the fire picked up it would most likely breakout on that side, that is the southern side of the swamp<sup>418</sup>. Given that instruction, the Cummins crew would have approached their designated task with some vigilance.

- 3.49. Mr Vigar stated that they would have arrived at Mr Christopher Hull's hayshed by 7:45am. They proceeded to the swamp area where they met the two Charltons. Mr Vigar admits that when he first gave evidence to the Inquest he may have been mistaken as to the location where this encounter took place. Suffice it to say it is clear that it took place in the swamp and in the vicinity of Christopher Hull's side of the hundred line. There is no evidence from which the time of this encounter can be precisely determined. There is a radio log entry that records the Cummins crew advising Wanilla Control:

'... where to go from there. Come back southern side of fire. We are moving put any hot spot.'<sup>419</sup>

That entry is listed as 9am. The Cummins appliance were to respond to a request for appliances to go to a flare-up in the sugar gums that morning. The Wanilla Control log records their response as having taken place at a time that is not written clearly in the log but which appears to be recorded as 9:33am, but in any event sometime between the previous entry of 9:30am and the next clear entry at 9:36am.

- 3.50. Mr Vigar and Mr Adrian Shepperd describe the observations made by the crew of the Cummins appliance. The crew spent some time blacking out on the northern side of the swamp near the hundred line on Christopher Hull's property. Mr Adrian Shepperd, who was driving the appliance, said that the fire appeared to have stopped on the northern side of the creek in the vicinity of the hundred line, but there were a few spot fires on the southern side that they had to black out. In Mr Shepperd's statement he described possibly five or six spot fires in a fairly small area about 150 to 200 metres south of the creek<sup>420</sup>. There appeared to him to be no more spot fires to the south of that location. It was at that location that they met the Charltons. The scrub in the swamp did not appear to have been burnt south of that location. Mr Shepperd maintains that the appliance was then taken along the northern edge of the large salt scald to the east of the hundred line in Mr Cabot's section of the swamp and

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<sup>418</sup> Exhibit C118, page 5

<sup>419</sup> Exhibit C203a (MD36)

<sup>420</sup> Exhibit C334, page 2

then around the eastern edge of the salt scald. They emerged from the swamp into the paddocks at a location between the triangular clump of trees and the hundred line. Mr Shepperd described having during the course of that journey blacked out a couple of small spot fires. Mr Shepperd stated that there had been obvious backburning in that location, some two or three chains into the stubble paddock<sup>421</sup>. It appears that he must be speaking of the original Cabot backburn in the pasture stubble because Mr Cabot always maintained that he did not burn in the canola stubble. The appliance was taken in an easterly direction along the southern side of the swamp for about 2 kilometres. At one point a large plume of smoke was detected from the north-east, but there was no way that the appliance could be taken to it. Eventually the appliance was taken in a westerly direction following the southern side of the swamp area. Mr Shepperd stated that they returned to the vicinity of the hundred line where they waited, as there was nothing further there for them to do. He said that there was no fire in their general vicinity that they could see, although there was some smouldering scrub to the north and east and at the northern side of the swamp area along Yorkies Creek or close to it. He did not notice anything to the west of north.

- 3.51. Mr Vigar said in his statement in respect of the edge of the swamp inspected by his crew:

'I thought that the night crews did a good job because they blackened the fire roughly 50 or so meters (sic) from the edges'.<sup>422</sup>

- 3.52. From a higher vantage point, Mr Vigar said that he could see the fireground in all directions. When the wind sprang up at about 9:15am, he detected '*little puffs of smoke*' within the fireground. Dust and ash were also being picked up. Mr Vigar took some photographs at that point. One of them depicts smoke rising in what is believed to be the triangular extrusion of trees in the southern edge of the swamp in Area C on Exhibit C176b<sup>423</sup>. Mr Vigar said the Cummins appliance was called away at about 9:30am when there was a flare-up in the sugar gums near Lady Franklyn Road.
- 3.53. Mr Mark Dickinson, also a crew member on the Cummins appliance, provided a statement that he compiled himself. He had been made aware of the contention that

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<sup>421</sup> A chain is 22 yards

<sup>422</sup> Exhibit C118, page 6

<sup>423</sup> Exhibit C118a

Peter Cabot's backburn had contributed to the breakout on the Tuesday morning<sup>424</sup>. Mr Treloar and Mr Cabot had asked him to make the statement. Mr Dickinson gave evidence in the Inquest. He stated that the Cummins appliance blacked out smouldering sticks and stumps in Christopher Hull's section of the swamp and then inspected the southern edge of the swamp on Mr Cabot's property. Mr Dickinson detected that there had been blacking out along the edge of the swamp and that there was evidence of backburning in the pasture paddock. He told me both areas appeared to be 'safe'<sup>425</sup> and required no more work. He told me that east of the hundred line no further blacking out was required. Mr Dickinson thought that the smoke that was seen to rise just before they left to go to the sugar gums flare-up had emanated from the triangular extrusion. In his statement, Mr Dickinson said this about the state of the swamp edge on Mr Cabot's property:

'It was our job to black out and patrol the area that is in question on the Tuesday morning. We did some blacking out in the swamp as previously mentioned in Chris Hull's swamp. We felt that the area on Peter Cabot property was safer than any other areas because it had been burnt back to the edge of the scrub and blacked out well. There was also a chemical break between canola stubble and the scrub. The canola stubble was also very thin (hadn't been a heavy crop) which in my experience is hard to burn. The next paddock to the east was a pasture paddock and this to also had a safe edge because it had been backed burned to the contour bank some way into the paddock. In my opinion the paddocks on Peter Cabots had burnt at some stage but not until much later after the break out at Chris Hulls stubble paddock. The fire in which we were caught in along Yorkies Gully rd. was the fire that started at Chris Hull stubble paddock.'<sup>426</sup>

In evidence Mr Dickinson reiterated that the southern edge of the swamp on Mr Cabot's property '*was probably the safest area that didn't need much of our attention*'<sup>427</sup>. He had seen for himself the burnt off area in the pasture paddock and that is why he had felt that it '*was all pretty safe*'<sup>428</sup>. To the north of that paddock in the swamp they could not locate anything to black out and again, for that reason, thought the area was safe. As to the area of canola stubble to the west, Mr Dickinson said:

'I thought the paddock was pretty safe because there was canola stubble and it was a pretty light crop but to say that the scrub was safe, I couldn't say, and that's why we sat on top of the hill in that area looking out across that way for any break outs knowing that

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<sup>424</sup> Exhibit C288

<sup>425</sup> Transcript, page 20068

<sup>426</sup> Exhibit C288, page 2

<sup>427</sup> Transcript, page 20068

<sup>428</sup> Transcript, page 20068

there would definitely be some smouldering stuff in the scrub because we had already blackened some out in that area there so our assumption was that if there was some smouldering stuff there there is going to be some in there.'<sup>429</sup>

Mr Dickinson said he could not comment specifically whether the fire had gone to the edge of the stubble from the swamp. He said that in the time since these events occurred he could not remember how far the fire had come through in that location. What he could say was that they had followed the scrub line all the way along that sector looking for areas to black out. Mr Dickinson could not tell whether there had been backburning in the scrub at that location<sup>430</sup>. He was asked by me:

'Q. If you had come across any evidence that a fire had been in that location or along that edge would you have looked at that more carefully if, say, you noticed that no fire had been in that edge of the swamp. Do you see what I mean.

A. Yes, I do see what you're saying, yes. I guess we would have. Yes if a fire had been there I guess we would have looked at it more carefully just to see if there was anything smouldering. Your concerns are I think, when you see where a fire had been through, you are not really worried about grass because that burns and it's out, but you know, you are looking at stumps and sticks and things like that which are pretty hard to put out. You put a heap of water on a stick and it can still be burning a couple of days later and that's the kind of stuff we would have been looking for if there had been a fire.'<sup>431</sup>

However, at one point in his evidence Mr Dickinson suggested that they had noticed that some vegetation had burnt and been put out in the triangular extrusion of scrub at the edge of the swamp. He did not see any smoke rising from the fireground until smoke started to rise on a freshening wind. At that time they were situated at the vantage point where Mr Vigar took his photographs. Mr Dickinson thought that the smoke emanated from the triangular extrusion of scrub<sup>432</sup>. He said that they probably would have gone to that location and checked it if the Cummins appliance had not been called away to the flare-up at the sugar gums. Mr Dickinson lived in Cummins and told me that he knew Mr Treloar well. Their children went to the same school. As to the suggestion that his evidence about how safe Mr Cabot's backburnt area appeared to be may have been coloured by his association with Mr Treloar, one of the men responsible for the Cabot backburn, he said:

'As I said, I've got nothing to gain or lose. He is not a close friend, but when Michael asked me if I could put something on paper I said 'I don't have a problem with that because I feel that's where the fire had come from', so all I said is that 'I'll bet you'll end

<sup>429</sup> Transcript, page 20069

<sup>430</sup> Transcript, page 20070

<sup>431</sup> Transcript, pages 20070 and 20071

<sup>432</sup> Transcript, page 20073 and Exhibit C118a



up down here', which didn't excite me too much, but, yes, so nothing for me to gain or lose by saying what I reckon happened that day.'<sup>433</sup>

That statement was made in response to questions from me. I found Mr Dickinson to be a straightforward witness whose powers of recall appeared to be good. His perception of events and locations accorded with known facts. I accepted that Mr Dickinson's perceptions and opinions were genuinely expressed.

3.54. The Cummins appliance was called away from Area C at around 9:30am. They attended to a flare-up in the sugar gums. This meant that no CFS appliance was in Area C until the breakaways that were to occur in that area commencing at about 9:51am. When Cummins left, the only visible fire activity in the swamp or at its edge was the smoke evidently rising from the triangular plantation of trees in Area C. Neither the Charltons nor the Cummins crew members gave evidence of having seen any fire creeping along the southern boundary of the swamp on either Mr Cabot's or Christopher Hull's side of the hundred line that morning.

3.55. Should Mr Cabot have sought approval before lighting his backburn?

Mr Cabot acknowledges in his second statement that he needed to obtain permission from a CFS officer to undertake the backburn but laments that no fire truck visited that part of the fireground<sup>434</sup>. Mr Cabot assumed the CFS were busy on the northern section of the fire as he could see flashing lights from that direction in the distance. Mr Cabot also told me that he did not know whom to contact in the CFS on the Monday evening. He assumed that CFS would visit his location in light of the fact that on his property he had a 5 kilometre fire edge. In the event, there was no contact made between CFS and Mr Cabot which is astonishing. Mr Cabot also, I infer, derived comfort from the obvious encouragement that Mr Foster and Mr Myers had given to Mr Treloar in his absence. He had also received encouragement from a Mr Ray Murchison who prophesied that they were '*going to get cooked the way the weather forecast is*'.<sup>435</sup> Mr Cabot did not perceive any particular danger about the backburning given that the conditions were mild at the time they were conducted. At all times he considered the burning to be under complete control. In the main, Mr Cabot was motivated by the belief, no doubt reinforced by the views of others, that there was a certain inevitability about the fire escaping into his paddocks south of the swamp on the Tuesday morning. He seems to have been so convinced of this

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<sup>433</sup> Transcript, page 20100

<sup>434</sup> Exhibit C192a, page 3

<sup>435</sup> Transcript, page 19893

inevitability that first thing on the Tuesday morning he sent his wife out of the area. This occurred notwithstanding the comfort he derived from his backburning operation. He was of the view that backburning would at least reduce the risk in those locations. He made a point of telling me that he thought that the CFS themselves would be organising suppression activities. He did not see any CFS people on the Monday evening and this greatly concerned him. He assumed that when the wind slackened the CFS would have been there to backburn. Mr Cabot seems to have held the view that backburning in his paddocks was an inevitability and that his actions were simply undertaken to get the ball rolling as it were. Mr Cabot is clearly a devotee of the school of thought that backburning has the obvious benefit of reducing fuel load at a time and in conditions in which it is safe to do so rather than have it ignite under the influence of a strong wind during the day. The competing contention is that backburning can present its own serious risks and adverse consequences for the following day because it introduces more fire into a flammable area, fire that may not be extinguished before the conditions worsen.

- 3.56. Mr Treloar for his part said that the backburning was undertaken after considerable discussion and after an extended inspection of the edge of the swamp over a period of some hours. The weather was very mild. He also obviously derived encouragement from his discussions with Mr Foster and Mr Myers. He was of the view that the proposed actions of backburning were appropriate and necessary in the light of Tuesday's forecast and in light of the fact that it was only going to be a small backburn. He told me that the backburn was undertaken carefully and in stages so that it was always manageable. He also resolved to check on the area the following morning which he did, first thing. He, like Mr Cabot, had also observed fire in the swamp in the area north of paddock C and I have no doubt that he also thought that in those circumstances there was a high degree of risk of the fire in any event escaping from the swamp if no action was taken.
- 3.57. There is no doubt that Mr Cabot should have sought formal permission to have conducted the backburn. However, there was clear evidence available to the CFS that the south-eastern flank of the fire was situated on Mr Cabot's land, to the point where they had acknowledged it as a problem that was 'well recognised and being taken into account'. The CFS has responsibility in relation to the suppression of fire. The fire's south-eastern flank was an aspect of the fireground that was going to require their attention. There is no evidence that there was a CFS firefighting presence in Area C

until Mr Leon Modra went in there with the Karkoo appliance at about 3:30am on the Tuesday. In any event, Mr Cabot's backburn was overtaken by events. The CFS knew there was fire in the swamp in any case. At 3:30am and following they dealt with that fire. If Cabot's backburn brought the fire closer to the edge of the swamp, in some senses it made it more accessible. Whether it did or did not, some might say it is difficult to see what difference it made when it is recognised that the CFS had a statutory responsibility to deal with fire whatever its source.

- 3.58. Mr Cabot and Mr Treloar saw a need to eliminate vegetation that might burn in the morning under unfavourable weather conditions. The backburns were conducted in areas along the southern edge of the swamp that were already affected by fire. The evidence in my view is clear that in both of the two areas in which the backburns were conducted fire already existed in the swamp to the north of the swamp edge. This observation is important in considering any suggestion that Mr Cabot carelessly introduced fire into the swamp in places where fire had not already existed. There are a number of ways of looking at what Mr Cabot and Mr Treloar did. Some might say that all they succeeded in doing was introducing more fire into the equation. On the other hand, others might argue that by conducting the backburns, particularly that between Area B and C on PNC1, they eliminated much of the flammable vegetation that would have been available to burn the following morning under a northerly breeze, especially given that there was fire to the north of that location in the swamp in any event. Others might suggest that any fire that resulted from spotting out of the backburnt area the following morning is clearly a result of the introduction of fire at those locations by Mr Cabot and Mr Treloar, such introduction being wholly unnecessary. The point has to be made that there seems little doubt that the backburn was conducted in circumstances where fire already existed in the swamp to the north of the backburn locations. The point is also worth making that given the conditions that were predicted for the following morning, and which indeed came to pass, it was inevitable that if Mr Cabot and Mr Treloar had not burnt any of the vegetation at the edge of the swamp it would have burnt anyway. The difficulty is, however, it may have burnt differently or at a different time.
- 3.59. The other matter that seems clear is that as of the Tuesday morning there was little fire activity in the swamp at the locations where backburning had taken place. It is not as if Mr Cabot and Mr Treloar introduced an uncontrollable inferno into the swamp.

#### **4. Fire breakouts on the southern edge of the swamp - Fire 1 and Fire 1A**

- 4.1. I now turn to the observations made by various persons present at the time of the breakouts along the southern side of the swamp in Mr Cabot's and Christopher Hull's properties. Several witnesses gave evidence about that. Some of the witnesses were farmers on private firefighting utilities. Others were crew members of CFS appliances. Much of this evidence was given by witnesses who were asked to relate those dramatic events for the first time many months after their occurrence. Accordingly, much of the detail of this evidence was difficult to comprehend as well as being difficult to reconcile at times. Notwithstanding these manifestly inherent shortcomings, the evidence given by these witnesses was subjected to the most rigorous and painstaking analysis, both during the course of their testimony and in counsels' final submissions. In particular, those acting for the CFS took to this material with a fine tooth comb and subjected it to an almost line by line microanalysis. Having said all of that, however, the evidence did in general terms demonstrate a consistent pattern from which a number of important conclusions can be drawn.
- 4.2. The evidence demonstrates that there were a number of escapes of fire from the southern edge of the swamp in the Cabot and Hull properties that consisted of a head of fire emanating from the swamp into stubble and/or spotting out of the swamp some distance into the stubble. There now appears to be at least three distinct areas where the escape of fire took place. When this Inquest began, it was reported to me that there was just the one breakout on the southern side of the swamp. It was thought to have started in rills left by Mr Casanova when his tractor cut breaks in the vicinity of the southern and eastern boundaries of the New South Wales paddock on the Monday afternoon. It was suggested that burning vegetation within the rills had flared up on the Tuesday morning causing an outbreak to proceed under the influence of a north-westerly wind, in a south-easterly direction across stubble towards the narrow part of the swamp. It had also been thought that the fire generated by the flare-up in the rills had then proceeded across the narrow part of the swamp and into paddocks on Christopher Hull's property on the south-eastern side of the swamp before proceeding to Yorkies Gully Road and then across it. This scenario was that suggested by Mr

Gould in his addendum report in November 2005<sup>436</sup>. The scenario is encapsulated in Figure 3 in that report produced below.

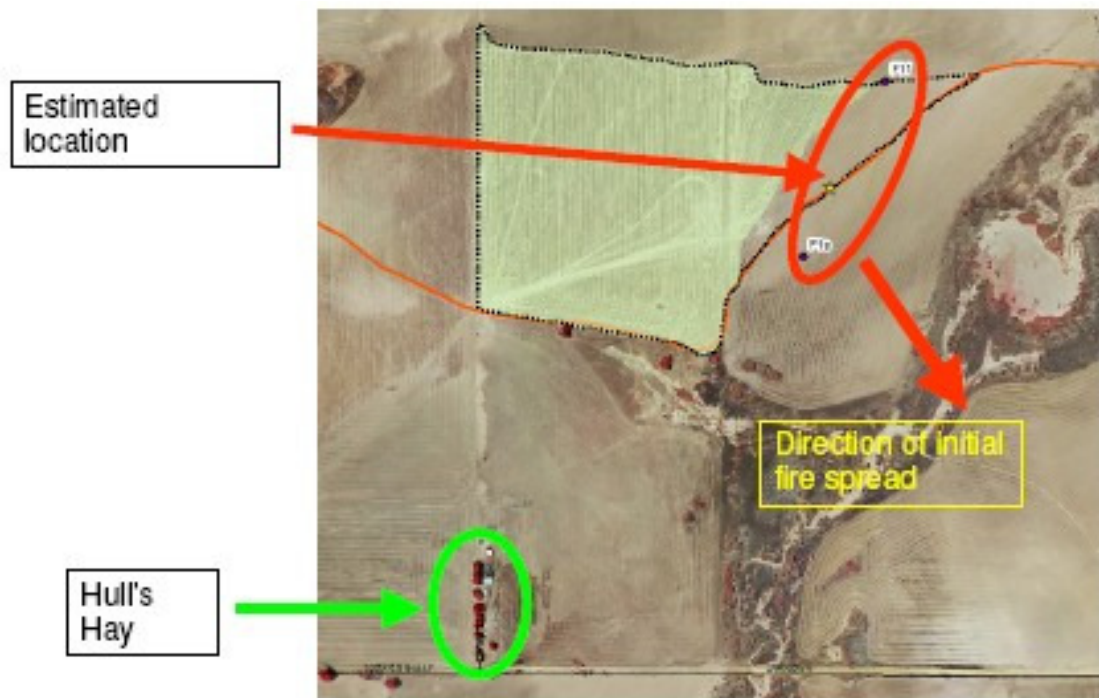


Figure 3 Fire 1 GPS breakout locations estimated by B Foster (F1f) and Greenpatch Shepperd (F1s)

The breakout location was estimated by Mr Gould to have been roughly half way between locations identified to him by Mr Brian Foster and Mr Grant Shepperd. It appears that the only witnesses to whom Mr Gould spoke in relation to this important matter were Mr Foster and Mr Shepperd. In this respect Mr Gould's analysis in respect of this issue was flawed as the underlying material suggesting that that is where the fire broke out from was, in the Inquest, found to be unreliable. I do not say this critically of Mr Gould. He at all times foreshadowed that his analysis of the matter might change in the light of further, more reliable, evidence. In this regard Mr Foster never claimed to have actually seen with his own eyes a breakout from the rills and his opinions in this regard were shown to be based more on speculation than hard evidence. As far as Mr Grant Shepperd's observations were concerned, they were made from a considerable distance and insofar as they were based on speculation that fire had come out of the rills, they were also unreliable. The only person who claims to have seen fire emanating from a location in stubble north of the swamp was Mr Shepperd, as I say, making observations from a distance. Those observations were

<sup>436</sup> Exhibit C175c

unsupported by other evidence. In particular, they were not supported by the evidence of Messrs Andrew and Byass who were actually present at the time of the breakout at the narrow part of the swamp. It became necessary to re-examine this whole matter in some detail. This necessitated a total re-evaluation of Mr Gould's analysis of how, when, where and in what circumstances the breakout from that location occurred, as well as a detailed analysis of whether or not there were other breakouts and what the sources of those other breakouts may have been. In particular, did Mr Cabot's backburn contribute in any way to these breakouts? Moreover, the flawed scenario that had been generated initially about this particular issue, based as it had been upon unsubstantiated premises, was perpetuated in the analysis of Dr Bob Smith whose aerial imagery<sup>437</sup> demonstrates a belief on his part that the fire broke out from a location north of the swamp on Mr Christopher Hull's property. Whilst such a straightforward analysis had its obvious attraction to begin with, it was inevitably destined to suffer from over-simplicity. The issue was far from simple when it was properly considered during the course of this Inquest. The other complicating factor is that, as I have already foreshadowed, the suggestion that Mr Cabot's backburn may have been the source of the breakout of fire in Area C.

- 4.3. There was in fact clearly more than one breakout in the Yorkies Crossing Sector on the Tuesday morning. This is hardly surprising bearing in mind the dynamic nature of fire in vegetation such as this and given the weather conditions. The evidence in my view establishes that there were three identifiable breakouts driven in the main by a north-westerly breeze. They did not all occur simultaneously. They were variously observed by CFS crew members and farmers. I have already referred to the detailed analysis brought to bear on this subject by those acting for the CFS. That analysis was driven by the desire on the part of those representing the CFS to assign responsibility for the breakouts, or some of them, to the Cabot backburn to which I have already referred. Further, it is contended that even if all of those breakouts cannot be sourced to the Cabot backburn, those that are to be attributed to that source are said to have significantly impacted upon the size and intensity of the fire or fires that descended upon the Wanilla Forest and its surrounding countryside, and in particular upon the location where Mr and Mrs Griffith and the Borlase children were caught in the open. This scenario is to be contrasted to that which was originally postulated by Mr Gould.

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<sup>437</sup> Exhibit C175d

- 4.4. In his initial analysis of the matter, Mr Gould described in very simple terms a single breakout that he postulated occurred at about 9:51am on the Tuesday morning and which had emanated from rills to the north-west of the narrow part of the swamp on Christopher Hull's property. That single breakout was referred to as Fire 1 in Mr Gould's initial report<sup>438</sup> and this description was repeated in further reports<sup>439</sup>. When Mr Gould first gave evidence in this Inquest in its very first week at Port Lincoln, he traced the fire that eventually made its way to the east coast of the Lower Eyre Peninsula to the one identifiable source, namely the rills near the NSW paddock. Mr Gould opined that this fire had passed across the narrowest part of the swamp on Christopher Hull's property and had, as a single fire front, proceeded in a south-easterly direction for some distance before a westerly change took it in a more easterly direction towards the coast. Whether that fire emanated from rills in the paddocks to the north-west of the swamp was but one issue. My view is that there is simply insufficient evidence of that having occurred.
- 4.5. There was a further live issue and that was whether the fire, being the single fire identified by Mr Gould, had indeed emanated from the narrow part of the swamp before it took off across the countryside to the south-east. The evidence establishes that the fire progression was not as simple as that. There were other conflagrations in and around the southern side of the swamp on the Tuesday morning, both on Christopher Hull's side of the hundred line and on Mr Cabot's side. Much of this evidence emanated from witnesses who had not prior to the Inquest made statements to the police. These witnesses were individuals who Mr Gould had not spoken to. As I say, I am not critical of Mr Gould in that regard. His prediction that his opinions about the progression of the fire might have to be re-examined in the light of material adduced during the course of the Inquest came to pass. As it transpires, further material shedding light on the origin of the fire on the Tuesday morning at that location was obtained.
- 4.6. The question has been posed, if there was more than the one breakout at that particular location on the Tuesday morning, what difference does it make in terms of the matters that I have to inquire into, namely the cause and circumstances of the nine deaths? I pause here to observe that it is not suggested that the breakouts of fire to the east and west of the hundred line accounted for the deaths of Messrs Murnane and

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<sup>438</sup> Exhibit C175a

Richardson. It is evident that their deaths were caused by a discrete breakout of fire on the Tuesday morning that had emanated from a separate location, namely from that part of the swamp on Mr Cabot's property just south of Warunda Road in the group of paddocks marked A on Exhibit C176b. Mr Doyle on behalf of the Motor Accident Commission, whose interest clearly is to eschew any responsibility on the part of Mr Visic's vehicle for this fire and its dreadful consequences, or at least to realign it in the direction of others, has submitted that even if the Cabot backburn was the source of some or all of the breakaways that occurred on the Tuesday morning to the east and west of the hundred line, that would not absolve the CFS of any responsibility for those breakaways given that organisation's mandate to take steps to prevent or at least minimise the consequences of a breakout on the Tuesday morning from that clearly identified perimeter of the fireground. I have already made a comment as to that. That will be a matter for others to judge.

- 4.7. I have given anxious consideration to submissions such as those articulated by Mr Doyle. For one thing it is not my function to ascribe responsibility as such to any entity or person. This Inquest is not simply about the performance of the CFS. My function is to identify, if possible, the cause or circumstances of the deaths in question and the cause or circumstances of the fire or fires. As part of that inquiry, it seems to me that I am under an obligation, if possible, to identify the source or sources of the fire or fires that are the subject of this Inquest. Accordingly, I consider myself to be under an obligation to attempt, at least where it may be relevant, to identify the source or sources of fire that on the Tuesday morning impacted upon the various locations where tragedy occurred. It was one of the terms of reference set by the previous State Coroner, and although I do not consider myself in any way bound by that, I am of the view that the source or sources of the fire or fires are highly relevant.
- 4.8. Those representing the CFS contend that there were multiple sources of fire on the Tuesday morning, including if not comprised entirely of, Cabot's backburn in Area C. They were perfectly entitled to ask me to consider scenarios other than that there had been purely the one breakaway from Christopher Hull's property on the Tuesday morning and as will be seen, in my view there was more than the one breakaway.

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<sup>439</sup> Exhibits C175b and C175c

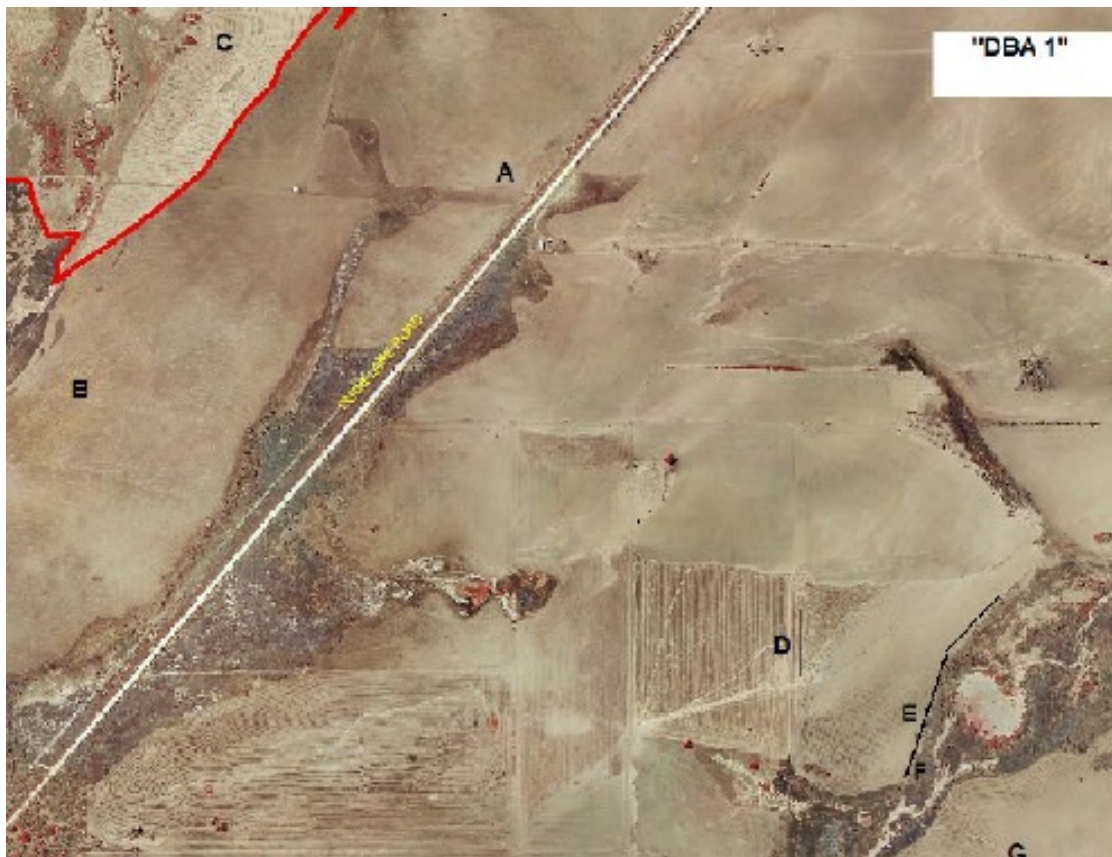


- 4.9. In summary those acting for the CFS contend the following. Under a north-easterly breeze that freshened at or some time after the CFS appliances left the paddocks marked C on Mr Cabot's property, the fire that had been introduced to the southern edge of the swamp by Mr Cabot's backburn rekindled. Having rekindled it is contended that it proceeded in a south-westerly direction along the southern edge, burning quietly, without being seen by any person. It is further contended that this low intensity burn was able to proceed in that south-westerly direction by virtue of the fact that Mr Cabot had failed to 'tie down' his backburn effectively at its western extremity. As a consequence, the fire proceeded along the southern edge of the swamp towards and across the hundred line and continued in a south-westerly direction towards the narrow part of the swamp. Ultimately, when the wind strengthened and started to develop more from a north or north-westerly direction the fire then spread into the paddocks on Christopher Hull's side of the hundred line at two identifiable locations, namely at or about the location of the narrow part of the swamp and also at the location where the swamp intersects with the hundred line on its southern side. In addition, it is said, inevitable spotting occurred from the vegetation along the southern edge of the swamp on Christopher Hull's property into the wheat stubble to the south-east. As well as that, later, under the north-westerly wind, spotting from burning vegetation in the swamp on Mr Cabot's side of the hundred line that had been engendered by his original backburning operation, set alight the canola stubble to the south of the swamp. This was a wholly separate fire from those on Christopher Hull's side of the hundred line. Thus, it is contended, that in reality the source of the fire that proceeded from the swamp in a south-easterly direction towards the Wanilla Forest and then to the east was identifiably Mr Cabot's backburn. Another way of putting it would be to argue that but for Mr Cabot's backburn, the fire that emanated from the southern edge of the swamp both to the east and to the west of hundred line would not have occurred, or if it did, would have occurred with much less, and perhaps manageable, intensity.
- 4.10. The contentions in this regard as argued by those acting for the CFS were based in the main upon the evidence of Dr Tolhurst and, to a lesser extent, upon the evidence of Mr Gould after he had reconsidered his original view that there had been the one single source of fire at the narrow part of the swamp. Naturally, the opinions of Dr Tolhurst and Mr Gould are very much to be influenced by and examined against not only their own observations of certain geographic and topographical features of the fireground, but also eyewitness evidence. I now deal with that eyewitness evidence.

4.11. The observations of Mr David Andrew and Mr Matthew Byass

As far as can be established, the only persons in the vicinity of the swamp at the time of the first breakout were Messrs David Andrew and Matthew Byass. The Cummins CFS appliance had been called to the sugar gums to respond to a flare-up at that location. Mr Andrew and Mr Byass, who both gave evidence before me, claim that they witnessed and were present at the location where the fire first broke out and witnessed that event.

- 4.12. Mr Andrew and Mr Byass were residents of Coultta and were both members of the CFS Coultta Brigade. Mr Andrew is Mr Byass' uncle. Messrs Andrew and Byass travelled to the fireground on the Tuesday morning in Mr Andrew's farm firefighting appliance. Messrs Andrew and Byass saw what they described as 'smokers' at a location on Christopher Hull's property near the NSW paddock. They took their utility to that location and there attended to some smouldering stubble, some of which may have been buried under the soil in 'rills' as a result of the construction of bare earth breaks. From there they proceeded to the northern edge of the swamp where there is a fence line. Mr Andrew was shown aerial imagery of the relevant location. That map became DBA1 attached to his statement<sup>440</sup>.

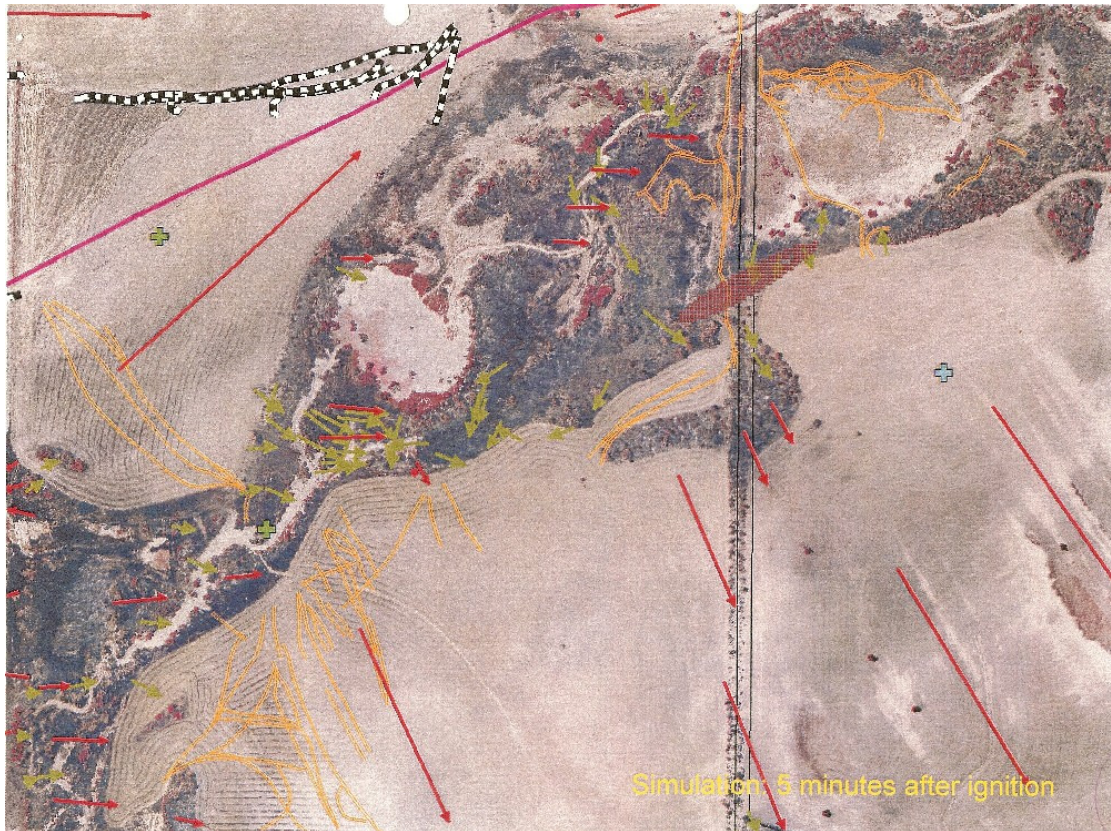


<sup>440</sup> Exhibit C199

At the northern end of the line marked E on DBA1, Messrs Andrew and Byass extinguished some 'smokers'. They noticed more smokers south along the fence line adjacent to the swamp. Mr Andrew said that they continued south and extinguished those smokers. Mr Andrew said in his statement that by then the wind was picking up and it was hot and dry. Mr Andrew had noticed that the wind was generally from the north, perhaps north-nor-west<sup>441</sup>. Mr Andrew gave evidence on two occasions. On the second occasion he was asked to provide more detail in relation to what he had seen at this location. Mr Andrew told me on the second occasion that he presumed that the fire on line E on DBA1 had come out of rills generated by a dozer mark. Mr Andrew indicated that there were rills pretty well along that line. He believed that there was a dozer mark in evidence at that location. Mr Byass also said that the line on the north-western edge of the swamp looked like a recent grader mark. Whether it was or it was not, there was smouldering material according to both men along the edge of the stubble adjacent to the swamp. The only activity involving a grader or a bulldozer that had taken place in that general location was the work performed by Mr Casanova the day before. Mr Casanova did not purport to put in any dozer break along the line that Mr Andrew and Mr Byass have identified. However, Dr Tolhurst indicated in his evidence that he was able to identify Mr Casanova's dozer breaks extending from the north-eastern corner of the NSW paddock across to the northern edge of the swamp and that there was apparently a dozer break in what would be the vicinity of the northern extremity of Mr Andrew's line E on DBA1. I am here referring to aerial imagery that Dr Tolhurst utilised and in particular Exhibit C281z(n), page 2 over the page.

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<sup>441</sup> Transcript, page 21631



However, as previously indicated there does not appear to be any evidence of dozer or grader work to the south of that location. Nevertheless, my confidence in the evidence of both Mr Andrew and Mr Byass that there was burning material in the vicinity of the northern edge of the swamp along the line marked E on DBA1 is not shaken. Both men gave consistent evidence about that. It may well be that they had an impression that fresh grader or dozer work had taken place in that location having seen evidence of that kind of work elsewhere to the north-west of the swamp, and perhaps having seen it at the top of the line on DBA1. Be that as it may, I accept their evidence that there was fire in the locations they described.

- 4.13. Mr Andrew described the fire along the line towards F on DBA1 as being patchy fire with '*bits here and there*'<sup>442</sup>.
- 4.14. Mr Andrew drove the vehicle in a southerly direction along the line while Mr Byass put water on the smouldering edge, using the pump on the back of the utility. Mr Andrew stated that they continued along the line until they ran out of water. The wind became quite strong and changed to the north-west and flame erupted in a clump

<sup>442</sup> Transcript, page 21637



of mallee trees which Mr Andrew placed at point F on DBA1. Mr Andrew later said in evidence that he might be wrong about the precise location of the clump of mallee. Mr Byass was unable to recall a clump of mallee flaring up but concedes that one may have. Both men are consistent in their description of what took place next, insofar as they say that the fire at that point proceeded into the swamp. I pause here to observe that when Mr Gould examined this particular location early in 2007 he was able to identify a tree that he believed was consistent with that '*clump*' of mallee referred to by Mr Andrew.

- 4.15. Mr Andrew in his statement, which was taken in December 2005, described the events in these terms:

'We kept moving south along the fence line (Refer to line E on map DBA1) until we ran out of water. I believe this coincided with the wind change to the north west and the wind became quite strong. A small amount of flame reached a clump of mallee trees and flared up (Refer to point F on map DBA1). It quickly got across to the other side of the swamp and into wheat stubble on the south eastern side. It was now burning strongly in the stubble towards Yorkies Gully Road.'<sup>443</sup>

Mr Byass in his statement taken in March 2007 described the events as follows:

'The stubble to the east of the line 'B1-B2' was partly burnt and partly unburnt. By that I mean some was burnt and some was not. I was on the back of the ute and I put water on the smouldering edge. We went up and back more than once but I cannot remember how many times.

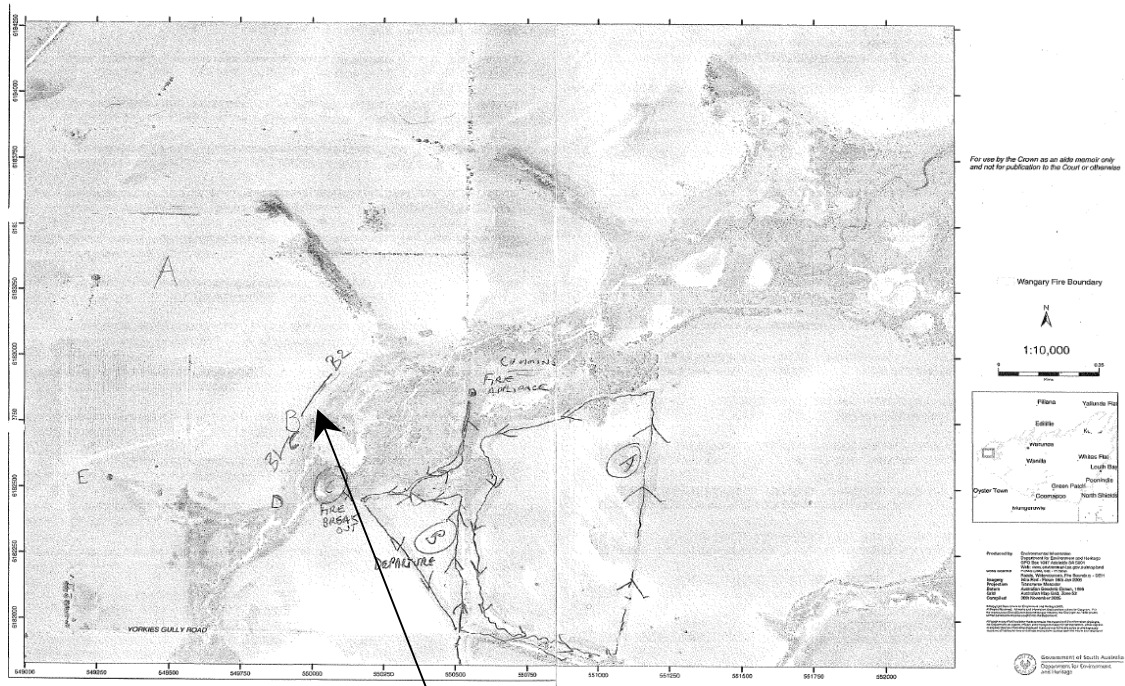
Then it started to flare up pretty bad. The wind was moving from the north or north west, to the east of the line 'B1-B2', I cannot remember if there was fire in the swampy vegetation to the east. I was on the back. I do not know what David did. He may have used the UHF but I do not know. I cannot remember a clump of mallee flaring up but it may have.

I remember seeing the fire get going into the swamp. I did not see how it got into the swamp and I do not know if the fire was in there on the previous day.'<sup>444</sup>

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<sup>443</sup> Exhibit C199, page 4

<sup>444</sup> Exhibit C338, pages 2 and 3



The line B1-B2 to which he refers is a line on a map that he drew<sup>445</sup> which is not inconsistent with the position of Mr Andrew's line on DBA1.

Mr Byass described in his statement an attempt to take the utility through the narrowest portion of the swamp at that stage. Mr Byass described also the fact of the fire getting through to the stubble on the south-eastern side of the swamp at that time. Mr Byass gave more detail about his observations of the fire when he gave evidence in May 2007. Mr Byass told me that when the fire went into the swamp it started to flare-up and moved across the swamp<sup>446</sup>. Mr Byass indicated that the fire moved in a southerly direction to the west of the kidney shaped lake and he saw the fire actually proceed to the other side of the swamp. When the fire arrived at the other side of the swamp he said '*it got in the stubble and really started to take off*'<sup>447</sup>. When asked as to how he knew that it was the same fire that had gone into the swamp as had come out of the swamp on the other side, Mr Byass referred to the wind direction and the fact that when they had been proceeding up and back along the northern side of the swamp the fire was not alight on the other side. Mr Byass conceded that there were gaps in his observation of the fire but stated that notwithstanding this he was confident that it was the same fire that had gone through to the stubble. The location of the fire in the stubble was consistent with the existing wind direction, having pushed it through the narrow of the swamp.

<sup>445</sup> Exhibit C338

<sup>446</sup> Transcript, page 22989

<sup>447</sup> Transcript, page 22989

- 4.16. Mr Andrew also conceded that he did not have an inch by inch uninterrupted observation of the fire through the swamp. However, when asked what he actually did see, he told me that one minute it was on the northern side of the swamp and the next minute it was on the southern side<sup>448</sup>. He said that when he saw the clump of mallee on the northern side take fire and saw it progress:

'I guess we saw some of the swamp catch fire, the next thing it was in the wheat stubble over the other side, yes.'<sup>449</sup>

- 4.17. Mr Andrew said that at the time the flare-up in the clump of mallee occurred the wind was really picking up to about 30 knots from the nor-nor-west.
- 4.18. Mr Andrew and Mr Byass in my view were reliable witnesses. Mr Andrew exhibited some inconsistency, but it related to detail that was not material to his general reliability. None of those inconsistencies shook my belief that Mr Andrew had given me an accurate picture of what occurred in relation to the flare-up of the mallee bush on the northern edge of the swamp and the passage of the fire across the swamp. His observations were supported by Mr Byass. I did not detect any evidence of collusion between the two notwithstanding their relationship. As an illustration of this, Mr Byass was unable to say anything about the clump of mallee flaring up as observed by Mr Andrew. It seems to me that if there had been any collusion between them, the flaring up of the mallee as the catalyst for the progression of the fire across the swamp would have been the kind of detail that they would be consistent on. There was also nothing to suggest that there was any cross-fertilisation of ideas between these two witnesses. They both appeared to me to be doing their best to describe their own independent recollection of those events.
- 4.19. I have no doubt that what Mr Andrew and Mr Byass witnessed was a fire that was originally moving benignly in the vicinity of the northern edge of the swamp but which then flared up on a change and strengthening of the wind. That fire I find then entered and crossed the swamp into the paddocks on Christopher Hull's property. While Dr Tolhurst did not prefer this material as an explanation for the origin of the fire at the swamp, Mr Gould did not have any difficulty with it. I discuss this below.
- 4.20. When Mr Andrew was at the location north of the swamp, he radioed Mr Wayne Puckridge. It is not clear when in relation to the flare-up in the clump of mallee that

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<sup>448</sup> Transcript, page 21641

this communication was made, but the two events must have been reasonably close in time because the communication arose out of Mr Andrew's concern that matters at his location were getting out of hand. At that time Mr Puckridge and a number of CFS appliances were in the vicinity of the sugar gums, there having been an earlier flare-up in the burning trees at that location. That was the flare-up that had taken Cummins CFS out of Area C in Mr Cabot's property. It was as a result of Mr Andrew's communication that the CFS's attention was first drawn to the fact that the fire had entered Christopher Hull's stubble paddock to the south-east of the swamp. This was the catalyst for the attendance of a further number of farm and CFS appliances at that location. There is no written record of Mr Andrew's communication with Mr Puckridge. However, in the Lincoln Base occurrence sheet it is recorded that at 9:51am the crew of the Edilillie CFS advised that fire had broken out on the Hull farm and that a number of CFS appliances were heading there. It is clear from the evidence that this communication was made very soon after Mr Andrew advised Mr Wayne Puckridge of the difficulties near the swamp on Christopher Hull's property. It appears therefore that the breakout of fire observed by Messrs Andrew and Byass occurred at about or very shortly before 9:51am.

4.21. What was the source of this fire?

It is not possible to determine the source of this fire with absolute precision. It appears to have come from the vicinity of the northern edge of the swamp at a location to the west of the long narrow extrusion situated west of the hundred line. At least that is where Messrs Andrew and Byass first noticed it but it will never be known whether for example the fire did in fact emanate from rills left by Mr Casanova's tractor at that location. It is a possibility that cannot be overlooked. Dr Tolhurst in his final report Exhibit C281z(a), page 18 referred to this possibility. He said:

'Another possible scenario is that the fire continued to smoulder in the rills created by the tractor mounted grader blade (Casanova) [Andrew statement p.4]. These smouldering heaps were observed on more than one occasion. One possibility it (sic) that not all of these smouldering mounds were adequately dealt with and one may have ignited the neighbouring unburnt stubble to the south.'

4.22. However, there are other competing possibilities. One is that fire from the previous afternoon and evening had penetrated the edge of the swamp in the vicinity of the narrow extrusion west of the hundred line, and that what Messrs Andrew and Byass



witnessed was at first a relatively benign flare-up of fire in the vicinity of that northern edge. It then became a more intense flare-up on the change and strengthening of the wind.

- 4.23. As to the suggestion made by Messrs Foster and Shepperd that this fire emanated from rills in the vicinity of the NSW paddock some distance to the north of the swamp edge, in my view that suggestion is now to be rejected. Mr Andrew and Mr Byass saw no fire coming from that direction at any time. If there had been any fire proceeding across the paddock between the NSW paddock and the narrow part of the swamp, to my mind it would have been so obvious that it would have been seen by them. They were both reasonably observant witnesses.
- 4.24. There has been no suggestion that the fire as described by Messrs Andrew and Byass, that is to say the fire they attempted to extinguish on the northern edge of the swamp, was the product of Mr Cabot's backburn. This is not surprising as it is to my mind extremely unlikely that it would have progressed so far to the north-west of its origin. To my mind the fire witnessed by Messrs Andrew and Byass was the product of the fire from the previous day.
- 4.25. Fire 1  
I find that what Mr Andrew and Mr Byass witnessed was the breakout that has been referred to in this Inquest as Fire 1.
- 4.26. Various witnesses, in the main farmers who attended in those paddocks, have described a line of fire crossing Yorkies Gully Road some distance to the west of the intersection of the hundred line with Yorkies Gully Road. In my view, they are referring clearly to the progression of the fire from the vicinity of the narrowest part of the swamp, that is the breakout witnessed by Messrs Andrew and Byass. Different witnesses gave different estimates as to the distance from the position where the fire crossed Yorkies Gully Road to the intersection with the hundred line. The precise details do not matter. In my view they all witnessed the same thing. Mr Grant Shepperd told me in some considerable detail that he pursued the south-western flank of that fire. He was of the view that it was the only fire front in existence and that it was a relatively narrow one. This also seemed to bear out Mr Gould's original view that there was one source and one fire. This turned out to be erroneous.
- 4.27. It is plain in my view that there were other fire fronts that originated from the swamp at around this time. I have already referred to a fire in the vicinity of the hundred line.

Mr Peter Whittaker observed fire in the trees all the way along the hundred line to Yorkies Gully Road. He described this fire as being twice the height of the trees. It was being driven by a gale force wind. Mr Kelvin Starke stated that he saw fire progressing south down the vegetation on the hundred line and eastwards into the paddocks. Mr Graham Giddings also witnessed fire spotting out of the trees on the hundred line, although he believed that this fire had originated from Christopher Hull's swamp.

4.28. Eye-witness observations of Fire 1A

In addition to those two sources of fire, fire also entered the paddocks on Mr Cabot's side of the hundred line originating from the swamp on that side of the line. This emanated in the main from spotting out of the swamp, although some of the spotting at the western extremity of Mr Cabot's paddocks could have emanated from mallee on the hundred line fence line<sup>450</sup>. This fire, spreading as it did into the canola paddock on Mr Cabot's property (paddock 15 on PNC1), became known as Fire 1A in the Inquest. It was a fire of which Mr Gould had no knowledge prior to this Inquest. The existence of this fire was identified by Mr Treloar, and others, who had entered the paddocks on Mr Cabot's property that morning.

- 4.29. Mr Treloar referred to certain features of the map MBT1 attached to his statement<sup>451</sup>. This imagery is reproduced below.



<sup>450</sup> Transcript, page 19358

<sup>451</sup> Exhibit C184

He said that having been in the group of paddocks marked C on Exhibit C176b for some time, he observed the wind increasing from the north and the temperature rising rapidly. He was with his vehicle. At one point he noticed dust emanating from Christopher Hull's property on the western side of the hundred line. Mr Treloar said that he made his way to point E on MBT1 and noticed at that time that a fire was burning in wheat stubble on Christopher Hull's property and that by then the Cummins CFS truck and farm firefighting units were endeavouring to quell that outbreak. In my view Mr Treloar is describing the fire that emanated from the narrow of the swamp, that is Fire 1. Mr Treloar decided to try and make his way to that location, but by the time he reached Yorkies Gully Road, the fire had taken hold and was approaching the road. The fire then crossed the road. At one point Mr Treloar went into a property to the south of Yorkies Gully Road in an endeavour to protect a house and some sheds. After some time, Mr Treloar noticed smoke emanating from Mr Cabot's property to the north so he headed back to that location. Mr Peter Whittaker and other farm units were engaged in fighting the fire at about point F on MBT1 in what was a wheat stubble paddock. He ultimately made his way to point G on MBT1 and endeavoured to extinguish the edge of the fire there. However, it kept reigniting behind him. Mr Treloar stated that the fire in these paddocks was distinct from the outbreak that he had seen on Christopher Hull's property. Mr Treloar in his statement said:

'Burning embers must have come out of the swamp and been blown over the backburn we had done the previous night and ignited Peter's paddocks.'<sup>452</sup>

Mr Treloar believed that the fire in Area C had its western flank between points F and G on MBT1. Mr Treloar thought that this fire would have ended up in the swamp area to the south-east near the lake that is adjacent to the road. He told me that they were still able to gain access to the west of the fire and that the canola stubble to the west had not burnt. These observations he said were made about 20 minutes after he had first seen the fire in Christopher Hull's paddocks. He said that the fire in the group of paddocks marked C would have been burning for some 10 to 15 minutes before he heard a call on the radio from Mr Cabot to the effect that he needed assistance to fight fire in Area A in Exhibit C176b<sup>453</sup>.

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<sup>452</sup> Exhibit C184, page 5

<sup>453</sup> Transcript, page 15764

4.30. Mr Peter Whittaker is the man whom Mr Treloar said was already in Mr Cabot's paddocks marked C when he returned. Mr Whittaker was at that time Mr Cabot's sharefarmer. He was familiar with Mr Cabot's property. Mr Whittaker had been involved in the fire suppression activities on the Monday afternoon and evening but had not been involved in Mr Cabot's and Mr Treloar's backburning operation. He had returned to Mr Cabot's farm with his two sons at about 9am on the Tuesday by which time he stated the weather was warming up, although the wind was not particularly strong at that time. By the time he had moved some portable field bins from the paddocks to Mr Cabot's house, the wind had picked up and had started to blow quite strongly. Mr Whittaker detected smoke coming from a westerly direction so he drove his tractor, which had a water cart attached, west along Yorkies Gully Road. As he approached the group of paddocks marked C he could see the trees and scrub were starting to burn along the hundred line at about the point where it intersects with the southern edge of the swamp. Mr Whittaker in aerial imagery marked PJW2 attached to his statement<sup>454</sup> marks that with point A.



Mr Whittaker together with Graham Giddings and Rob Flavel, who had jumped on the back of his rig, made their way to that location. As they did so, the fire burnt quickly along the hundred line tree line to Yorkies Gully Road. Mr Whittaker

<sup>454</sup> Exhibit C202

described the flames as '*unbelievable in size*'<sup>455</sup>. The fire burnt into paddock 15 adjacent to the hundred line and as they were trying to fight that fire, spot fires were also occurring all around them. Mr Whittaker said that the spot fires would have had to have been coming out of the swamp north of paddocks 15 and 16 on PJW2, being the areas of the swamp that had been the subject of Mr Cabot's backburning operation the night before. By that time other farm firefighting appliances, together with the Edilillie CFS truck, were involved in fighting the fire. In order to seek some form of refuge, Mr Whittaker made his way into the middle of paddock 16 which consisted of very short sparse pasture grasses. Spot fires were still occurring at and around that location. The wind was as strong as any that Mr Whittaker had ever experienced. The Edilillie CFS appliance, captained by Mr Damien Puckridge, remained with them at that location for their protection. At that time Mr Whittaker heard Mr Cabot on the radio calling for assistance from a location towards the northern end of his property. This was probably the same transmission heard by Mr Treloar. Mr Cabot by then had his hands full with fire in Area A on his property.

4.31. Although Mr Treloar gave every impression that the canola paddocks to the west of paddock 16 had not been affected by the time he arrived, Mr Whittaker's evidence in my view makes it plain that there must have been spotting into those paddocks. They are the paddocks marked 15 on PJW2. This spotting had been difficult to quell and was the reason Mr Whittaker had sought refuge to the east. Dr Tolhurst was ultimately to tell me that he could identify locations in paddocks 15 where clearly there had been spotting and a consequent progression of fire in a south-easterly direction towards Yorkies Gully Road. I come back to that.

4.32. Mr Graham Giddings, whom Mr Whittaker was with that morning, gave evidence to the Inquest. He confirmed that the hundred line was, to use his expression, '*well and truly alight*'<sup>456</sup>. There was a strong north-westerly wind at that stage. He and Mr Flavel jumped onto the back of Mr Whittaker's tractor and trailer and entered the paddock on Mr Cabot's side of the hundred line. Mr Giddings described the scene as follows:

'It was hopeless, you'd put out one sort of a finger that come off the - and then there would be another spot fire a bit further on, you would go and try and put that out and you look behind and there's another spot fire.'<sup>457</sup>

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<sup>455</sup> Exhibit C202, page 7

<sup>456</sup> Transcript, page 20114

<sup>457</sup> Transcript, page 20114

Mr Giddings told me that the spotting was emanating from the hundred line. He told me that embers from the trees were landing in the paddock about 100 to 200 metres away. Mr Giddings' impression was that the fire in the hundred line had burnt to the hundred line from Christopher Hull's property in a south-easterly direction from the swamp. Mr Giddings said that his impression was that the fire was blowing down the hundred line rather than across the hundred line under a wind that was more northerly than westerly at that stage<sup>458</sup>. Mr Giddings said that after about half an hour or three quarters of an hour he came to the realisation that there was a fire burning behind them in an area in the group of paddocks marked C on Exhibit C176b, midway between the triangular extrusion of mallee and the centre of the large lake on Mr Cabot's property adjacent to Yorkies Gully Road. Fire at that stage was in the pasture paddock. Mr Giddings was not aware of where that fire had originated. Mr Giddings told me that this fire was beyond their control so they took shelter on burnt ground. Mr Giddings formed the impression when he left Mr Cabot's paddocks and travelled east along Yorkies Gully Road towards Mr Cabot's house, that the large lake just to the north of Yorkies Gully Road directly below the letter C on Exhibit C176b had halted the progress of the fire that he had witnessed to the east of his original location in the paddock.

- 4.33. Mr Giddings thought that the second fire that he saw emanated from somewhere in the swamp directly north of the letter C in Exhibit C176b and that the fire was a fire front, not simply spotting.
- 4.34. Mr Damien Puckridge, the Captain of the Edilillie CFS appliance, also gave evidence about the fire in Mr Cabot's paddocks marked Area C. He had been at the sugar gums area with the crews of the Cummins and Karkoo appliances when he heard Mr Andrew's UHF transmission that there was an uncontrolled breakaway on Christopher Hull's property. The three appliances then made their way east along Yorkies Gully Road. By that time the fire was moving rapidly across Christopher Hull's paddock towards the road. They unsuccessfully endeavoured to fight the fire on both sides of Yorkies Gully Road. Mr Puckridge made a transmission over the GRN, that is probably reflected in an entry in the CFS GRN014 radio log<sup>459</sup> timed at 9:57am, namely '*Fire over road in Giddings farm*' – that is to say, David Giddings' farm south

<sup>458</sup> There seems to be some inconsistency between the proposition that the fire had originated from the swamp and had progressed south-east to the hundred line and the proposition that it had blown down the hundred line under the influence of a more northerly wind.

<sup>459</sup> Exhibit C203a – MD36

of Yorkies Gully Road. The Edilillie appliance then proceeded into Mr Cabot's property to the east of the hundred line. Mr Puckridge was asked:

'Q. How long did you spend at Cabot's stubble paddock.

A. We were fighting spot fires in this area here and we ran out of water and there's a tank just back here somewhere (INDICATES) and I was about to head back in –

Q. Let's get that on the transcript, there's a tank what, about a couple of 100 m into Peter Cabot's stubble paddock to the north of Yorkies Gully Road.

A. Yes. This paddock is a full wheat stubble and by this stage things were getting very out of control very scary. I made the decision not to go into that paddock with the wheat stubble because it looked to be very heavy wheat stubble and I knew we'd be in a bit of trouble if the fire came in there the way it was moving. And at this stage I notice Peter Whittaker who share farms Peter Cabot's place, he had his big John Deere tractor with an open trailer on the back of the tank on it and he had two blokes standing on the trailer trying to fight spot fires as well. He also had his kids in the tractor with him and I sort of deemed them to be my responsibility, I decided to stay with them because the tractor can't move very fast and if they got caught somewhere they were going to be in big trouble, so I decided to stay with them. At that stage the visibility was cutting right down, you would have been lucky to see half the length of this room.

Q. And the length of that is about what, 20m, 25 m.

A. Yes, you'd be lucky to see that far and I talked to Peter on the UHF and sort of asked and indicated that we needed to get into a paddock that wasn't going to be a hassle and it had already burnt a lupin paddock here, lupins don't burn - like they're not very thick, so the chances are you'd find a spot in the paddock that's not going to burn. It had already gone through though and taken out the thick spot so you knew it wasn't going to come out of the swamp again and burn, so we ended up parking up in a paddock here somewhere (INDICATES) and we sat there and did not move for probably close to an hour.<sup>460</sup>

The paddock marked 14 on PJW2 consisted of wheat stubble. I daresay Mr Puckridge was referring to that paddock in the above passage. Mr Puckridge described the area in which the Edilillie appliance and Mr Whittaker's tractor took refuge as already burnt ground. This constitutes further evidence in my opinion that after the initial breakaway from Christopher Hull's property had crossed Yorkies Gully Road, there was intense fire on Mr Cabot's property, characterised at least initially by spotting. The fact that paddock 14 had burnt is plainly consistent with either fire having progressed there from the canola paddock 15 under a north-westerly wind or consistent with spotting into it, or both.

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<sup>460</sup> Transcript, pages 1122 and 1123



#### 4.35. Observations by witnesses of the spread of fire/s from the swamp

The evidence of two other witnesses is also relevant. Shane Nelligan operated a farm situated between Wanilla and Edilillie. He was a member of the Edilillie CFS Brigade, but was at the fireground on the Tuesday morning in his private utility. He arrived at about 7am. He and Jed Siegert explored the hundred line separating Christopher Hull's property from Mr Cabot's property at a time when the wind was, to use Mr Nelligan's expression, '*pretty quiet at that stage*'<sup>461</sup>. They observed nothing untoward at that location except that Mr Nelligan could see smoke emanating from an area well into the swamp. He and Mr Siegert then spent some time at Les Hull's property. When the wind picked up from the north, they proceeded south down Settlers Road. As they progressed, they learnt over the UHF radio that fire had broken out on Christopher Hull's property. They then proceeded west along Yorkies Gully Road past the hundred line to a point approximately midway between the hundred line and the Yorkies Crossing ford. Mr Nelligan told me that CFS trucks and private units were present. Under a strong northerly, the fire crossed over Yorkies Gully Road. There was a fire front that he estimated to be about 50 metres in width. The fire was also spotting within a reasonably confined area. The fire jumped the road with ease and proceeded into a property on the southern side of Yorkies Gully Road. The fire entered a tree line which bordered the properties of David Giddings to the west and Tim Nelligan to the east (being the extension of the hundred line). Mr Shane Nelligan told me that when the fire was emanating from Christopher Hull's swamp the wind had been from the north until it reached the road, when the wind started to swing around to the north-west. Mr Nelligan observed the fire as it proceeded across Tim Nelligan's property. He observed that the fire front passed to the south-west of Mr Nelligan's house and headed straight for the Murrunatta Conservation Park<sup>462</sup>. At the time Mr Nelligan left his location, the main fire front was virtually at the Murrunatta Conservation Park. Mr Nelligan expressed the belief that the fire that he witnessed south of Yorkies Gully Road was the only fire on that side of the road at that time. Mr Nelligan's evidence would suggest that, at least as far as the time when he made his observations were concerned, there was only the one fire front that had crossed Yorkies Gully Road. That front to his observation had crossed the road, by way of spotting, at a location to the west of the hundred line and had originated somewhere from Christopher Hull's swamp. When Mr Nelligan left

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<sup>461</sup> Transcript, page 20020



the area, he travelled west along Yorkies Gully Road towards Duck Lake Road and so his view of what was taking place east of the hundred line on Mr Cabot's property was limited.

- 4.36. Mr Nelligan's evidence suggests that there was only the one fire front heading towards the Murrumbidgee Conservation Park and indeed was the only front that reached that location. However, these observations would have been made from a considerable distance.
- 4.37. Mr David Giddings is the son of Mr Graham Giddings. David Giddings farmed the group of paddocks south of Yorkies Gully Road and immediately to the east of the southern paddocks of Christopher Hull's property. David Giddings' paddocks were the paddocks between Christopher Hull's property and Tim Nelligan's property. Mr Giddings was mobile on the Tuesday morning with two other gentlemen. They were travelling west along Yorkies Gully Road when they heard the broadcast over the UHF radio to the effect that fire had broken out. They drove right to the hundred line with no sign of fire along the road to that point. However, fire was burning down the hundred line north of the road. They pulled up at that location and watched the fire burn to the road and then jump the road into Tim Nelligan's property. Having crossed the road, the fire headed with the prevailing wind in a south, south-easterly direction and to the west of Tim Nelligan's house. Mr Giddings and his companions proceeded south towards Mr Nelligan's house where they spent approximately 20 minutes wetting things down. At that time the fire was approaching to the west of the house in a south, south-easterly direction. Having spent some time at the house they then proceeded to fight the head of the fire as it progressed across Mr Nelligan's property. Things became very dangerous. The wind was extreme. Mr Giddings told me that the wind speed may have been somewhere in the vicinity of 75 to 100 kilometres per hour. They took refuge in a shed for about 30 to 35 minutes. In due course they decided to leave that location and they made their way back to Yorkies Gully Road where they headed west. At that stage there was smoke generally in the Areas A, B and C on Mr Cabot's land to the east. They proceeded west because it was clearer in that direction.

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<sup>462</sup> That observation is very much in keeping with the observation of Mr Grant Shepperd who followed the south-western flank of the fire all the way to the Wanilla Forest.

- 4.38. Mr Giddings expressed the view that it was highly unlikely that the fire that crossed Yorkies Gully Road was from Mr Cabot's property. His reasoning essentially was that when they had approached the hundred line from the east, there was no fire in Mr Cabot's property or at the road. What Mr Nelligan saw was fire that either emanated from the swamp on Christopher Hull's side of the hundred line or had emanated from an area to the north along the hundred line or a combination of the two. It has to be kept in mind that the fire front that is said to have emerged from Mr Cabot's property emerged at a time after the fire that came out of Christopher Hull's property. Mr Giddings spent a significant period of time in the shed on Mr Nelligan's property and so was unable to see what path the fire had taken in relation to the shed and the house. When he and his companions were at Mr Nelligan's homestead they were on the easterly side of the fire. The fire at that stage was not burning directly towards the house and the initial front was probably about 200 metres to the west of the house. Mr Nelligan could see no second front from the house, but as seen, he was in the shed for some time. By the time he emerged from the shed the fire front had passed and visibility was very poor. Mr Nelligan's house did not burn down, but the fire burnt around the rear of the house and damaged a pergola. Clearly fire had gone through that location. When asked as to how it was that the house had been reached by fire, bearing in mind that on Mr Giddings' evidence the fire front that he was aware of had passed to its west, Mr Giddings speculated that the house may have been approached by a finger of fire that had broken away from the main front or had been approached by fire after the wind had changed. Either way Mr Giddings did not see what had happened in relation to Mr Nelligan's house.
- 4.39. My view is that Mr Giddings' evidence did not advance the matter of whether or not there was a second fire front emanating from Mr Cabot's property to the east of the hundred line. However, the fact that Tim Nelligan's house was affected by fire some time after the initial fire front had passed suggests that perhaps there had been another fire front further to the east at some point in time. Like Mr Shane Nelligan, Mr Giddings headed west along Yorkies Gully Road after emerging from the paddocks to the south and therefore was in no real position to witness what was occurring to the east.
- 4.40. Both Mr Shane Nelligan and Mr David Giddings had been approached by Mr Cabot before they gave their evidence to the Inquest. It was clear that both witnesses were

aware of the allegation that Mr Cabot's backburn had contributed to the breakaway on the Tuesday morning. While I do not doubt the sincerity of either witness, it seems to me that they may well have witnessed events at a time before the fire that originated in the swamp on Mr Cabot's side of the hundred line emerged. In Mr Giddings' case, he was in the shed on Mr Nelligan's property taking shelter at a time when the fire that originated from Mr Cabot's swamp may have passed through that property.

- 4.41. Mr Grant Shepperd, who claimed that he had seen how the breakaway had been generated on Christopher Hull's property, namely through fire from the north of the swamp, was recalled on the issue as to whether there was more than one front. It will be remembered that he followed the south-western flank of the fire all the way to the Wanilla Forest. Mr Shepperd was at the Wangary Control centre when he first became aware of the breakaway on Christopher Hull's property. He arrived at the Yorkies Gully location some time after the breakaway. His observations therefore, at least at the beginning, have to be examined in the light of the fact that he must have arrived at the scene several minutes after the start of these events. Mr Shepperd told me that while he followed the south-western flank of the fire as it progressed towards the Murrunatta Conservation Park, he could see right across the fire front. He maintained that only the one head of fire entered the Murrunatta Conservation Park and when it did so, its south-western flank entered the park along its western side. On one of the site visits, Mr Shepperd took the Inquest to that location and pointed it out. Mr Shepperd told me that at that point he could see right across the fire front. He maintained that when he saw the fire enter the Park he was in an elevated position and would have been able to see other fires if there had been any<sup>463</sup>. Mr Shepperd saw the fire in the Murrunatta Conservation Park at about 10:57am. Mr Lock, who was at Wangary and was in contact with Mr Shepperd, recorded this time incorrectly as 1157 hours on his map, Exhibit C223b, but confirmed in his oral evidence that this notation was wrong and should have been 10:57am<sup>464</sup>. Mr Shepperd told me that the fire was still only a very narrow one, no more than 100 metres wide, even when it entered the forest and before the wind had changed.
- 4.42. Mr Kelvin Starke, who owned the property to the south of Yorkies Gully Road and to the east of Mr Nelligan's property, gave evidence to the Inquest. His property extended south all the way to the northern border of the Murrunatta Conservation

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<sup>463</sup> Transcript, page 19999

<sup>464</sup> Transcript, page 8150

Park. Mr Starke told me that the two paddocks bordering the northern extremity of the conservation park did not burn. The westernmost of the two paddocks was bare pasture. However, the easternmost paddock was canola. It is to be acknowledged that if there had been a fire front passing through the forest to the east of the original front as seen by Shane Nelligan, David Giddings and others that it is surprising the canola paddock did not burn at any stage.

4.43. Mr Nigel Breed, who gave evidence, was the CFS Officer in Charge of the Karkoo appliance after Mr Leon Modra's crew was relieved on Tuesday morning. Mr Breed and his crew attended with the appliance in the south-eastern paddock on Christopher Hull's property, that is the paddock to the south-east of the swamp. There were other appliances in attendance. He told me that the fire in that group of paddocks was impossible to control - the difficulty being that the fire in the header rows simply could not be quelled in the conditions that prevailed. The header rows would reignite *'time and time again'*<sup>465</sup>. Mr Breed told me that he saw the fire jump across Yorkies Gully Road. He said it was crossing the road when they first approached the location from the west along Yorkies Gully Road. The wind was strong enough to take it over the road. At that stage the Karkoo appliance was to the west of the fire. At that point the Cummins appliance went to the south in an endeavour to pursue the head of the fire in that direction while the Karkoo appliance went into the paddocks on Christopher Hull's property to the north where they found it impossible, as I have said, to quell the fire. In due course they made their way to Mr Cabot's home along Yorkies Gully Road. They had to pass through fire along Yorkies Gully Road. Mr Breed thought that the fire was mostly located in the area of the hundred line.

4.44. I have already referred to Mr Vigar of the Cummins appliance. Mr Vigar's appliance also went to Mr Cabot's home. Mr Vigar said that as they made their way east along Yorkies Gully Road towards Mr Cabot's home, the road was alight all the way to where the swamp joins the road near the large lake south of point C<sup>466</sup>. Mr Vigar was aware that the fire had burnt well to the south by that stage but was not aware that it had progressed to the east of the hundred line as well. He said:

'As we moved off down the road from this corner here at the hundred line it got worse and worse and we got into a situation that we'd never like to get into ever again: visibility

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<sup>465</sup> Transcript, page 6952

<sup>466</sup> Transcript, page 7044 and 7045

was almost nil, it was that bad that I was giving directions to the driver. We could [see] that the fire had burnt all along, along here.<sup>467</sup>

At that stage Mr Vigar said that the wind had probably changed to come from the north-west. Mr Vigar's observations would suggest that there was a source of fire to the north of Yorkies Gully Road and to the east of the hundred line, that is to say from Mr Cabot's paddocks 15 and 16.

#### 4.45. Dr Tolhurst's observations

Dr Tolhurst was able to identify areas in paddock 15 just to the east of the hundred line on Mr Cabot's property that had been subjected to spotting. I refer here to Figure 8 in Dr Tolhurst's first report<sup>468</sup>.

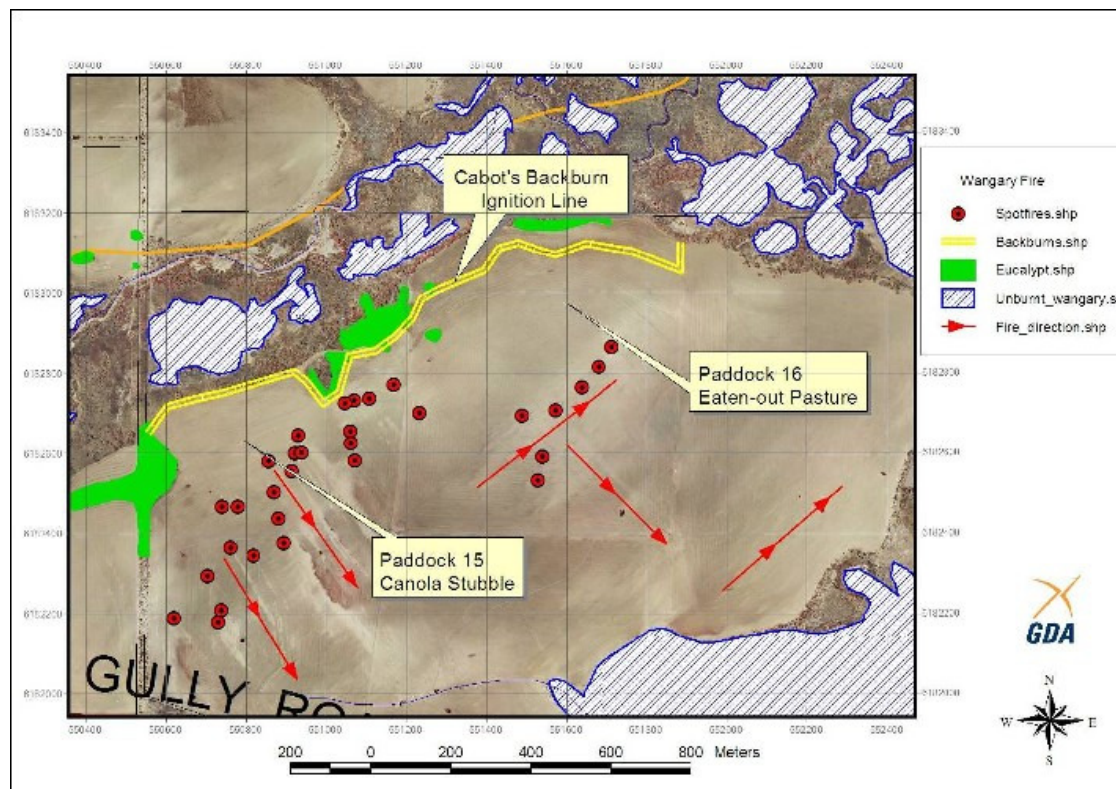


Figure 8 Swamp area north of Cabot's backburn showing line of ignition, area of mallee eucalypts, spotfire points, unburnt patches in swamp and general direction of fire travel.

These spot fires are described as having occurred up to 500 metres from the swamp edge. Dr Tolhurst postulated that it was possible that others had occurred beyond that location but had not been detectable. Dr Tolhurst asserted that there were two sources for this spotting, namely the area of Peter Cabot's backburn and the burning hundred line. There was a suggestion by Mr Brian Foster that the paddocks in Area C burnt

<sup>467</sup> Transcript, page 7045

<sup>468</sup> Exhibit C281

later in the day after the wind had changed to the west and south-west<sup>469</sup>. While this is possibly so in some locations in Area C, the evidence that stubble was alight in Area C on Mr Cabot's property within minutes of the breakout on Christopher Hull's property, and that the fire was being driven by a north-westerly wind is quite overwhelming.

4.46. How many breakaways occurred from the southern edge of the swamp?

In my view the evidence that I have summarised makes it clear that at a point in time after the first breakaway in the vicinity of the narrow section of the swamp on Christopher Hull's property there was also a fire in the hundred line that extended along its length. The evidence would suggest that the fire at the hundred line and the fire from Christopher Hull's swamp became one as they progressed south towards Yorkies Gully Road such that when the fire crossed Yorkies Gully Road it essentially did so as one front. The south-western flank of that fire was the flank that was identified by Grant Shepperd, Shane Nelligan and David Giddings.

4.47. It is also clear that there was another discrete fire, which has been referred to in this Inquest as Fire 1A, that emanated from Mr Cabot's property some time after the breakouts of the fire on Christopher Hull's property and the fire from the hundred line. It may well be that the fire that was seen towards the eastern part of Area C on Exhibit C176b was to an extent arrested by the large lake just to the north of Yorkies Gully Road<sup>470</sup>. However, there appears to be a persuasive body of evidence that there was also a large amount of spotting coming out of the swamp edge further to the west in Mr Cabot's property from an area of the swamp that encompasses the triangular shaped extrusion. Many witnesses observed this. There is clear objective evidence of its existence. In my opinion it was the progression of fire or fires originating in Mr Cabot's swamp that inundated Yorkies Gully Road to the east of the hundred line. This was the fire seen by Mr Vigar.

4.48. Dr Tolhurst has postulated that the fire that emanated from Mr Cabot's side of the hundred line, initially by way of spotting, ultimately joined with the original fire that had crossed Yorkies Gully Road to the west of the hundred line. If this occurred, it does not appear to have been witnessed by any person, including Shane Nelligan, David Giddings and Grant Shepperd. As I have already suggested, in my view the

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<sup>469</sup> Transcript, page 1934

<sup>470</sup> Although Mr Gould suggested that the fire would in due course make its way around that obstruction

evidence of Mr Nelligan and Mr Giddings does not advance the proposition that there was ever a second fire front. As for Grant Shepperd, he would strongly reject the suggestion that there was any second fire front. However, I found Mr Shepperd not to be particularly reliable as far as his observations were concerned. Mr Shepperd for instance claimed that he could identify the source of the original breakout from Christopher Hull's side of the hundred line as he was motoring east along Yorkies Gully Road, having been advised about the breakout when he was as far away as the Wangary Control centre. Mr Shepperd's observations, as earlier recorded, were to form the flawed basis for Mr Gould's assertions that there had been only the one breakout in the vicinity of Christopher Hull's swamp and which had originated from rills in the paddock to the north of it. That theory has now proven to be untenable in the light of observations made by the witnesses to whom I have referred, in particular Messrs Andrew and Byass. In addition, Mr Shepperd saying that the fire front was only about 100 metres wide when it hit the Wanilla Forest, in my view simply cannot be a correct observation on the evidence that I have heard. If the fire crossed Yorkies Gully Road at its western flank some distance west of the hundred line, and it also crossed at the hundred line itself as part of the one fire front, it could well have been at least 100 metres wide at that stage. It would have only become wider as it progressed in a south or south-easterly direction towards the Murrumbidgee Conservation Park and the Wanilla Forest. In short, I do not place much reliance on Mr Shepperd's observations as to the width of the fire front. It would be surprising if anyone in Mr Shepperd's position was able to provide an accurate estimate as to the width of a fire front, given the dynamic nature of such a fire front and the smoke that it would have been generating. This would be especially so when viewed from one of its flanks and Mr Gould suggested that when the fire passed Mr Nelligan's house it may have been some hundreds of metres wide at that stage<sup>471</sup>.

- 4.49. It should also be recorded here that in addition to the three areas of breakaway which I have described, namely from the vicinity of the narrow part of the swamp on Christopher Hull's property, secondly from the area of the hundred line and thirdly from the swamp in Mr Cabot's property, two members of the Cummins CFS crew assert that they witnessed fire coming down the southern edge of the swamp from the north-east to the south-west and then burning out into Christopher Hull's paddocks. Those members were Mr Adrian Shepperd and Mr Vigar.

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<sup>471</sup> Transcript, page 20706

4.50. The source or sources of the breakaways of fire that emanated from the swamp in Christopher Hull's and Mr Cabot's properties in Area C

Dr Kevin Tolhurst prepared three reports in relation to the Wangary fires<sup>472</sup>. The work undertaken by Dr Tolhurst, and the preparation of the reports, was commissioned by the Minister. The Reports became exhibits in the Inquest. Dr Tolhurst also gave oral evidence on a number of occasions. The first of these reports, provided in October 2006, in the main concerned observations as to fire suppression options that were or may have been available on the night of 10 January 2005 and the morning of 11 January 2005. In addition, Dr Tolhurst raised the significance of the spot fires that I have already referred to emanating from the swamp. These spot fires were depicted in Figure 8 on page 25 of his first report. Dr Tolhurst suggested that the spot fires ignited up to 500 metres from the swamp edge and had originated by way of flaming embers being blown out of burning vegetation. The suggestion was also made that the spotting that was generated by a flare-up in the swamp on Mr Cabot's property had its origins in the backburning operation that had been undertaken between points B and C on PNC1, that is to say the westernmost section of backburning conducted by Mr Cabot and Mr Treloar on the Monday evening. The suggestion was that the spot fires were the source of much of the fire that was to travel to the south-east of the swamp into the Murrumbidgee Conservation Park and then to the Wanilla Forest. Dr Tolhurst developed the theory that the fire that made its way to the Wanilla Forest was not simply that which had been identified in the first instance by Mr Gould as being Fire 1 from the narrow part of the swamp, but was in essence a coalescence of firstly Fire 1, secondly fire from the vicinity of the hundred line and thirdly Fire 1A that Dr Tolhurst says originated in the Cabot backburn. Dr Tolhurst further suggested that spotting from the Murrumbidgee Conservation Park had been generated by fire from the Cabot backburn and that this spotting had created the fire that ultimately reached the fatal Borlase Road location. Dr Tolhurst suggested that there was circumstantial evidence to demonstrate that the fire that overwhelmed Mr and Mrs Griffith and the two Borlase children came from paddocks to the north of Borlase Road and not from the Wanilla Forest where Mr Griffith had earlier detected fire. Dr Tolhurst's theory is to be contrasted with that of Mr Gould. Mr Gould had originally opined that the entire conflagration on the Tuesday could be traced entirely to the one source, namely the location on Lady Franklyn Road where the fire had

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<sup>472</sup> Exhibits C281 produced in October 2006, C281z and C281z(a) both produced in February 2007



undoubtedly started on the Monday afternoon. He also stated that the fire that reached the fatal locations at Borlase Road, North Shields and Poonindie had the one identifiable origin on the Tuesday, namely Fire 1 on Chris Hull's property.

- 4.51. For Dr Tolhurst's second report of February 2007, the Crown Solicitor invited Dr Tolhurst to consider these further terms of reference:

'There would appear to be some confusion in the evidence about whether there were breakouts on Tuesday morning from the narrow part of the swamp and/or the southern part of the swamp further to the east but west of the Hundred line and whether there was a breakout or breakouts virtually at the southern edge of the swamp at the Hundred line.'

1. "Can you perceive objective evidence of breakouts in any or all of these areas or is there evidence negating breakouts in any or all of these areas?"
2. "Is there evidence of the fire travelling along the swamp laterally between Cabot's backburn and the narrow of the swamp on the Monday night or Tuesday morning?"
3. "If there evidence of the above available on examination of the aerial photographs of the fire could you include such material in your report.'<sup>473</sup>

In his second report, and subsequently in evidence, Dr Tolhurst identified an area of the swamp that extended along its southern boundary from the western extremity of Mr Cabot's backburnt area, then across the hundred line and then a certain distance along the southern edge of the swamp on Christopher Hull's side of the hundred line. This area he says could be distinguished from other areas of burnt swamp. This area was different in that it was characterised by burning of low intensity, as indicated by lack of significant scorching, lack of uniformity of scorching and by a lack of crown removal in the trees by fire. Dr Tolhurst suggested that there was no clear spread pattern in that area indicating that it was probably burnt by a backing or flanking fire extending to the west from the hundred line. Dr Tolhurst thought that this area almost certainly had burnt before the area immediately to its north since the burn indicators in the northern area were indicative of a high intensity fire spreading generally to the east. Dr Tolhurst suggested that the low intensity fire along the southern edge of the swamp had burnt under a freshening wind from the north-east that had pushed the fire in a south-westerly direction along the swamp line. Dr Tolhurst suggested that this fire was probably the result of the lateral movement of fire from the western extent of Cabot's backburn. As an alternative explanation, Dr Tolhurst suggested that it was possible, but less likely, that the fire had spread from the northern edge of the swamp to the south as far as the narrow neck of the swamp half way to Yorkies Gully

Road<sup>474</sup>. In short, the effect of Dr Tolhurst's evidence at that stage was that in spite of the blacking out that had taken place in the area of Cabot's backburn overnight by the Karkoo appliance, the backburnt area at the edge of the swamp had reignited and was allowed to burn in a south-westerly direction under a north-easterly breeze owing to the fact that the western end of Mr Cabot's backburn had not been properly 'tied down'. Dr Tolhurst's suggestion was that the fire that ultimately took hold in the hook like extrusion of the swamp where it straddled the hundred line, and the fire in the hundred line itself, originated from the Cabot backburn. This scenario was developed by Dr Tolhurst in his evidence. Mr Gould was asked to comment on Dr Tolhurst's theory. I will deal with that in due course.

4.52. A body of evidence was adduced during the course of the Inquest that tended to refute Dr Tolhurst's theory that the fire had crept in a south-westerly direction along the southern edge of the swamp and across the hundred line. I here refer to evidence that I have already alluded to, namely the observations of the crew members of the Lincoln and Greenpatch appliances who had attended in the vicinity of the hundred line overnight and into the daylight hours of the Tuesday morning. They did not detect any such fire. There was other evidence in that regard and I refer here to evidence from Mr Christopher Hull and Mr Branson. That body of evidence in my view demonstrated quite clearly that at least while those persons had been present, and therefore at least until a certain time in the daylight hours of the Tuesday morning, there had been no such fire as contemplated by Dr Tolhurst. It will be remembered that Greenpatch left the area at 7am, Lincoln left at 7:45am and Cummins was situated for the most part in Area C on Mr Cabot's property until about 9:30am when they were called away to the flare-up in the sugar gums. Karkoo had left Area C in Mr Cabot's property at about 8:20am.

4.53. Dr Tolhurst produced a third report in February 2007<sup>475</sup>. It contained a further development of his theory. This report described its terms of reference as follows:

'The initial request for this report was based on the background that there has been conflicting evidence as to where the first breakout from Yorkies Gully was. Various, it is suggested that it has come from as far south in the gully as the narrow of the swamp about 300 m north of Yorkies Crossing to back near the intersection of the Hundred Line

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<sup>473</sup> Exhibit C281z, page 2

<sup>474</sup> Exhibit C281z, page 9

<sup>475</sup> Exhibit C281z(a)

and Yorkies Gully. There is also contention as to whether the fire came from the southern edge of the swamp or from the north.

In addition to this written request, I was also verbally requested by Senior Counsel to assess the evidence on the origin and path of the fire which led to the two fatalities on Settlers Road and the three fatalities in Borlase Road.'<sup>476</sup>

Dr Tolhurst also had regard to further material that was described as follows:

'Sources of Evidence

The two main sources of evidence used were field notes taken by me on 19th February and a post-fire infra-red orthophotograph taken by Aerometric Pty Ltd on 18 January 2005 and provided to me by the Department of Environment and Heritage.

1. GIS (Geographic Information System) Data for the Wangary Fire Area supplied by the Department of Environment and Heritage, S.A. on 9 August 2006. Data layers are: Contours, roads, cadastre, water courses/bodies, native vegetation, Wangary fire boundary, fire perimeters on 10/1/2005 captured by Dr Bob Smith, and post-fire IR aerial photography.
2. A second site inspection of the fireground on Monday, 19th February in the presence of Mr Paul Cuthbertson QC and Mr Brenton Eden (CFS).
3. Various statements and transcripts of evidence including some recently taken in Port Lincoln on 8th February.'<sup>477</sup>

4.54. For the purposes of this report, Dr Tolhurst had also conducted a second site inspection of the fireground in February 2007<sup>478</sup>.

4.55. In his third report, Dr Tolhurst in essence contends that the low intensity fire that he had earlier identified as having crept along the southern edge of the swamp from the western end of Cabot's backburn to a location in Christopher Hull's property to the west of the hundred line had further extended to the narrow part of the swamp via what Dr Tolhurst described as a 'lunette'<sup>479</sup> of vegetation on the south-eastern side of the salt scald in the swamp. The suggestion is that the fire that developed at the narrow section of the swamp, Fire 1, did not originate as witnessed by Messrs Andrew and Byass, but originated from the fire that had crept unseen along the southern edge of the swamp from Mr Cabot's backburn. This was a significant modification of Dr Tolhurst's earlier expressed view that the area of less intense burning had been confined to a location along the southern edge of the swamp on Christopher Hull's property falling a considerable distance short of the narrow section of the swamp. In

<sup>476</sup> Exhibit C281z(a), page 2

<sup>477</sup> Exhibit C281z(a), page 2

<sup>478</sup> His earlier inspection had taken place in May 2006

<sup>479</sup> Presumably because of its crescent shape

Dr Tolhurst's earlier report he had expressed the view that the southern edge of the swamp to the south-west of the narrow section had burnt under the following circumstances:

'This area has a higher level of residual char probably from burning under milder, less windy conditions. A plausible explanation of this burn pattern is that it burnt from the stubble paddock back into the swamp and then largely gone out in lighter fuels either in the creek or more open vegetation.'<sup>480</sup>

In Dr Tolhurst's last report he said that he still maintained most of that view, except that he was now suggesting that this area had burnt under the influence of the mild north-easterly winds that had caused the fire to creep slowly from the western end of the Cabot backburn into Christopher Hull's property<sup>481</sup>.

4.56. Thus Dr Tolhurst now suggests that the Cabot backburn is the source of all of the Tuesday breakouts that emanated from the southern side of the swamp, both on Mr Cabot's side of the hundred line and Christopher Hull's side of the hundred line. The mechanism by which the Cabot backburn was responsible for the breakouts is said to be two fold.

(1) Firstly, it is suggested that this low intensity fire crept along the southern side of the swamp from Mr Cabot's backburnt area in a south-westerly direction, unseen by any CFS members or farmers. This occurred under the influence of a north-easterly breeze. A north-easterly breeze was in existence at Coles Point AWS at 7:32am being a breeze of 30 kilometres per hour gusting to 33 kilometres per hour. At 7:34am the Port Lincoln AWS recorded a breeze from the north-north-east of 9 kilometres per hour gusting to 13 kilometres per hour. I have already referred to the intrinsic difficulty in relying too heavily on AWS data. However, the most relevant observation in this regard was made and recorded by Mr Lock at 8:25am near Christopher Hull's hayshed. Mr Lock took these measurements: temperature of 30.6°C, relative humidity of 18% and a NNE wind of 22.6 kilometres per hour gusting to 32.4 kilometres per hour. The suggestion is that the fire under these conditions moved into Christopher Hull's property along the southern edge of the swamp. When the wind freshened and changed direction to the north, and then to the north-west, fire was able to escape from the swamp into the paddocks on Christopher Hull's property. That in essence is the first

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<sup>480</sup> Exhibit C281z, page 5

<sup>481</sup> Exhibit C281z(a), page 15

mechanism suggested by Dr Tolhurst. Included in that breakout would be Fire 1 and the fire that emanated from the swamp into the hundred line.

- (2) The second mechanism, accounting for a later fire, consisted of the spotting from the western area of the Cabot backburn and also from the hundred line, into the canola paddocks to the east of the hundred line on Mr Cabot's property which then resulted in a second front that headed towards the Murrumbidgee Conservation Park and the Wanilla Forest.

4.57. Dr Tolhurst's report includes aerial imagery that he says illustrates the first mechanism of the fire moving along the southern edge of Christopher Hull's swamp in a south-westerly direction<sup>482</sup>. That figure is Figure 14 in the report.

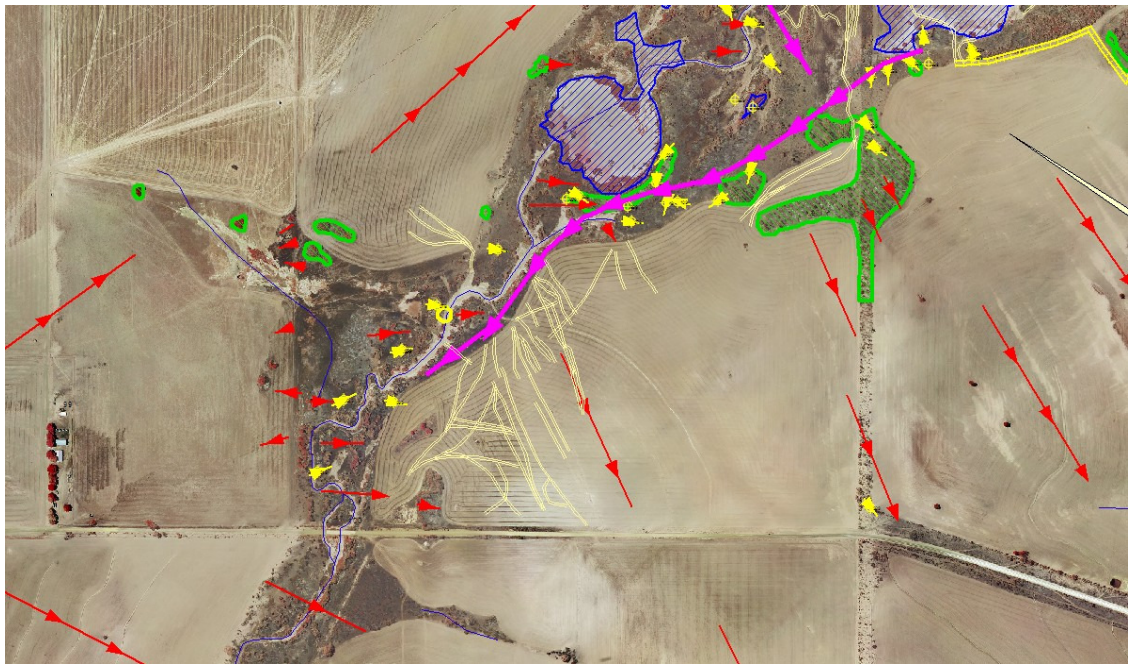


Figure 14 Yorkies Gully showing burn patterns as previously described and vehicle tracks made by firefighting vehicles.

- 4.58. The pink lines in Figure 14 depict Dr Tolhurst's burn patterns: the one travelling south-west along the southern edge of the swamp is the relevant burn pattern.
- 4.59. Dr Tolhurst suggests in his report that there was a discernible sequence of events in connection with these breakouts on the Tuesday morning. He said:

'The vehicle tracks in Figure 14 show the path of successive passes of fire fighting vehicles as they tried to suppress the flanks of the fires. This repeated attempt at trying to stop the spread of the fire is describe (sic) by Adrian Shepperd (Statement p.3).

<sup>482</sup> Exhibit C281z(a)

Before the fire really made a run, a lot of effort had been made to suppress the spotfires in the stubble paddock. Eventually, these efforts were overwhelmed and the fire escaped. Gould (Addendum Report, Nov. 2005) estimated this time to be 0951 hrs. These vehicle tracks, together with the burn pattern in the stubble paddock, give a good guide to the location of the initial outbreak. This initial escape probably occurred at about the red fire direction arrow near the narrow of the swamp or several metres to the east of it.

This initial outbreak was probably quickly followed by the fire coming out of the swamp near the Hundred line and moving more or less along the Hundred Line. Given the evidence of the fire initially crossing Yorkies Gully Road to the west of the Hundred Line, then it is likely that movement down the Hundred line followed the initial spread across the stubble paddock.

The third wave of outbreaks appears to have occurred in Cabot's farm. The spread direction in the Canola stubble paddocks have been driven by slightly more westerly winds (Figure 14) [Whittaker statement p.7,8]. On the basis of these spread directions and the wind direction reconstruction shown in Figure 5, I estimated the fire in the canola paddock to be approximately 13 minutes after the first escape in Chris Hulls property.<sup>483</sup>

- 4.60. Dr Tolhurst's estimate that the fire in the canola paddock on Mr Cabot's property occurred approximately 13 minutes after the first escape in Christopher Hull's property is within the realms of possibility. Although Dr Tolhurst believes that to be a reasonably accurate figure, all I am prepared to say is that it is a figure that is in keeping with observations of other witnesses, particularly Mr Treloar. Certainly the fire that was observed in Mr Cabot's paddocks occurred after fire was observed in Christopher Hull's paddocks.
- 4.61. The time difference, if any, between the breakout from Christopher Hull's swamp and the fire entering and moving along the hundred line is somewhat immaterial because Dr Tolhurst expressed the view that the fire along the hundred line quickly joined up with the fire from the narrower part of the swamp. Dr Tolhurst expressed the view that the timing of the breakout from the narrow of the swamp and the fire coming down the hundred line was not a crucial issue. He said that the fire in the narrow of the swamp quickly incorporated the fire coming down the hundred line. The addition of the fire from the hundred line widened the fire slightly but it did not really make a material difference. The two fires quickly joined and became one. In fact, the fire from the hundred line and the fire from the narrow of the swamp would have joined

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<sup>483</sup> Exhibit C281z(a), page 16

before they reached Mr Nelligan's property on the southern side of Yorkies Gully Road.

- 4.62. Dr Tolhurst's contention that the fire from the narrow part of the swamp and the fire from the hundred line are accounted for by fire from the Cabot backburn creeping in a south-westerly direction along the edge of the swamp, is not supported by any eyewitness evidence. However, the existence of this creeping, snake-like fire is not inconsistent with it having occurred after all of the CFS appliances had left that general vicinity. Certainly Greenpatch and Lincoln had left by 7am and 7:45am respectively. Karkoo had also left that location by 8:20am. Cummins were called away at about 9:30am. Dr Tolhurst suggested that this fire of low intensity, emanating as he said from the western end of the Cabot backburn, would have taken approximately 10 to 15 minutes to spread to the salt pan and then from there to the narrow of the swamp in another 20 minutes. Dr Tolhurst suggested that it would have taken about half an hour to an hour for the fire to reach the end of the pink line on Figure 14, although the breakout from the swamp may have already taken place by then<sup>484</sup>. Dr Tolhurst suggested that conditions between 7am and 9am were suitable for this snake-like run of fire to have occurred. He says that such a fire could have gone unwitnessed by virtue of the fact that nobody was present along the southern edge to have seen it and by virtue of the fact that being a less intense fire, it would have given off relatively little smoke. One would have thought, however, that such a fire could have been easily detected by aerial surveillance. It would certainly have been detected by CFS crews if they had been in the immediate vicinity. Cummins were in Area C until 9:30am and saw nothing except what appeared to be smoke rising in the triangular clump of trees. However, they were making their observations of the swamp from a distance.
- 4.63. I also pause here to observe, and I shall mention this in another context, that the evidence would suggest that if this low intensity fire had been detected, at least in its initial stages, it may have been suppressed either by ground CFS crews or aerial attack.
- 4.64. Mr Gould was asked to comment on Dr Tolhurst's theory. Mr Gould's evidence about these matters was given in a piece meal fashion, in the main because Dr Tolhurst's theories had emerged in the same manner. In the end Mr Gould and Dr

Tolhurst made a joint visit to the fireground in March 2007. Both gave evidence after that visit. Mr Gould agreed with Dr Tolhurst's observations that there had been an area along the southern edge of the swamp on Christopher Hull's property characterised by fire of lower intensity, as indicated by lack of scorching and canopy removal. After the joint inspection of the fireground, Mr Gould provided a further report of his own<sup>485</sup>. While not resiling from his agreement that there was evidence of a burn of less intensity along that southern edge of Christopher Hull's swamp, Mr Gould expressed the view in his last report that there was:

'... no strong visual and physical evidence of the fire path spreading west of the Hundred Line under east-north-easterly winds between 0600 hours and 0900 hours on Tuesday morning 11 January 2005.'<sup>486</sup>

Mr Gould based that conclusion on a number of matters. Mr Gould referred to the evidence of Mr Charlton Snr and Mr Charlton Jnr that there was no sign of fire in the relevant locations. Mr Gould however, referred to the Charltons as having been at the location between 8am and 9am. As I understand Dr Tolhurst's theory, the fire originating from the Cabot backburn and extending along the southern edge of Christopher Hull's swamp could have occurred after the Charlton's left the area. Mr Gould also erroneously believed that Mr Lock's observations of the weather made from Christopher Hull's hayshed at 8:25am involved a wind from the north-west which would be inconsistent with a fire travelling along the southern edge of the swamp from the north-east to the south-west. Mr Gould's belief in that regard was incorrect. Mr Lock's observation of the wind direction was in fact from the north-north-east at 8:25am. It is not known exactly when the wind started to go around to the north at this location, or around to the north-north-west and north-west although Dr Watson from the Bureau of Meteorology suggested that on their data it is likely the wind was from the north at the fireground by 9:30am<sup>487</sup>. However, Mr Gould made some other observations that he said refuted Dr Tolhurst's theory. Firstly, in Mr Gould's opinion the physical evidence of stem charring was insufficient to indicate a spread pattern under a east-north-easterly wind early Tuesday morning. He said that the majority of leese side stem char indicated wind from the north of north-west in origin. In any event, and this is a point that he made in his report and in his evidence, individual stem char does not necessarily reflect the prevailing fire spread nor indeed

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<sup>484</sup> Transcript, page 21338

<sup>485</sup> Exhibit C175m

<sup>486</sup> Exhibit C175m, page 3

<sup>487</sup> Transcript, page 16942



the prevailing wind because of varying local thermal fire convections around some clumps of trees which would have higher fuel loads at the base compared to grass fuels. Mr Gould said that stem char pattern, relied upon heavily as it was by Dr Tolhurst, provides some evidence of the direction of wind at the site of burning trees, but the timing of the fire passing through is also critical. The direction of stem char patterns could have occurred from local updrafts and indraws from the main fire front burning through the area after the breakouts. Secondly, the narrow fire path envisaged by Dr Tolhurst, passing through narrow grassy fuel between the swamp and the stubble paddocks under weather conditions that occurred between 6:30am and 8:30am, when the conditions were predominantly north-easterly, he said was unlikely. Mr Gould suggested that the fire spreading under a 20 kilometres per hour wind ought to develop a length to breadth ratio of approximately 4:1. The net result of this would be an expectation that Dr Tolhurst's snake-like creeping fire front would have been quite wide, as much as 125 metres wide, and should have spread into the stubble paddocks along the south-eastern flank of Christopher Hull's swamp. On this, Dr Tolhurst would reject that suggestion because of the existence of a bare earth track just to the south of the swamp edge which would have prevented the fire spreading into the stubble paddocks in the manner that Mr Gould suggested.

4.65. Mr Gould in his evidence said:

'...I feel there wasn't enough indication to draw that conclusion that the fire was spreading under a north-easterly wind on the western side of the hundred line.'<sup>488</sup>

Mr Gould mentioned other possibilities as to the origin of fire along the southern edge of Christopher Hull's swamp. In making that point Mr Gould said this:

'I am just proposing, the whole issue that we have with these burn patterns and the wind patterns interpreted from these burn patterns, there is no relationship no (sic) time. We are making assumptions that a lot of this occurred before the break-outs occurred. If you make that assumption then that is one scenario. But you also have to look at, after these break-outs occur, there is still some flanking fires and backing fires that are going to occur, some of these aren't burnt fuels, that is another thing to be considered.'<sup>489</sup>

4.66. The contention that fire from Mr Cabot's backburn crept in a south-westerly direction under a north-easterly wind was said to be supported by the existence of burn markers that Dr Tolhurst observed in burnt vegetation at the edge of the swamp between the western edge of the backburnt area and the hundred line. The markers were said to

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<sup>488</sup> Transcript, page 21941

have indicated that the vegetation burnt under a north-easterly wind and at a time before the breakaways either at the narrow of the swamp, the hundred line or from the backburnt area itself. It was said that in reality there were only two possible candidates for the source of the fire at the edge of the swamp between the backburn and the hundred line and they were the backburn itself or the area in the swamp on Christopher Hull's property in the vicinity of where the Greenpatch CFS appliance had become bogged in the creek bed while carrying out blacking out operations in the early hours of the Tuesday morning. Given a number of factors that included the greater distance that fire would have to travel from the Greenpatch bog area, the direction that the fire would have to travel to reach the location near the hundred line and the nature of the fuel load between those locations, Mr Gould agreed with Dr Tolhurst that the more likely source for the fire that burnt between the western end of the backburn and the hundred line was the Cabot backburn<sup>490</sup>. Mr Gould also agreed that this area had burnt before the breakouts of fire and had burnt under a north-easterly wind<sup>491</sup>. Mr Gould further agreed that when the wind changed to the north-west, the fire that had crept down from the backburnt area resulted in the fire that erupted at the top of the hundred line and travelled down the line in a southerly direction. In other words, Mr Gould ultimately agreed that the fire observed at the hundred line was the product of the Cabot backburn.

- 4.67. In the end Mr Gould did not disagree with the suggestion that fire that had existed in the vicinity of the hundred line where it intersects the southern edge of the swamp had its origins in the Cabot backburn<sup>492</sup>. However, as far as the edge of the swamp to the west of the hundred line was concerned, Mr Gould made the point that even if there were burn indicators to show that fire along the southern edge of Christopher Hull's swamp west of the hundred line had burnt under a wind from the north-eastern quadrant, this was not necessarily reflective of the prevailing breeze at that time, and was not necessarily reflective of the time at which the fire must have occurred at that location. Mr Gould made this point:

'Look, even though - so I just have a hard time piecing all those evidence together; I make it perfectly clear all those arrows' indications that Dr Tolhurst interpreted, they're correct, indicating the wind's in the charred bark, I have no dispute about that. The whole issue about these things is we don't know what time all these things occurred.

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<sup>489</sup> Transcript, page 21995

<sup>490</sup> Transcript, page 21986

<sup>491</sup> Transcript, page 21996

<sup>492</sup> Transcript, page 21996

Some could have happened before the breakout, some may have happened during the time that everything flared up, some could have happened afterwards. There's no timing of things and that is all important. And you also have to remember that as the morning developed, the day's getting hotter and drier and windier. So when the fire does break out in here, you're starting to get some thermal activities and stuff to start drawing some of those other fires into each other. Those things have to be taken into account. And you can't - it's difficult for me to look at each individual spot and say at that spot that's what the wind exactly did at that time.'<sup>493</sup>

- 4.68. I am prepared to accept the evidence of Dr Tolhurst when he said that fire at some point in time before the breakouts occurred had crept from the vicinity of the western end of the area backburnt by Mr Cabot and that it had reached the hundred line. I am also prepared to accept that this fire was the origin of the fire that inundated the hundred line when the breakouts occurred. Mr Gould ultimately agreed with that proposition on the basis that this area had burnt before the breakouts and as a matter of probability, the Cabot backburn was the more likely cause of two competing sources.
- 4.69. On the other hand, although it is a possibility that the fire crept further along the southern edge in a south-westerly direction along Christopher Hull's edge of the swamp, I am by no means convinced by Dr Tolhurst's evidence that that did occur to the extent that he suggests. Mr Gould's evidence leaves me with the view that it will never be understood how and when that area of low intensity burning along the southern side of the swamp on Christopher Hull's property occurred. In any event, as I have already said, I have no hesitation in accepting the evidence of Messrs Andrew and Byass as to their observations. Although Dr Tolhurst did not favour what these gentlemen saw as a likely source of the fire for the breakout from the narrow part of the swamp, Mr Gould had no difficulty in seeing how easily the fire could jump the creek at the narrow part of the swamp. Mr Gould saw indicators that to him supported the fire moving into the swamp from a clump of mallee that Mr Andrew had spoken of. Mr Gould thought that he was able to identify a tree consistent with what Mr Andrew had seen. Dr Tolhurst on the other hand was not convinced that at that part of the swamp there was sufficient flammable material to carry a fire through the swamp. In addition, Dr Tolhurst was of the view that spread indicators did not bear out what Mr Andrew had observed at that location. Bearing in mind a number of matters, namely, a) Mr Gould's evidence that burn indicators do not necessarily

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<sup>493</sup> Transcript, page 22005

reflect the prevailing wind direction, b) Mr Andrew's and Mr Byass' observations that when the fire flared up under a freshening north-westerly wind it was virtually immediately across to the other side of the swamp and c) Mr Gould's evidence that in his view there would be no difficulty in fire spotting across the narrow part of the swamp, and in particular across the creek or other bare earth features, I have no hesitation in concluding that the fire that Messrs Andrew and Byass had tried to quell near the northern edge of the swamp as it crept towards its narrow part was the source of the fire that entered Christopher Hull's stubble paddocks on the south-eastern side of the swamp, that is Fire 1. Whilst Dr Tolhurst's theory is an interesting one, in my view it is convoluted, speculative and reliant on too many matters that are clearly open to question, such as the burn indicators that Mr Gould told me were poor historians as far as prevailing wind direction was concerned. I can accept that it is a possibility, of course, that there was a fire of low intensity on that side of the swamp on Christopher Hull's property. However, as I say, even if that were the case, I am perfectly satisfied that the fire that originated in the vicinity of the narrow part of the swamp originated in the way that Messrs Andrew and Byass said it did.

- 4.70. As far as the fire that entered Mr Cabot's canola paddocks is concerned, Dr Tolhurst preferred the view that the spotting that occurred into the canola stubble originated from the area of the Cabot backburn, more particularly at its western extremity, and/or from the hundred line. A number of matters have to be borne in mind in relation to these assertions. Firstly, the evidence would suggest that the fire that had been introduced by Mr Cabot at the edge of the swamp was implemented with the intention that it would meet with fire that was already in the swamp to the north. In other words, there was fire already in the swamp where Mr Cabot backburnt, or at least fire to the north of where the backburn was undertaken. Secondly, the evidence from Mr Modra of the Karkoo appliance was that a thorough job had been done in blacking out in that particular section of the swamp edge. Dr Tolhurst's position on all of this is neatly encapsulated in the following passage:

'Q. Can you describe the area that - well, we can see from the map what was burnt. I am interested in the vegetation that you observed that you understood to be part of the back-burn.

A. What I observed in that area there was similar to what we have just been talking about: the fire that had burnt under there had been quite low intensity, removing only the surface fuels and leaving the elevated and bark fuels largely intact because it was such a low intensity fire and hence the reason why the amount of scorching

that was quite low and that's why we can still see the red tinge on the canopy indicating that the green leaves are intact. So the low intensity of the burning operation, which was not so much a back-burn but a burn with the wind coming from the south-westerly direction, blowing it into the swamp. So it really wasn't backing so much as it was being driven by the light south-westerly winds overnight.

- Q. There has been some evidence that there were also south-easterly winds at about that time; that is, from 8.30 to 10.30 on the fireground –
- A. Well, I am happy to call them southerly winds, but into the swamp –
- Q. Generally southerly.
- A. Generally southerly into the swamp area.
- Q. Given the nature of the back-burn, wouldn't that too lead to the conclusion that that area would be unlikely to cause spotting.
- A. No, because the burn was such a low intensity it would have left significant unburnt patches, which could have reburnt the following day and that is part of the issue of the lower intensity fire not being as effective at removing the finer fuel as the fire under more severe conditions. So, in particular, the bark fuel and some of the elevated fuel, fuel up above the ground, could have reburnt on the Tuesday morning.
- Q. And reignited being fuelled by its own heat within itself, without necessarily having been the subject of spotting or a fire coming from the north-west or the north.
- A. There could have been areas within the back-burn that could have reignited - patches of unburnt fuel that could have reignited and caused that spotting or it could have been a fire coming from the north that burnt into the area that had previously been back burnt, burning out the remaining patches of unburnt fuel as well as ember material that potentially started the spot fires.
- Q. Looking at figure 8 and the spot fires that you have referred to there, is it then the case that those spot fires may have come from an area further to the north, generally northerly direction, I know the wind is coming from the north-west, but is it the case that those spot fires could have come from an area generally to the north of the Cabot back-burn, and we're still talking about the western section.
- A. So when you say 'to the north' from the north of the - that's still in the swamp?
- Q. Yes.
- A. It's possible but I think the most likely explanation for why the embers carried so far is they were probably eucalypt bark and the eucalypt bark were - well, the eucalypt trees were restricted in that case to the fringe of the swamp. So I think it is more likely that they have come from the eucalypts on the edge of the swamp. Where the melaleuca - there's been melaleuca alone on the edge of the swamp, the spotting has been much shorter in its distance and a lot less prominent, so the melaleuca is less likely to be spotting at 500 m distance under those conditions.<sup>494</sup>

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<sup>494</sup> Transcript, pages 19354 to 19356

Mr Gould's position on the same issue is summed up in the following passage:

- 'Q. The question is, are you in a position to say what the source of the fire was that started the fire seen by Treloar.
- A. I don't have enough information to determine the source of what would have caused that other breakaway but I do know, by reviewing a number of the statements I had up until July, that there seems to be a lot of people reporting some type of fire activity all along this Monday night boundary, off and on, throughout the whole night. Some people were talking little flare-ups, smoke or hot spots and everything else, so obviously throughout the whole night and some early parts of, early morning, Tuesday morning just before sunrise, there is still some type of hot spots in that swamp area. And there is no information at all was given of - there is information I got from Treloar and Cabot they put the back-burn in but they didn't tell how far in it went to the swamp or all that depth and everything else, so it's sort of, it's a bit of an unknown but you would look at the burning conditions that you had that night with all those fire activities going, that fire wasn't blackened out, doesn't matter which one it is, whether it was the back-burn operation or an ongoing fire, you have the fuel conditions right, the smoke, so there is already enough fire activity in the swamp that it flared up the next day to breakaway, from which fire, we will never know that.
- Q. Do we interpret you to be saying, then, that it could be from the back-burn.
- A. Yes, there is a probability it could have happened.
- Q. Or, it could be from the original fire perimeter in the swamp.
- A. Yes.
- Q. You use the word 'probability', are you able to say which one is more likely than the other.
- A. No, it's very difficult because if I would have known that back-burn was put in when I did my ground truthing in January and February one would have gone in and had a look at the depth of that back-burn and stuff, if it did go in that deep it would have burnt out, then we could have make a good assumption that the back-burn didn't go in that deep, it burned out so it wasn't smouldering.
- Q. What if the area of the back-burn had been, in fact, blacked out by CFS during the Monday night and early Tuesday morning, and I have in mind I think Mr Modra, Mr Leon Modra, who gave evidence some months ago now, and effectively blacked out the perimeter of the fire from the stubble into the swamp in that location of the back-burn.
- A. Well, given that information and given the information that we had a fair amount of fire activity all along the swamp area from the Monday night perimeter, we could

probably safely say it was a high probability that the fires would have flared up through the Monday night perimeter thing than the back-burn operation.

Q. Rather than the back-burn you mean.

A. Back-burn operation. Given the information you gave me about some people patrolling that, ensuring that that was blackened out.'<sup>495</sup>

4.71. The major point of distinction between Dr Tolhurst's and Mr Gould's position is that if one could be satisfied that the blacking out operation carried out on the backburnt area had been completely successful, Mr Gould would favour the contention that the spotting emanated from the Monday night fire perimeter<sup>496</sup>. As to this, Dr Tolhurst suggests that there could have been areas within the backburn that reignited. On this, it will be remembered that Mr Modra did not black out in the area deeper than the 25 metre hose length. Beyond that, there were remnants of smouldering stumps and '*individual trees that continue burning*'<sup>497</sup>. If that is right, there does not appear to have been complete blacking out. I do not know whether the vegetation that remained smouldering was part of the original fire or was the remnants of the Cabot backburn. I heard on many occasions during the Inquest that blacking out can be an imperfect exercise. Mr Cabot's own evidence did not clarify how far into the swamp the backburn would have progressed between points B and C on PNC1.

4.72. It is difficult to be precise to the point of being dogmatic about the source of spotting into Mr Cabot's canola paddock. Undoubtedly some of it came from the hundred line. Some of it may well have resulted from reignition from an imperfectly blacked out Cabot backburn. Fire from the original Monday perimeter could also have contributed. That possibility to my mind has not been entirely eliminated. In my view, it is impossible to say that none of the spotting that came out of the swamp on Mr Cabot's side of the hundred line resulted from his backburn. Equally, it is impossible to say that none of it emanated from the original fire. It could well have been two sources, but there is nothing to refute the suggestion that spotting could have resulted from the backburnt area from a reignition of smouldering material. I cannot be satisfied that such reignition did not occur. The conclusion therefore is that the conflagration in the canola paddock could well have come in whole or in part as the result of reignition in Mr Cabot's backburnt area. However, the issue is attended with too much uncertainty to be able to say that this was more probable than not.

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<sup>495</sup> Transcript, pages 17281 to 17284

4.73. The source or sources of fire that affected the Borlase Road location

Minds differed about this issue as well. The evidence about this was complicated. The issue that was debated here was whether it was the fire that had originated from the narrow of the swamp (coupled with the fire at the hundred line), or the fire that several minutes later originated in Mr Cabot's paddocks, that was the fire that reached Borlase Road.

- 4.74. It will be remembered that Mr Grant Shepperd said that he followed the south-western flank of the fire that crossed over Yorkies Gully Road west of the hundred line, Fire 1, to the Murrumbidgee Conservation Park, and then to the Wanilla Forest where he observed the wind change. Mr Shepperd did not notice any other coexisting fire such as might have emanated from Mr Cabot's property - Fire 1A. That there was such a fire, however, is beyond doubt in my view. The fire that Mr Shepperd pursued, he said at its south-western flank, entered the Murrumbidgee Conservation Park about halfway along its western boundary. I accept much of Mr Shepperd's evidence. The fire from Mr Cabot's swamp would therefore have had to enter the park somewhat further to the east. There was some agreement between Dr Tolhurst and Mr Gould that the two fires would have conjoined at, or not long before reaching, the Murrumbidgee Conservation Park. There was also agreement that the conjoining of these fires would have affected their size and intensity. Dr Tolhurst expressed the view in his last report that fire reached the fatal Borlase Road location by mass spotting resulting from burning embers originating in the Murrumbidgee Conservation Park. He opines that these spot fires were in existence to the north-west of Borlase Road by about 11:20am. Strong winds and a changing wind direction brought the fire to Borlase Road more quickly than would have been expected without the assistance of spotting. Dr Tolhurst thought that this might explain in part why Mr Griffith was surprised at the sudden arrival of the fire and might also explain Mr Griffith's observation that the fire seemed to be '*throughout the whole forest*' at about 11:30am even though the fire had not been in the forest for very long. Dr Tolhurst believed that the fire that reached the fatal location on Borlase Road was not directly from the Wanilla Forest as first thought. He postulated that the fire may have accelerated down the hill to the north-west of Borlase Road under the strong winds being experienced on the Tuesday and that the fire that actually reached Borlase Road at

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<sup>496</sup> See also Transcript, pages 17288 and 17289 on this issue

<sup>497</sup> Transcript, pages 3012 and 3013



that location had its origins in spot fires in grassland to the north and to the east of the forest. This fire spread is illustrated in Figure 19 of Dr Tolhurst's report<sup>498</sup>. Mr Griffith made the observation that the fire seemed to approach from the right-hand side of the road being the north-western side of Borlase Road. This observation is in keeping with Dr Tolhurst's view. Dr Tolhurst postulates that the fire that reached the fatal Borlase Road location has as a strong component the fire that had emanated from the swamp on Mr Cabot's side of the hundred line.

4.75. Dr Tolhurst told me that he was able to identify features in the burnt vegetation on the northern side of Borlase Road that indicated that fire at that location had approached from the north-west and across paddocks to the north of Borlase Road. Mr Gould also examined that location in March 2007. He agreed with Dr Tolhurst's conclusion based on burn indicators on the vegetation. However, Mr Gould believed that any spot fires that emanated from the Murrumbidgee Conservation Park should have passed further south than the Borlase Road location. In addition, it had to be a major fire that reached the Borlase Road location because of the intensity of the blaze that occurred there.

4.76. Mr Gould explained his view of the progress of the fire towards Borlase Road in these terms:

'Q. ... The question is where did the fire come from, and you indicated generally, I thought - well let's go through it again and we will pause and get it on the transcript.

A. Okay. In my opinion the major progress of the fire that has come out of the Murrumbidgee Conservation Park. It burnt across - this is Settlers Road, isn't it?

Q. Yes.

A. It burnt across there. Now there is a high probability that there is spotting that come out of there.

Q. 'There' being the southern portion of Murrumbidgee Park.

A. Out of the Murrumbidgee Park, and it would have thrown probably embers along this path here right down into the southern western edge of Vanilla Forest, and at the same time we're starting to have a wind change direction and just - and there was a statement from Mr Walsh at the corner of Borlase Road and Todd Highway across from Vanilla Forest that he observed spotting blowing - embers coming down the driveway which was an east/western direction before he left the property and things, and the information from Mr Griffith of fire activity along the rail road line, also on the north and south side of the Borlase Road. So obviously we are having a

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<sup>498</sup> Exhibit C281z(a), page 24

fire front that was coming through into here, and this fire front would have also thrown embers probably to the north in this northern paddock along Borlase Road here and stuff. And eventually we would have probably had the questions there was it a major fire front that hit this property –

Q. That is the Borlase property.

A. The Borlase fatality site - or was it a combination of that or a bunch of spot fires coming together having a small fire front that hit that? When I observed this site when I first arrived to do this work in January 2005 my recollection is that this was a very high intense fire because of the ash and stuff there, so it had to be more than just the one or two spot fires that really impacted there.<sup>499</sup>

4.77. Mr Gould, while being prepared to agree that the fire that reached the fatal location on Borlase Road had emanated from the north-west as a result of spotting into the paddocks on the right-hand side of Borlase Road, believed that the most likely source of the spotting was the Wanilla Forest rather than the Murrumbidgee Conservation Park because he believed the Murrumbidgee Conservation Park was too distant. However, he said this:

'A. ... Look, the fire was moving quite rapidly in those wind conditions. It is feasible that the fire that Mr Borlase (sic - should be Mr Griffith) observed at the railroad line could have been the fire front that impacted the fatality site. Again, it is feasible that there could have been spot fires that come out ahead of that fire front that have come together and impacted the fatality site. They are both feasible, they could have really happened, which one really did happen –

Q. No-one will ever know.

A. No-one will ever know but they're both feasible.'<sup>500</sup>

Mr Gould said that in his view there were a number of fecund sources of spot fires that included the Wanilla Forest, vegetation crops, the paddocks between the railway line and Borlase Road and other native forest. In fact, Mr Gould expressed the view that in terms of likelihood, the further away the alleged source of spotting is said to be, the less likely it is to have been the source of fire at a distant location<sup>501</sup>.

4.78. Both Dr Tolhurst and Mr Gould agreed that at some point in time the fire from the narrow of the swamp, which became known as Fire 1, and the fire from Mr Cabot's side of the hundred line, that was known as Fire 1A, would have coalesced. Their views differed slightly as to where on the landscape the coalescence would have occurred. Suffice it to say, it was either just before or in the Murrumbidgee Conservation

<sup>499</sup> Transcript, pages 21957 and 21958

<sup>500</sup> Transcript, page 21961

<sup>501</sup> Transcript, page 21962

Park. Either way there is little doubt that this coalescence would have meant that the fire that was crossing the landscape in that south-easterly direction was more intense and would have had a wider front than if they had existed alone. In addition, the north-eastern flank of the fire would have been further to the east than if Fire 1 had existed on its own.

- 4.79. However, Mr Gould ultimately made a number of important concessions about the source of the fire that approached the fatality site on Borlase Road. He conceded two matters. Firstly, he agreed that the fact that the fire appears to have approached the fatality site on Borlase Road from its northern side would indicate that the so-called Cabot backburn fire (Fire 1A) had contributed by extending the width of the fire that originated in the swamp. Secondly, he also agreed that the fire that ignited the vegetation on the hundred line and the Cabot backburn fire would have assisted the production of fire by spotting further to the north than would have been the case had there just been the one fire from the narrow part of the swamp (Fire 1). Thirdly, he said that the fact that the fire that caused the fatalities on Borlase Road approached from the north was an indication that it probably emanated from the northern extremity of the conjoined fires.
- 4.80. Given Dr Tolhurst's clearly articulated opinions and Mr Gould's concessions as described, it is difficult to avoid the conclusion that the fire that emanated from Mr Cabot's property, that is Fire 1A, had a significant impact on the intensity and time of arrival of the fire at the fatal Borlase Road location.
- 4.81. Essentially what Dr Tolhurst was saying was that the fire from Mr Cabot's property caused the fire to arrive at the fatal Borlase Road location about 5 or 10 minutes earlier than it otherwise would have. Dr Tolhurst explained as follows:

'Because geographically the Cabot back-burn is further to the north-east already, so it has less distance to travel to get to that point on Borlase Road when the wind change comes through. It's got geographically less distance so the effect of the two fires combined was to advance its easterly progress by five to ten minutes.'<sup>502</sup>

In addition, Dr Tolhurst said that the spotting from the Murrumbidgee Conservation Park which in the main he attributed to the Cabot backburn fire, assisted the fires to catch-up with each other even though the Cabot fire was generated several minutes after the fire had first escaped from the swamp on Christopher Hull's property.

However, Dr Tolhurst was also of the view that the fire from the narrow part of the swamp on Christopher Hull's property also had an effect on the progression of the fire front as a whole. In respect of the role of the fire from the narrow part of the swamp (Fire 1) he said:

- 'A. No, I'm not saying it was irrelevant, I'm saying it had some contribution to it and in fact, forgetting about the fatality, that fire would also have burnt through that area but five to 10 minutes later. So it still would have burnt but the timing was different(ly) - so it still had an effect on the combination of both fires but it's primarily the influence of the Cabot back-burn fire that advances the fire to that area by the five or 10 minutes.
- Q. Can I put this to you then. Say the fire No.1 breakout had not occurred.
- A. Yes.
- Q. And I'm talking about the fire from the narrow part of the swamp. Are you saying that the fire that did arrive at the Borlase Road location would have arrived at exactly the same location and exactly the same time.
- A. It has probably arrived because the fire has been advanced by the combination of the two, it has probably been advanced by two or three minutes by the combination of the two fires. So there has been some contribution of the fire from the narrow of the swamp. I haven't quantified that, but yes, the two fires acting together would have some additional influence. I guess my judgment is the more important influence is the more easterly extent of the Cabot back burn. So it meant the fire had less distance to go so it arrived sooner.'<sup>503</sup>

In effect, the evidence is that the fire from Mr Cabot's property in paddock C (Fire 1A) and the fire from the narrow part of the swamp (Fire 1) were having an influence on each other. The fatal outcome of Borlase Road was thus the product of the entirety of the fire that emanated collectively from the southern side of the swamp on both sides of the hundred line, and at the hundred line, in Area C.

- 4.82. However, there are other factors that come into play in examining the circumstances of these deaths quite apart from merely looking at the effect of these fires from Area C separately or collectively. Firstly, the fire from the narrow part of the swamp attracted resources, both in terms of CFS crews and farm firefighting units, that could have been deployed elsewhere, say in Mr Cabot's paddocks fighting Fire 1A. It will never be fully understood what may have happened had there been Fire 1A alone. Secondly, the fire that was approaching from the north of Borlase Road was not the factor that prompted Mr and Mrs Griffith to decide to leave the Borlase premises at

<sup>502</sup> Transcript, page 21453

<sup>503</sup> Transcript, pages 21459 and 21460

the time that they did. There is no evidence that Mr Griffith was aware of the existence of any fire, either as a front or by way of spotting, to the northern or right-hand side of Borlase Road at any time. What prompted Mr Griffith to leave the premises was his observation of fire firstly in the Wanilla Forest and secondly fire along the railway line. It was the approach of that fire towards the Borlase farm that caused him and his wife and the two Borlase children to be exposed to danger on Borlase Road. That fire in my view was probably the progression of the fire that Mr Shepperd had seen enter the Wanilla Forest. It will be remembered that Mr Shepperd had followed the south-western flank of the fire from the time it crossed Yorkies Gully Road at a point west of the hundred line. The fire from the narrow part of the swamp on Christopher Hull's property, Fire 1, was no doubt a major component in that fire. Therefore, this fire bears some responsibility for exposing Mr and Mrs Griffith and the Borlase children to the danger of fire generally.

- 4.83. Mr Cuthbertson QC for the Minister has urged me to find that the Cabot backburn was a substantial factor in the death of Mrs Griffith and the two Borlase children. Putting it another way, Mr Cuthbertson urges a finding that but for the Cabot backburn breakout (and for that matter the breakout from the top of the hundred line) joining with the breakout from the narrow of the swamp, it is unlikely that Mrs Griffith and the Borlase children would have died. Mr Cuthbertson concedes that this is not to say that other fire such as the breakout from the narrow of the swamp, Fire 1, was not also a substantial cause of their deaths. He does assert that the Cabot backburn breakout was at least as significant, and probably more significant, than any of the other fires in the causation of the deaths. I have already found earlier that a component of the fire that came out of Mr Cabot's property may have resulted from his backburning operation. However, I have also concluded beyond any doubt that the fire from the narrow part of the swamp was not from the Cabot backburn, but emanated from fire that had existed from the previous day, or was at least the reignition or spread of such fire. The evidence is clear that there must have been some influence that each fire was exerting on the other in terms of intensity and timing. In my view it is not possible to apportion the significance of either or any of these fires in terms of the fatal outcome on Borlase Road. What happened at Borlase Road in my view was the product of all of those fires, from whatever source on Christopher Hull's and Mr Cabot's properties.

- 4.84. The evidence was also clear that the fire that originated from the swamp at Area C, be it from Christopher Hull's side of the hundred line or Mr Cabot's side of the hundred line, was the fire that progressed as far as North Shields and Poonindie. Both Mr Gould<sup>504</sup> and Dr Tolhurst<sup>505</sup> are in agreement on this. There is no suggestion that the fire that originated from Area A on Mr Cabot's property, or from the swamp adjacent to that area, was the fire that reached North Shields and/or Poonindie. In fact, the evidence in my view was clear that the fire from the swamp at Area A on Mr Cabot's property, had it stood alone, would not have affected North Shields or Poonindie. As well, it had no effect on the progression of the fire or fires from Area C. As far as the fire from the sugar gums was concerned, this fire broke out quite some time after the fire from Area C. The sugar gums fire ultimately would have progressed into ground already burnt by the fires that had started earlier. At that point the sugar gums fire ceased to have any significant impact. Certainly, there is no evidence that it continued to impact on the Lower Eyre Peninsula as a stand alone fire.
- 4.85. It would follow therefore that the fires from Area C accounted for the fire or fires that reached North Shields and Poonindie. As with the fatal location on Borlase Road, it is impossible in my view to say definitively that it was the fire from Mr Cabot's property or the fire from Christopher Hull's property, that accounted for the death at North Shields and the deaths at Poonindie.
- 4.86. The deaths of Messrs Murnane and Richardson I find did not have as their origin the fire that emanated from Area C in Christopher Hull's property or Mr Cabot's property or from a combination of the two fires. At various stages of the Inquest the suggestion was made that the fire that had emanated from the swamp on Mr Cabot's side of the hundred line, Fire 1A, progressed to the Beaumont premises on Settlers Road and also to the location where Mr Murnane and Mr Richardson met their deaths. One can understand the reason why those representing the Minister were enthusiastic about that scenario. However, the suggestion was laid to rest ultimately by Dr Tolhurst. It was also refuted by eyewitness evidence that established conclusively that the origin of the fire that killed Messrs Murnane and Richardson did not originate in Area C.

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<sup>504</sup> Transcript, page 17331

<sup>505</sup> Transcript, page 19185

## 5. **Breakouts in Area A - Fire 2 – Swampy Sector**

- 5.1. That there was fire in the swamp on Mr Cabot's property west of Area A, to the south of Warunda Road, is clear. Fire was clearly seen by numerous farmers and CFS personnel in that part of the swamp on the Monday afternoon and evening. Mr Kelvin Starke, who attended the fire on the Monday afternoon in a private farm fire fighting unit, said he saw fire in Mr Cabot's swamp to the west of Area A at about 5pm. He said that he saw the fire coming through the swamp in an easterly direction and it then turned and headed north towards Mr Les Hull's property. Mr Starke left the area to combat the fire on Mr Hull's property<sup>506</sup>. Mr Graham Giddings who was with Mr Starke confirmed this and said that the fire was moving fairly quickly in a north-easterly direction through the swamp to the west of Area A<sup>507</sup>.
- 5.2. Mr Russell Branson and Mr Jeffrey Lock also encountered fire in the swamp to the west of Area A early on the Monday evening. The men were in the process of conducting a reconnaissance of the fireground and saw what Mr Lock described as flames about 25 to 30 feet in the air burning in the swamp where it crosses the continuation of Warunda Road<sup>508</sup>. Mr Lock and Mr Branson had been attempting to drive their vehicle in that direction, but after encountering the flames headed south along the swamp edge through Area A towards Yorkies Gully Road. Mr Branson said that he could see active fire in the swamp whilst driving through that area. Mr Branson said the fire was up to 500 metres from the stubble edge into the swamp<sup>509</sup>. There were no CFS appliances in Area A when Mr Branson and Mr Lock travelled through sometime after 8pm.
- 5.3. Fire activity was observed in the swamp early on the Tuesday morning. Mr Leslie Hull who operated a farm with his brother George Hull north of Warunda Road and to the north-west of Mr Cabot's paddocks marked A on Exhibit C176b, said in his statement that by about 9am on the Tuesday morning he could see flare-ups to the south of his premises in the swamp area near his house<sup>510</sup>. He could see flames and trees burning about 500 metres from his residence. Mr Hull attended to some matters on his property and ultimately returned to his house. Mr Ross Pope who was the Captain of the Wanilla CFS Brigade had been at the premises for some time. The

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<sup>506</sup> Transcript, page 19901

<sup>507</sup> Transcript, page 20111

<sup>508</sup> Transcript, page 8060

<sup>509</sup> Transcript, page 10011

<sup>510</sup> Exhibit C67, page 6

Wanilla CFS appliance was in the general vicinity. Mr Pope, although Captain of that Brigade, had left the firefighting responsibilities with his crew. Mr Jeffrey Tiller was in charge of the Wanilla appliance that morning.

- 5.4. A view could be obtained from Mr Les Hull's premises of the swamp to the south-east. Beyond that, a limited view could be obtained of the paddocks to the south-east of the swamp, that is the paddocks marked A on Exhibit C176b. At that time there were a number of CFS appliances in the general vicinity of Les Hull's property. Mr Pope was in fact at that time the Sector Commander of the Scrubby Sector that ran from Duck Lake Road through the property of George and Les Hull to what Mr Pope believed was Warunda Road. In other words, his belief was that the sector for which he had responsibility did not extend into the paddocks marked A on Mr Cabot's property. It is evident that in fact no-one on the fireground, either during the night or that morning had assumed any responsibility for this flank of the fireground. However, there were a number of appliances on Mr Hull's property that morning including Coultas 24, Coffin Bay 34 and Wanilla 24. Coffin Bay was at one point released to the Lady Franklyn sector.

5.5. Mr Pope's observations

In Mr Pope's statement he describes what he says he observed from the Hull premises at about 10:30am:

'At about 10.30 a.m. on the Tuesday morning the weather conditions deteriorated and the wind direction changed to a strong westerly wind. I saw a fireball come from the direction of the north west crossing burnt and unburnt country threatening Les Hull's home and sheds. Those conditions lasted for about an hour and then conditions calmed. At about 11.15 a.m. that morning a wind from the west flared an outbreak on the northern end of Cabot's swamp which is out on the western end of Warunda Road. I could see the outbreak responding with Wanilla 24 and George Hull with his private vehicle. The Wanilla appliance was unable to control the outbreak and I requested that Tumby Bay fire appliances be directed to my sector. I was standing at Les Hull's home using a GRN portable hand set to direct the appliances. On arrival of Koppio, Lipson and Tumby Bay, I directed them to contact Wanilla 24 for further instructions.'<sup>511</sup>

- 5.6. In that passage Mr Pope spoke of a fireball. During the Inquest, counsel for the Minister argued that the fire that erupted in the swamp, progressed into Area A on Exhibit C176b and which ultimately accounted for the deaths of Messrs Murnane and Richardson, had not originated in Mr Cabot's unattended swamp. Rather, it had an originating source to the north-west of Mr Cabot's swamp and had arrived in Area A



by way of a fireball. The accuracy of Mr Pope's evidence about this fireball, and its possible connection to the flare-up and breakout from Mr Cabot's swamp into Area A, was very much open to question.

- 5.7. Mr Pope said that when he witnessed the fireball he was with Mr Les Hull. Mr Pope also claimed that Mr Hull had inserted some star droppers into the ground to indicate the direction that the fireball had travelled<sup>512</sup>. However, Mr Les Hull does not in any sense corroborate what Mr Pope has said about the existence of this fireball. Les Hull stated that the star droppers were placed into the ground to signify some other event that Mr Hull described in his statement and in his evidence. It will be noted from the quoted passage that Mr Pope said that the fireball had been witnessed after the wind direction had changed to a strong westerly wind. He said that those conditions had lasted for about an hour and that at 11:15am the wind from the west had fanned an outbreak of fire on the northern end of Mr Cabot's swamp. Nowhere in that passage does Mr Pope suggest that there was any connection between the fireball and the outbreak at 11:15am. However, at one point in his evidence Mr Pope agreed with the proposition that the fireball that he said he witnessed may in fact have been the breakout that he saw on the Tuesday morning<sup>513</sup>. Later in his evidence he acknowledged that in his statement he had suggested that the breakout had occurred some considerable time after he had witnessed the fireball. In any event he acknowledged that he did not see the swamp on fire at the time that the fireball had passed over it and again agreed that it was a considerable period after the fireball passed before he noticed the breakout of the fire in the swamp<sup>514</sup>. As I say, this evidence does not appear to be corroborated by Mr Les Hull whom Mr Pope said was with him at the time of the fireball. Mr Les Hull said that he was with Mr Pope when he saw the fire *'jump out of Cabot's place and then work its way up to Giddings up the hill about 4 kilometres away'*<sup>515</sup>. The Mr Giddings he refers to is the Mr Giddings who owned the Beaumont property on the eastern side of Settlers Road. Mr Hull refers to a fireball in his statement but describes it as having been seen on his property some time after the breakout from Mr Cabot's swamp. In his evidence Mr Hull suggested that it was not really a fireball in any event. Clearly he and Mr Pope were talking about something quite different. Mr Les Hull said that he placed the star

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<sup>511</sup> Exhibit C198, pages 4 and 5

<sup>512</sup> Transcript, page 4796

<sup>513</sup> Transcript, pages 4795 and 4796

<sup>514</sup> Transcript, page 4804

<sup>515</sup> Exhibit C67, page 7

droppers in the soil on his property as an indicator to the location where he saw the breakout of fire from Mr Cabot's swamp. Mr Les Hull marked Exhibit C176b with a red X to illustrate the location where he said he saw the breakout in Mr Cabot's swamp.

- 5.8. At the time of the breakout that he witnessed, Mr Pope immediately sent the Wanilla and Coultas trucks into Mr Cabot's paddocks.
- 5.9. Mr George Hull, the other occupant of the property, and who lived in premises to the north-east of Mr Les Hull's homestead, told me that he also saw the eruption of fire on Mr Cabot's property on the Tuesday morning. It was clearly an event that has prominence in his mind. He suggested that it was like a nuclear bomb going off. At one point he also said that it appeared as if napalm had been dropped at that location. He believed that the fire broke out in the swamp perhaps 200 metres south from the point X that his brother had marked on Exhibit C176b. Mr George Hull in his statement said that he was with Mr Pope when the breakout from the swamp occurred because they were standing next to his brother's sheds<sup>516</sup>. Mr George Hull stated that Mr Pope had asked him to go and have a look into the area, which he then proceeded to do. Mr Hull at that time went down to Warunda Road and saw that the fire was about 500 metres south of his location in the swamp and was burning in a south-easterly direction very rapidly. Mr Hull then returned to his brother's house. On the way he passed the Coultas fire truck and gave them directions to enable them to get to the fire.
- 5.10. Mr George Hull then returned to his property because he had noticed that fire had flared up on the north-western side of the property.
- 5.11. I find that the evidence given by Mr Pope about the fireball is not reliable. Mr Pope had an imperfect recollection of when it was that he had seen the fireball. He was not consistent about whether or not he had drawn any connection between the fireball and the breakout from the swamp. Mr Pope did not at any stage claim that having witnessed this dramatic event he drew it to anybody's attention or reported it to any higher authority. This was perhaps somewhat perplexing given that he agreed that the fireball was heading in the general direction of the township of Wanilla in the vicinity of which he had a property of his own. I think Mr Pope was mistaken as to the timing

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<sup>516</sup> Exhibit C186

of, and the circumstances in which he witnessed, a fireball. His evidence in that regard is neither corroborated by Mr Les Hull or Mr George Hull and in my opinion Mr Les Hull made it clear that Mr Pope is very much mistaken about what the star droppers were meant to signify. I accept Mr Les Hull's evidence as to the purpose of the placement of the star droppers.

5.12. Time and location of the breakout of Fire 2

The evidence is clear that there was fire already in the swamp to the west of Area A overnight. That fire had not been attended to. The fact that Messrs George and Les Hull witnessed the eruption in the swamp is very much in keeping with the fire being stoked by a freshening breeze from the north-west. In my view the possibility of the eruption in that swamp having been caused by the progression of fire from the north-west near Duck Lake Road is to be rejected. Mr Pope was the only witness to have drawn a connection between a fireball and the eruption in the swamp and that connection, it has to be said, was only expressed in response to a leading question<sup>517</sup>. The eruption in the swamp was witnessed by George and Les Hull and I accept their evidence that it originated in the swamp on Mr Cabot's property west of Area A.

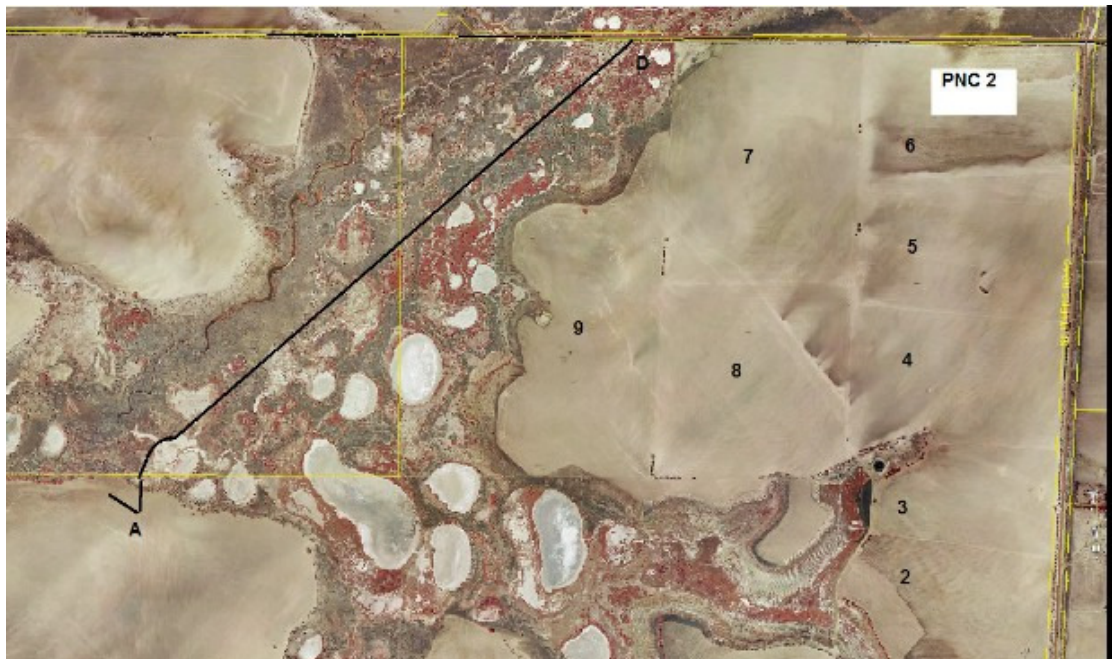
5.13. What does seem clear is that at the time of this eruption in the swamp, there were no CFS appliances in the paddocks to the east of the swamp, that is the paddocks marked Area A. The Wanilla and Coultas appliances were only sent into Area A after the flare-up in the swamp was identified. Those appliances were later joined by the Koppio appliance. The Koppio appliance was in fact part of the Tumby Bay Group strike team, the appliances which had originally been dismissed from the fireground and then asked to return when matters that morning deteriorated.

5.14. Immediately adjacent to the swamp edge in Area A to the south and east of the location of the flare-up in the swamp were canola stubble paddocks. To the immediate east of the canola paddock were wheat paddocks. To the east of those were a number of paddocks that contained lupin stubble, wheat stubble and pasture. The paddock immediately across Settlers Road from Beaumont was a lupin stubble paddock. The paddock to the north-west of Beaumont and across Settlers Road was a

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<sup>517</sup> Q. Do you think that might have in fact been the break-out that you saw on the Tuesday morning. A. Yes.  
Transcript, page 4795

wheat stubble paddock. The relationship of these paddocks to the swamp edge and to the Beaumont premises is seen in PNC2 that is part of Exhibit C192a<sup>518</sup>.



- 5.15. There had been no fire breaks constructed along the eastern side of the swamp at Area A. Nor had there been any meaningful blacking out in the swamp at that particular location. Save and except for the courageous but largely ineffective efforts of firefighting crews in Area A on Exhibit C176b, any fire that emerged from the swamp into those stubble paddocks under a strong north-westerly or westerly breeze was always going to have an unhindered passage towards the fatal location on Settlers Road. The line from A to D on the imagery above represents the approximate fire perimeter on the night according to Mr Peter Cabot.
- 5.16. The times that I have described in this section are for the most part estimates by the relevant witnesses. However, in some instances times of communications have been documented. There is a reference in the CFS GRN014 radio log at 10:25am on 11 January 2005 to an outgoing message from Wangary Control to the Operations Officer recorded as follows:

'Grid reference where canola fire north of Peter Cabot's place.'<sup>519</sup>

This appears to be the first recorded reference to the existence of the fire in the vicinity of the paddocks in Area A on Exhibit C176b. GRN transcripts reveal that at

<sup>518</sup> Area 2 on map PNC2 is a pasture paddock, areas 3, 5 and 6 are lupin paddocks, areas 4, 7 and 8 are wheat stubble paddocks and area 9 is a canola stubble paddock. The Beaumont premises are on the eastern side of Settlers Road.

<sup>519</sup> Exhibit C203a – MD36

10:49am Wangary Control sought clarification from the Wanilla Captain, Mr Pope, as to the precise location of the outbreak at the northern end of Mr Cabot's property<sup>520</sup>. Mr Pope was unable to provide this information and stated that he would endeavour to obtain a grid reference from the Wanilla 24 crew. This was clearly at a time after the Wanilla appliance had been sent into Area A.

5.17. Observations of the Wanilla CFS appliance crew

The members of the Wanilla 24 crew provided statements to the Inquest and were called to give evidence. Those persons were Mr Jeffrey Tiller<sup>521</sup> who was in charge of the appliance and operated the radio, Mr Philip (Pip) McFarlane<sup>522</sup> who drove, Mr Greg Packer<sup>523</sup> and Mr Andrew Duggin<sup>524</sup> who were firefighters on the rear of the appliance. The precise details of their experiences as described by these four gentlemen naturally differed, but in general terms it is clear what occurred. Mr Tiller in his statement says that their appliance was at Mr George Hull's premises refilling with water when at about that time a large amount of smoke in the swamp area south of Mr Les Hull's premises was seen. The Wanilla crew received instructions from Mr Pope to take a look. They drove the appliance down the Hull access road to Warunda Road which they crossed over and then entered Mr Cabot's paddocks in Area A to the south of Warunda Road. They travelled in a south-westerly direction towards the swamp area where they encountered Mr Peter Cabot trying to extinguish spot fires in the canola stubble which was situated in the large paddock immediately to the east of the swamp edge. According to Mr Tiller, although the fire was still inside the swamp at that time, spot fires were coming out and igniting the stubble. The wind was from the north-west. A request was made by Mr Tiller to have more appliances sent into the area. Mr Tiller thought that the time of that communication was 10am. However, a communication of the nature that Mr Tiller described was made at 11:01am. The GRN transcript reveals that at that time the Wanilla 24 crew advised 'base' that they were on the western side of Mr Cabot's property<sup>525</sup>. The precise detail of this communication is somewhat garbled but it reveals that by then the fire was in the canola stubble and could not be stopped. The observation was also made that the fire was heading for Mr Cabot's homestead and that Mr Cabot had been sent there. The radio operator, Mr Tiller, said that they were going to need more appliances or

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<sup>520</sup> Exhibit C222l, page 192

<sup>521</sup> Exhibit C323

<sup>522</sup> Exhibit C324

<sup>523</sup> Exhibit C325

<sup>524</sup> Exhibit C322

*'whatever's available'*. The operator at Wangary advised that he would pass that message on.

- 5.18. Indeed, it appears from Mr Tiller's statement and his evidence, and from the evidence of the other witnesses who were part of the Wanilla crew, that they were simply overwhelmed by the magnitude of the task of extinguishing these spot fires. At one point Mr Pope called Mr Tiller on the radio. This took place at 11:04am<sup>526</sup>. Mr Tiller advised Mr Pope that the fire had *'jumped out of the first canola paddock'*, that it was into a second canola paddock and that they could not stop it. Mr Tiller advised that the fire was heading towards Mr Cabot's house and that the priority was to protect that property. At 11:05am, as part of the same communication, an enquiry was made about the perceived danger to the Beaumont premises to which the response from the Wanilla crew was:

'Oh negative I'd say Peter Cavitt's (sic) ah one may wanna stay down that road ah as well on Graham's cause it's sort of burning now on a sort of easterly front.'<sup>527</sup>

- 5.19. At another point, the Wanilla appliance ran out of water. The appliance was then driven to Mr Cabot's farmhouse where they were able to refill. There is no suggestion that at that time Mr Cabot's house was under immediate threat. As it transpired, the fire that was to threaten Mr Cabot's property was not sourced from Area A. Rather the suggestion is that it was threatened by fire that had originated from the area marked C on Exhibit C176b. In any event, according to Mr Tiller they refilled the appliance at Mr Cabot's homestead and returned to the paddocks in Area A. By then the fire had emerged from the swamp as a front and it had opened up into a 'V'. It was burning to the south-east and to the north-east through the stubble paddocks. The Wanilla appliance attempted to control the northern edge of the breakaway but the realisation dawned on its crew that there was really nothing that they could do to stop it. As well, the situation had become quite dangerous. Accordingly, the Wanilla appliance left Area A and made its way north to Warunda Road and then up to the Hull property. Mr McFarlane who was driving the appliance stated that at that time they were in the middle of Mr Cabot's canola stubble. The Coultas appliance had also been sent into this area by this time.

<sup>525</sup> Exhibit C222I, page 194

<sup>526</sup> Exhibit C222I, page 195

<sup>527</sup> Exhibit C222I, page 195

5.20. As to the location where the fire existed in Area A, Mr Tiller suggested that they had been at a location in the canola paddocks just south of the area marked X where Mr Les Hull said he had seen the outbreak in the swamp. Mr Tiller also suggested that is the location to which they returned after refilling and where they had fought the fire. Mr Tiller suggested that the northern flank that they fought was to the north-east of that point in the paddock. Mr McFarlane marked a map in a way that was not inconsistent with that suggestion. Mr Packer was able to give a little bit more detail insofar as he suggested that there was a single sheoak tree on the fence line close to the scrub where the majority of the spot fires were landing. There is a lone tree at the edge of the swamp just to the south of the point marked X. Mr Packer's description of what took place is quite graphic. Bear in mind that he was on the rear of the truck fighting the fire with Mr Duggin. Mr Packer's account is that the winds had increased to about 30 to 40 kilometres per hour. For about 20 minutes they extinguished small spot fires that were igniting in the stubble. To Mr Packer it appeared that the spot fires were being caused by hot embers emanating from an area in the swamp that generally corresponds with the location marked X. Mr Packer said:

'Spot fires always seem to appear on the leeward side of the fire as if they are blown over the top of the scrub and just drop to the ground at the base of the scrub line about five (5) metres into the stubble, even if the winds pick up and fire comes closer, the embers still drop in the same spot.'<sup>528</sup>

Mr Packer suggested that the hot embers were travelling possibly from a location about 200 metres north of their location from the swamp. Mr Packer also described seeing the fire progressing through the swamp to a point about 20 metres from the swamp line. It became too hot at that stage to remain where they were so they retreated 200 or 300 metres further out into the paddock, extinguishing spot fires as they travelled. Mr Packer thought it inevitable that the fire was going to come out of the swamp into the canola stubble and in his statement he expresses annoyance that no fire break had been constructed in the paddock overnight. Mr Packer stated that he witnessed the fire emerge from the swamp and that they started to chase it. Mr Packer does not recall the appliance leaving the area to refill at Mr Cabot's homestead<sup>529</sup>. In any event, there is no reason to suppose that Mr Packer's observations, at least as far as the location of the fire both in the swamp and the paddocks was concerned, is inaccurate. Mr Packer suggested that it took the fire less than 10 minutes to leave the

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<sup>528</sup> Exhibit C325, page 3

<sup>529</sup> Transcript, page 20872

swamp area, cross the stubble paddock and then cross Settlers Road. In his statement he said that he did not know where it crossed Settlers Road because they were focussing their attention on the fire in their immediate vicinity. I return to this issue in a moment. In his statement Mr Packer described a sudden gust of wind which doubled the intensity of the fire and blew flames over the top of their appliance. He did not describe this as a fireball, but simply an increase in intensity of the fire upon the change of the wind direction. Mr Packer suggested that they were in an area that he marked on Exhibit C325a with a G. This location is in the vicinity of a tank in the middle of Area A. At one point in time the Coultas appliance also stopped at the tank and refilled and it too was almost overwhelmed by a fire front at that location. I return to a description of those events later in these findings.

- 5.21. The GRN transcript reveals discussions that reflect concern about the Beaumont property<sup>530</sup>. These discussions take place between 11:05am and 11:17am at which time the Tumby Bay appliance crew advised Wangary Control that they were moving to Beaumont to see what the fire was doing at that stage. They indicated that they had the Yallunda Flat 34 appliance with them at that time. At 11:15am there is a transmission from the Wanilla 24 appliance that the wind was gusting at least to 40 knots from the north-west. The next recorded transmission from Wanilla 24 is at 11:24am when Mr Tiller apparently advised Mr Pope of the fact that they had just refilled with water (presumably at Mr Cabot's property) and that they were leaving the Koppio appliance on the northern edge of Mr Cabot's property. The Wanilla crew advised that they would retreat to Mr Les Hull's premises. It appears from that transmission that Wanilla 24 were in the Cabot property in Area A at least until about 11:24am. The Wanilla appliance made its way out of the paddocks as they were fighting a losing battle. Fire would reignite as soon as it was extinguished, owing to the dryness of the conditions, the wind and the oil content of the stubble they were working in. On this Mr Tiller told me that a bare earth break would have been beneficial.

5.22. Did this fire cross Settlers Road at the fatality site

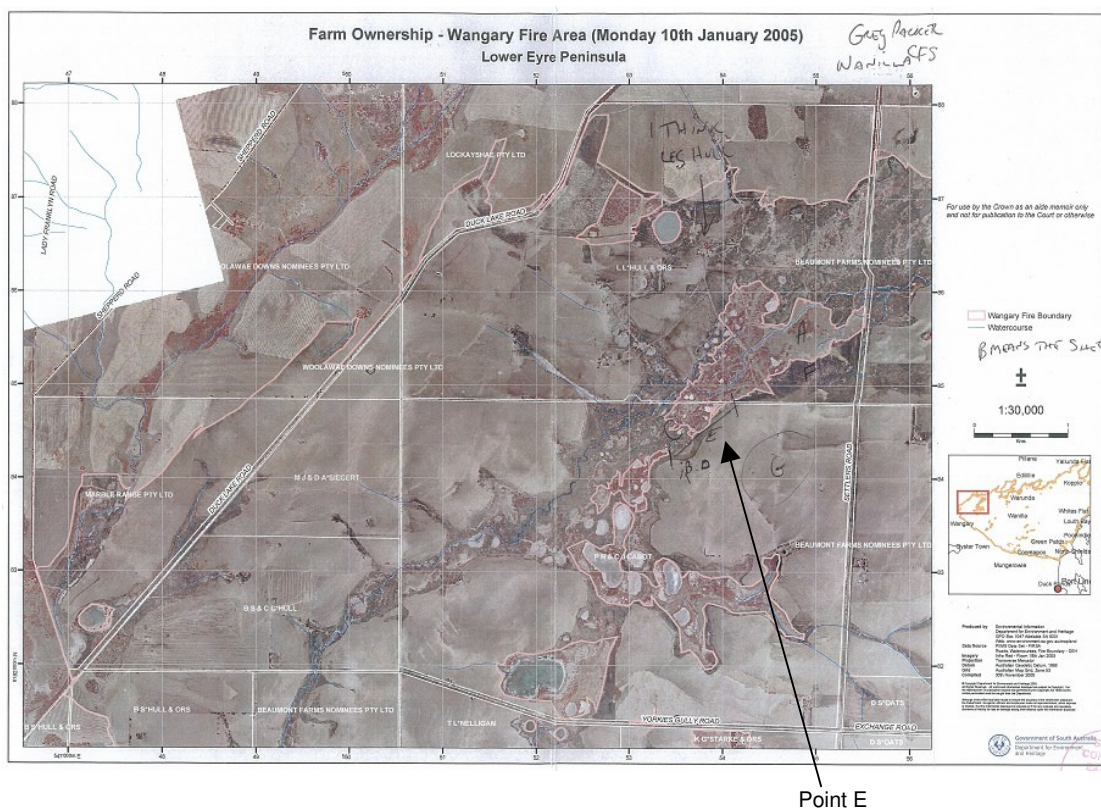
There is no doubt in my mind that the fire that emanated from the swamp in the approximate location of the point marked X on Exhibit C176b, that is the point that Mr Les Hull identified as being where the flare-up occurred, travelled across Area A and ultimately crossed Settlers Road. In his evidence before me, Mr Packer suggested

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<sup>530</sup> Exhibit C222l, pages 195 and 197



that there may have been two outbreaks from the swamp. He believed that they were able to contain the first of those outbreaks. He described that first outbreak as an outbreak that had gone across the paddock in a south-easterly direction. The fire that he said took less than 10 minutes to leave the swamp area to when it crossed Settlers Road was a second run of fire that they were unable to contain<sup>531</sup>. Mr Packer told me that as the appliance was leaving Area A he had a view to the south and he saw the fire cross over Settlers Road. He believed that the stronger gusts of wind at that point in time would have been close to westerlies. He had detected a change from the north-west to the west increasing in strength to what he guessed would be about 40 knots. Mr Packer described his appliance as at one point chasing the fire towards Settlers Road in a south-easterly direction, the fire being driven by a north-westerly wind. They were travelling towards Settlers Road when the westerly gust hit them. As to the fire that crossed Settlers Road and its origins, Mr Packer believed that fire had originated from a point marked E on Exhibit C325a. This point is also in the general vicinity of the point marked X by Mr Les Hull on Exhibit C176b.



Mr Packer did concede that he did not know exactly where the fire had come from. In cross-examination by Mr Humphries, Mr Packer suggested that the spotting that he observed originated at the same place where the outbreak into the paddocks occurred.

<sup>531</sup> Transcript, page 20872

He told Mr Humphries that the fire crossed Settlers Road before any southerly wind change took place.

- 5.23. It seems from Mr Packer's evidence that there may have been a number of sources of fire emanating from the general area around point X on Exhibit C176b, or at least a number of escapes of fire from the swamp into the canola paddocks. Suffice to say there was at least one outbreak on his evidence that crossed the entire area and indeed ultimately crossed Settlers Road.
- 5.24. Mr Tiller also gave evidence. He suggested that the fire seemed to be spreading in a general south-easterly direction as it came out of the swamp<sup>532</sup>. He thought that the fire was heading virtually straight towards the Giddings' premises, Beaumont.
- 5.25. Other evidence that I will describe in more detail elsewhere, and I refer here to evidence from crew members of the Tumby Bay and Yallunda Flat appliances, suggests that the fire from Area A crossed Settlers Road at a point about a kilometre south of the Beaumont homestead. There was a radio transmission to that effect at 11:31am<sup>533</sup>.
- 5.26. Members of the Coultas appliance, in particular Mr Phillip Puckridge, suggested that there were long narrow strips of fire in Area A. Mr Raymond Murchison had travelled from Coffin Bay to the fireground. He entered Mr Cabot's paddocks at one point and saw a fire to the south of his location travelling in a south-easterly direction. At another point in time he saw fire emerge in the vicinity of where Warunda Road joins the eastern side of the swamp.
- 5.27. The evidence would therefore suggest that there may well have been multiple fires in that area, but the one dominating feature of the evidence in my view is that there was in existence a fire that headed in a south-easterly direction which had originated from Mr Cabot's swamp at or about the location that Mr Les Hull said he had seen a flare-up, that is at point X on Exhibit C176b. The evidence is also clear that there was a fire front that crossed Settlers Road heading in a south-easterly direction under a north-westerly wind. The evidence would suggest that that fire front crossed Settlers

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<sup>532</sup> Transcript, page 20818

<sup>533</sup> Exhibit C222l, page 200

Road some distance south of the Beaumont location. The evidence is also clear that there was at one point in time a wind change to the west while fire in Area A on Exhibit C176b existed.

- 5.28. In my view the overwhelming conclusion, and I so find, is that the fire that caused the deaths of Messrs Murnane and Richardson who perished just north of the Beaumont homestead on Settlers Road originated from the swamp on Mr Cabot's property, that is from the location in the swamp to the south of Warunda Road. I deal with this in more detail later in these findings when I discuss the precise circumstances of those deaths. I make it clear at this stage that I reject any notion that the fire that accounted for the deaths of Messrs Murnane and Richardson originated from any other location. The most likely location in the swamp from where the fire originated was the location at or about point X as illustrated by Mr Les Hull on Exhibit C176b. Again, in my view the overwhelming conclusion is that the flare-up that was witnessed by Mr Les Hull and Mr George Hull was a flare-up of fire or of smouldering that already existed in the swamp from the previous day. I so find. There were no fire breaks at Area A to halt, limit or delay the passage of fire from the swamp to the fatal location on Settlers Road.
- 5.29. Dr Tolhurst deals with the origin of the Settlers Road fire. I set out the entire section of the report that deals with that subject. I agree with the conclusions that Dr Tolhurst has expressed. He states:

'2. Origin and Path of Fire reaching Settlers Road north of "Beaumont"

Fire broke out of the swamp to the east of George and Les Hull's property under strong north-westerly winds. Gould (Addendum Report, November 2005, p.20) gives the time of this breakout as being 1025 hrs even though there had been increased fire activity in this area for some time before this (e.g. Hull T2623, Cabot statement 22 April 2005, p.4). This breakout was about an hour before the first westerly wind shift.

Packer (statement p.4) and Duggin (statement p.6) were on the Wanilla tanker and recall that the fire took less than 10 minutes to cross Settlers Rd after breaking out of the swamp. This initial crossing was to the south of Beaumont and to the north of Peter Cabot's property as indicated in Figure 15. The intensity and speed of crossing Settlers Road was lessened by the fire, having broken out of the swamp, running into an easterly extension of the swamp to the north of Cabot's. It appears from the aerial photograph, that the fire burnt into the edges of the swamp, and eventually spotted ahead and re-established in the stubble further downwind. This is more apparent in Figure 16. The direction of fire spread is progressively more easterly indicating that the widening of this

fire was a gradual process. At about the time of the wind shifting from the west to more south-westerly, Andrew Cabot (statement p.2), in the Yallunda tanker, drove about half a kilometre south of Beaumont and saw that the fire had crossed Settlers Road. He then left to the north quickly, through the paddocks to Warunda Rd and initially had trouble keeping ahead of the fire moving north.

The fire impacting on Peter Cabot's house and sheds came from the swamp to the west of his property. Initially from the west-north-west and then later from the south-west. This is in accordance with the observation made onsite by Treloar (statement p.6) that the fire was initially attacking the house from the west and then a drastic wind change to the west-south-west caused the fire to come through the house area at about 1100 hrs.

The fire that impacted on Richardson and Murnane was therefore almost certainly the flank of the fire which had broken out of Hull's swamp at about 1025 hrs, about one hour earlier. This flank fire became the head fire on the wind shift and was driven across Settlers road north of Beaumont.

The fire that had burnt past Peter Cabot's house could not have reached the site of the fatalities without having to pass through unburnt swamp or previously burnt ground.'<sup>534</sup>

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<sup>534</sup> Exhibit C281z(a), page 19



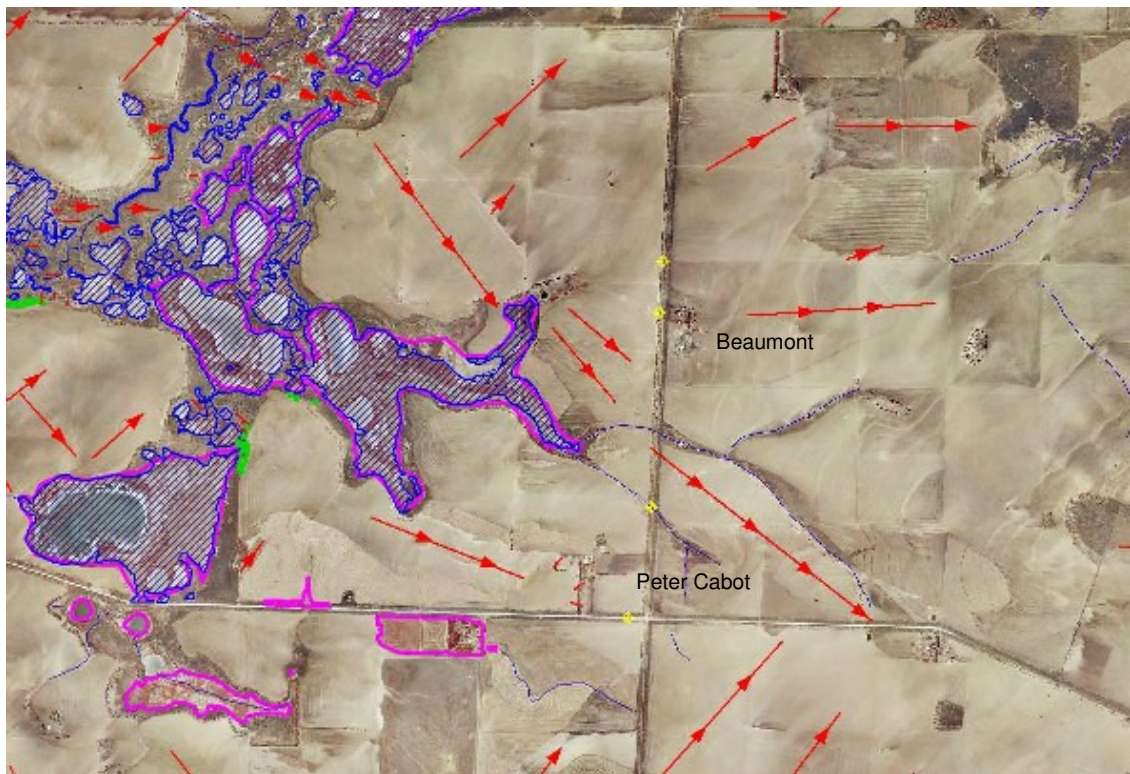


Figure 15 Fire directions in the vicinity of Settlers Road near 'Beaumont'.



Figure 16 'Beaumont' is the property on the middle right of image. Fatalities occurred at the northern-most yellow spread indicator.

**6. The circumstances surrounding the deaths of Judith Maud Griffith, Star Ellen Borlase and Jack Morley Borlase**

- 6.1. The two Borlase children were aged 3 years and 2 years respectively. They were the only children of Darren and Natalie Borlase. Judith Griffith, aged 59 years, was the mother of Natalie Borlase.
- 6.2. Darren and Natalie Borlase and their two children lived on a farm on Borlase Road near Wanilla. The district is sometimes referred to as Pearlah and is approximately 15km southeast of the original fireground. Borlase Road runs in a roughly east-west direction and originates at its western end at the Tod Highway. The Tod Highway runs in a roughly north-south direction at that point and is the main highway between the Flinders Highway to the south and Cummins to the north. On the western side of the junction of Tod Highway and Borlase Road is the junction of Forrest Road with Tod Highway. Forrest Road originates at its western end at the Flinders Highway. The junctions of Forrest Road, Borlase Road and the Tod Highway form an intersection. In the north-western quadrant of that intersection is the Wanilla Forest. The Wanilla Forest is a hard wood plantation of some eight hectares and is operated by the Aboriginal Lands Trust. The Borlase farmhouse was situated on the southern side of Borlase Road approximately 3 kilometres from the junction of Borlase Road with the Tod Highway. Between the junction and the Borlase farmhouse is a railway crossing that crosses Borlase Road about 2 kilometres from the farmhouse. Borlase Road is a dirt road bordered by native vegetation including yakkas, gum trees and other shrubbery. Stubble exists in the paddocks on both sides of the road. At its eastern end the road turned into what is virtually a track.
- 6.3. The farmhouse was situated approximately 200 metres from the road. To the south of the Borlase residence is another residence that was occupied by Darren Borlase's mother, Diane. Access between the homestead occupied by Darren and Natalie Borlase to Diane Borlase's homestead could be gained by turning left onto Borlase Road from Darren Borlase's homestead, proceeding approximately 200 metres west and then turning left down a dirt track. As the crow flies, the distance between the two Borlase premises was several hundred metres. There are other properties between the Borlase farmhouse on Borlase Road and the Tod Highway to the west. One such property is that occupied by the McKean family. The McKean premises are also on the southern side of Borlase Road and a short distance from the train line and

about 1.5 kilometres from the Borlase residence. Mr and Mrs Ryan occupy premises on the southern side of the Borlase Road, Tod Highway junction.

- 6.4. Mrs Griffith and her husband Wayne lived in Adelaide. They were visiting their daughter Natalie and her family for the summer. They were occupying the McKean residence whilst the McKeans were on holidays. Mr and Mrs Griffith had at different times frequently stayed either with their daughter or at the McKean property while they were away. They visited their daughter and her family about three or four times a year. On this occasion they had arrived on the Lower Eyre Peninsula from Adelaide on Sunday, 12 December 2004.
- 6.5. Mr Griffith had operated a motor trimming business in Loxton during the 1970s. He and his family returned to Adelaide in 1980. Mr Griffith worked as a motor body draftsman with Chrysler until he retired in June 2000. He had also worked at what had then become Mitsubishi for some time between 2002 and 2004. I received in evidence a statement from Mr Wayne Griffith<sup>535</sup>. Mr Griffith states that apart from one incident that occurred in 1974, when they were living in Loxton, he had never seen nor experienced bushfires. The occasion in 1974 had simply involved him helping others to extinguish spot fires after a bushfire had already burnt through a station property. He had certainly never before experienced nor seen any bushfires in the vicinity of his daughter's property. Before the McKeans had gone away they had made Mr Griffith familiar with some fire protection arrangements that had been installed but which had been designed only to deal with a localised fire around the property.
- 6.6. Were they aware of the fire on the Monday afternoon and Tuesday morning?  
Mr Darren Borlase was a member of the Wanilla CFS Brigade and had received a call on his pager to attend the fire on Monday, 10 January 2005. Mr Borlase was in bed at home with tonsillitis and was unable to attend the fire. He was later that day admitted to the Port Lincoln Hospital.
- 6.7. Mr Griffith said in his statement that on the Monday he was aware of a fire situated in the vicinity of the Marble Range. Some time on the Monday he had driven to the top of a hill on Borlase Road that was west of his daughter's property but east of the railway crossing. From there he could see at a distance flames and smoke to the

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<sup>535</sup> Exhibit C9

north-west. He estimated the distance between his position and the fire to be about 18 or 20 kilometres. It seemed to be travelling in a northerly direction towards Marble Range. This was not an accurate conclusion, because the fire had been travelling through the course of the Monday afternoon generally in a north-easterly direction from Wangary and had stopped in its progression not far from Settlers Road to the east. In any event, Mr Griffith concluded at that stage that the fire presented no danger to them. At about 10:30pm on the Monday night he again drove to the top of the hill on Borlase Road and observed that the fire had diminished significantly during the early evening. Mr Griffith stated that he had just wanted to check for his own '*peace of mind*'<sup>536</sup> and also out of curiosity. Although he could still see small areas of flame, and could see what he presumed to be the headlights of vehicles near the fire, he was confident that the fire was under control.

- 6.8. Mr Griffith stated that he had learnt from a television weather report on the Monday evening that it was going to be a hot and windy day on the Tuesday with forecast temperatures in the 40s. He presumed that there would be a fire ban in the area for the Tuesday, although he said that he did not specifically hear about any ban. Mr Griffith made further observations of the fire on the Tuesday morning from which he drew certain conclusions that I will discuss later in this section. Other than from his own observations, Mr Griffith did not receive any information about the fire from any other source including radio, television, neighbours, telephone, the CFS, police or other emergency services.
- 6.9. Mr Griffith does not purport to have any understanding of the CFS 'Stay or Go' policy. Moreover, he does not purport to have given any advance consideration as to what action he should take in the event that the fire threatened the McKean or the Borlase properties or threatened the safety of his family.
- 6.10. Mrs Natalie Borlase, the daughter of Mr and Mrs Griffith, had lived in the area for a number of years. Her witness statement was tendered to the Inquest<sup>537</sup>. A second witness statement was sworn by Mrs Borlase on 12 October 2007<sup>538</sup>.

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<sup>536</sup> Exhibit C9, page 6

<sup>537</sup> Exhibit C52

<sup>538</sup> Exhibit C52a



- 6.11. Natalie Borlase worked as a conveyancer in Port Lincoln. Her office was situated in Jabomie House which, as it happened, also accommodated Region 6 CFS Headquarters.
- 6.12. Natalie Borlase had become aware of the fire through the pager message that her husband had received from the CFS on the Monday afternoon. She had also received a telephone call from David Giddings who had a property on Settlers Road. Mrs Borlase knew that the fire was at Wangary. Mrs Borlase said that she was not worried about the fire at all at that stage because it was a common thing for the CFS pager to go off and for her husband to attend small fires at that time of the year. Her only concern was that the fire may have been on 'Wiltoo' a property in which her family had a farming interest. The fire was not affecting that property.
- 6.13. Natalie Borlase took her husband Darren to the Port Lincoln Hospital that evening and he was admitted. The consequence of this was that Darren Borlase was absent from the Borlase property during the evening of the Monday and for much of the Tuesday.
- 6.14. On her way back from the hospital, Natalie Borlase stopped at the top of the hill on Borlase Road to view what could be seen of the fire. She could see smoke in the Wangary area, although there did not appear to her to be a large amount. What smoke there was seemed to be moving in a north-easterly direction away from their property. Mrs Borlase said in her statement that she *'didn't worry at all about the fire'*<sup>539</sup>.
- 6.15. Mrs Diane Borlase is the mother of Darren Borlase. I received her written statement in evidence<sup>540</sup>. Diane Borlase occupied the other homestead on the Borlase farm. Her husband had passed away in September 2004. This was the property that I have mentioned that was to the south of the homestead occupied by Natalie and Darren Borlase and their children.
- 6.16. Diane Borlase was home on the Monday afternoon. She became aware of the fire after seeing its smoke. She presumed that the fire was in the Marble Range area. Sometime that afternoon she drove to her son's homestead to check on his health. After she left, she drove her vehicle to the top of the hill on Borlase Road and observed a lot of smoke rising from the west and moving east. Diane Borlase

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<sup>539</sup> Exhibit C52, page 4

<sup>540</sup> Exhibit C64

estimated at that stage that the smoke was coming from the Warunda Road, Duck Lake Road, Settlers Road area. In this she was largely correct. Her impression at that stage was that the fire was out of control. At that time there was a brisk westerly breeze and it was hot. Diane Borlase received information during the course of that day that suggested that Les Hull had nearly lost his house in the fire. Shortly before 9pm she received a telephone call from her daughter-in-law Natalie to the effect that her son Darren had been admitted to the Port Lincoln Hospital. As a result, she attended at her son's homestead. Her daughter-in-law, her grandchildren and Mr and Mrs Griffith were present. She stayed only for about 10 minutes. She does not claim to have imparted any relevant information to any of those present about the state of the fire.

- 6.17. Upon leaving the premises Diane Borlase returned to the hill on Borlase Road to check on the fire. At that stage she could see in the distance two strips of glowing light as well as activity that was consistent with the CFS being in attendance. She estimated that this activity was occurring about 12 or 15 kilometres from her position. Later that evening she received further information that led her to presume that the fire was under control.
- 6.18. Mr and Mrs Griffith dined at their daughter's premises on the Monday evening. They later returned to the McKean premises where they spent the night. An arrangement was in place for them to return to the house the following morning to look after the children and for them to be there in time for Natalie Borlase to leave for work at about 8:15am.
- 6.19. Natalie Borlase does not say anything in her statement about her state of knowledge about the fire on the Tuesday morning. Her statement does not reveal any hesitancy about going to work and leaving her children with her parents. In accordance with the arrangement made the night before, Mr Griffith came to look after the children. Natalie Borlase then went to work in Port Lincoln.
- 6.20. That morning at about 9:30am, Diane Borlase received further information from Mr Ken Pobke. Mr Pobke expressed some concern about the weather forecast and potential for fire. He expressed particular concern as to a fire that might be started by a train on the Port Lincoln to Cummins line which was the line that crossed Borlase Road. However, Diane Borlase stated that at that time she did not think that Mr

Pobke, who is a member of the Greenpatch CFS Brigade, was concerned about the fire from the previous day. Mr Pobke, however, in his statement<sup>541</sup> said that on the Tuesday morning he was very concerned about the fire from the Monday to the point where he decided to contact his neighbours including Diane Borlase. He stated that he tried to establish what assistance Diane Borlase had for the day and learnt that Darren Borlase was in hospital. Nevertheless, Mr Pobke said that he was satisfied with what Diane Borlase told him as to her plans for the day. Later Mr Pobke saw the fire '*coming over Borlase's Hill*'<sup>542</sup>. He witnessed this from his own property which was to the east of the Borlase property. He placed the time of that observation as being about 11:45am. As will be seen, this time is not inconsistent with other evidence as to the time the Borlase property was attacked by fire.

- 6.21. Just before 10am on the Tuesday morning Diane Borlase dropped in at her son's homestead. At that stage Mrs Griffith was there with the children. Mr Griffith was not there. Diane Borlase stated that she does not recall having any conversation or discussion with Mrs Griffith about the fire. After leaving the premises Diane Borlase drove to the top of the hill on Borlase Road to see what was taking place in relation to the fire from the day before. She saw smoke which appeared to be travelling in a north-westerly direction, away from her farm. Although it appeared that the fire had flared up again, it did not look very big and she was not particularly concerned. The smoke appeared to be about 10 or 12 kilometres from her location.
- 6.22. Diane Borlase drove to Port Lincoln. Although she visited her daughter-in-law's place of work, and had expressed some concern about the fire, she does not appear to have had any communication with either Mr or Mrs Griffith during the morning about the fire.
- 6.23. Diane Borlase stated that they did not really have a bushfire plan. She said that she had always thought that if she were caught in a fire she would fill the bath with water and lay in it covered with a blanket. Alternatively, she thought she might go to one of the dams and cover herself with a blanket there. She also stated that she had contemplated that if there was enough time to get out before a fire front arrived, she would leave in the car and evacuate. Diane Borlase does not purport to have any understanding of the CFS 'Stay or Go' policy and indeed, appears to have entertained

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<sup>541</sup> Exhibit C134

<sup>542</sup> Exhibit C134, page 4

a belief that would be anathema to that policy insofar as she thought that safe refuge could be achieved in a bath.

- 6.24. On the Tuesday morning, Diane Borlase had not been listening to the radio at all and was not aware of any warnings that may have been issued. She said that she did not think to listen to the radio because it was not until much later when she saw smoke over Port Lincoln that she gained an appreciation of the possibility that the Borlase property was in the path of the fire.
- 6.25. Although Diane Borlase had generally heard of the existence of phase 1, 2 and 3 warnings in relation to bushfires, she was not aware of what each of those phase warnings meant.
- 6.26. Diane Borlase does not claim to have discussed any kind of plan or strategy with the Griffiths as to what they should do in the event of the Wangary fire, or fire in general, threatening their location.
- 6.27. During the course of the Tuesday morning Natalie Borlase rang her home to see how things were going. Telephone records relating to communications between Natalie Borlase's place of work and her home reveal that a call was made at 11:35am. This call lasted for 109 seconds and concluded at 11:37am. The clear inference is that this call was answered and that a conversation took place during the course of the connection. I also infer that this record relates to the call that Natalie Borlase made to her home and the call in which she spoke to her mother. There was only the one telephone conversation between them. Natalie Borlase said that during her call she spoke to her mother who said that everything was all right but that it was very smoky. Mrs Griffith gave her daughter to understand that her husband and the children were all present at the premises at the time of this conversation. There is no evidence of discussion between Natalie Borlase and her mother about any strategy that her parents should adopt in relation to a fire. I do not say this critically because at that stage Natalie Borlase had no particular information about the fire. She only gained an idea of the seriousness of the situation when she noticed some time later that Port Lincoln itself was becoming very smoky, and after she had spoken to a member of the CFS staff at Jabomie House. This person had told her that a phase 1 warning was in existence for her area and that a decision would have to be made by affected householders as to whether they should evacuate or stay and defend the premises from

the fire. This person had indicated that if Natalie Borlase's family were going to evacuate, then she should tell them to do that immediately. Natalie Borlase said she did not know what a phase 1 warning meant and whether it was the most or least urgent warning, but nevertheless understood the verbal instruction she had received from the CFS member.

- 6.28. Having spoken to the CFS, Natalie Borlase immediately went back to her workstation in the same building to telephone her parents. She made several unsuccessful attempts. She rang her home number as well as her parents' mobile telephone numbers and all that she managed to achieve was the activation of recorded messages. The Borlase premises' telephone records reveal that the next call that was made to the premises after the 11:35am telephone call was a call made at 11:45am. This call was made by a Tania Edwards and it was not answered. Other unsuccessful attempts to call the premises occurred at various times thereafter. Calls at 12:04pm and 12:09pm, placed by a Jillian Borlase, were also unanswered. The first unsuccessful call placed by Natalie Borlase from her place of work was at 12:16pm. Further unsuccessful attempts were made by her every few seconds until 12:21pm. Her conversation with the CFS therefore appears to have occurred between 11:37am, when Natalie Borlase and Mrs Griffith terminated their call, and 12:16pm when Natalie Borlase unsuccessfully attempted to ring her home. The CFS phase 1 warning for the Wanilla Forest area was created by Mr Vogel, the CFS Regional Duty Officer, at 11:52am.
- 6.29. Natalie Borlase retrieved her vehicle from the local Bridgestone tyre shop and then proceeded towards her property on the Flinders Highway. At one point she telephoned her husband, who was still in Port Lincoln Hospital, and told him that a phase 1 warning had been issued. She told him that she was on her way to their property to evacuate everyone. Her husband told her not to evacuate but to stay in the house as it would not burn. He advised her to pull the hoses out and wet the grass around the house. In this conversation Natalie Borlase was insistent that she would evacuate everyone. There was some further discussion as a result of which Natalie Borlase returned to Port Lincoln and collected her husband from the hospital. Natalie Borlase was ultimately to make her way to the property by which time her mother and children had perished. The telephone conversation between Natalie Borlase and her husband appears to have been the only meaningful discussion about the fire that they conducted together. By the time Darren Borlase was consulted as to what should

occur the reality was that there was nothing that he or Natalie Borlase could do to prevent these tragic deaths.

6.30. Natalie Borlase appears to have had little discussion with her parents about the Wangary fire. A fair inference is, and I so find, that Natalie Borlase had been in possession of very little information about the Wangary fire until she had spoken to her mother on the telephone on the Tuesday morning and had later received information directly from the CFS. It is obvious that Natalie Borlase had little awareness of the potential danger that the fire presented on the Monday night and of the actual danger that the fire presented on the Tuesday morning. Had Natalie Borlase been in possession of relevant information, there could be little doubt that in the nature of things she would have shared it with her parents. Her frantic attempts to later contact her parents is powerful evidence of that.

6.31. The decision to leave the Borlase property

A description of the circumstances in which Mrs Griffith and the two Borlase children died is given in a detailed statement made by Mr Griffith to the police in two sessions on Monday, 7 February 2005 and Wednesday, 16 February 2005.

6.32. I need only deal with the essential features of that statement. I deal elsewhere with the issue as to the source of the fire that was to claim the lives of Mrs Griffith and the two children and to injure Mr Griffith. Mr Griffith makes some observations that are relevant to that issue. I will mention those matters insofar as they might assist in identifying the source of the fire that overwhelmed them.

6.33. Although Mr Griffith had not received any information from an external source regarding the fire, he made certain observations of his own during the course of the Tuesday morning. It should be added here that in Mr Griffith's statement he makes it plain that he was not aware of the CFS 'Stay or Go' policy, but that during the actual event he had thought that there was probably some procedure in existence.

6.34. According to Mr Griffith's statement, after their daughter had gone to work, he and his wife looked after their two grandchildren. The radio was not switched on and although the television would have been on, it was probably on a children's program or was playing a children's video. Suffice to say Mr Griffith does not appear to have received any information about the fire through either medium.

- 6.35. Mr Griffith said that some time between 10am and 10:30am, having detected that the wind had picked up, and having seen smoke through a house window, he drove his own vehicle which was a Landrover station wagon up to the top of the hill on Borlase Road west of the homestead. At that stage he could see a large amount of smoke emanating from a bushfire which he thought might be situated south of Wangary and probably in the vicinity of the Flinders Highway. He estimated the fire to be about 18 to 20 kilometres away. Smoke appeared at that stage to be moving in a southerly direction. If Mr Griffith's estimate as to time were correct, his observation about the direction of the smoke would also be approximately correct. In any event, Mr Griffith did not detect any immediate danger at that stage.
- 6.36. Mr Griffith had a radio in his vehicle but it was not switched on. Mr Griffith made it plain that he is not in the habit of listening to the radio.
- 6.37. Mr Griffith returned to the homestead and mentioned to his wife that he did not think that they were in any danger at that time. While at the house, Mr Griffith considered listening to the radio, but stated that he did not know what channel to listen to. He said he must have been distracted and did not switch the radio on.
- 6.38. At about 11am Mr Griffith again went to the top of the hill on Borlase Road. It seemed to him that the fire had moved further to the south, but did not appear to be any closer to his location than it had been earlier. The wind was from the north, but it did not seem to be any stronger than it had been the last time he had made his observations. However, on this occasion in order to have a closer look, he drove to the end of Borlase Road, over the highway and then along Forrest Road to the Flinders Highway where he turned right heading north-west for about 4 or 5 kilometres towards Wangary. He did not drive as far as the Coffin Bay turnoff. Mr Griffith said that at that time the smoke was well south of the highway and appeared to be going south towards Coffin Bay. Mr Griffith did not consider that the Borlase property would be in any danger. He returned to that premises. He estimates that he arrived back at the homestead at approximately 11:15am or 11:20am.
- 6.39. By the time he had returned to the homestead, the wind had strengthened considerably and on Mr Griffith's observation it was now coming from the south-west. He deduced from this that the fire would travel generally east, but because of the location

of the smoke as observed earlier, he thought that the fire would travel to the south of their location.

- 6.40. When the family dog became agitated, Mr Griffith again decided to see if he could observe the fire. He said the time was about 11:30am. He states that at about that time the power in the premises went off. From the house he could see that the smoke was still to the west of their location and by then could actually smell smoke in the air. Mr Griffith returned to the top of the hill on Borlase Road and at that stage noticed smoke in the Wanilla Forest. The smoke seemed to be throughout the entire forest. Mr Griffith kept driving west along Borlase Road and as he approached the McKean property he could see flames at the railway line. The railway line was situated along the western boundary of the McKean property and was less than 200 metres from the McKean homestead. It appeared to Mr Griffith that the flames and smoke appeared to be travelling in a south-easterly direction along the railway line and that the flank of the fire that he could see was about a kilometre long. Mr Griffith drove into the McKean premises in order to find their dog but was unable to locate it. While at that location Mr Griffith formed the belief that the smoke was still travelling in a south-easterly direction. However, the smoke had by then reached the McKean premises.
- 6.41. Mr Griffith drove back onto Borlase Road and at that stage could see that the tall trees on Borlase Road west of the McKean gate and east of the railway line were on fire. Mr Griffith concluded at that point that they had to evacuate the Borlase premises. He drove back to the Borlase house where a decision was made that they would take the children and the dog and drive to Diane Borlase's house to the south.
- 6.42. The two children were seated in the rear of the Landrover and Mrs Griffith drove. Mr Griffith followed in Darren Borlase's utility, the idea being that the pump and water supply on the back of the utility could be used in an emergency. At that stage the smoke at the house was moderate, but there was no sign of any flames around or near them. Mr Griffith stated that when they left the house he did not anticipate that they would be caught in the fire. His intention was to put some distance between them and the fire and be able to reassess their position. In addition he knew that at Diane Borlase's premises there was a large water tank with a petrol operated pump and if need be they could spray an area to protect themselves and the vehicles.



- 6.43. The two vehicles left the Borlase homestead. Mrs Griffith led in the Landrover with the children and the family dog and Mr Griffith followed in the utility. When Mr Griffith reached the gate onto Borlase Road, Mrs Griffith was about 20 or 30 metres ahead. Mr Griffith stopped momentarily at the gate and looked across the road in a northerly direction but could not see any flames. There was some smoke but it was moderate and he could see through it. He could still see approximately 200 metres along the fire track. I take it that he means 200 metres to the west because that is the direction in which they were heading and the direction that the fire was last seen. Mr Griffith executed a left-hand turn and had only travelled about 10 metres when he describes both vehicles being suddenly surrounded by flames. He lost sight of the Landrover. Mr Griffith stated that he had no idea what direction the flames had come from. This still puzzled him because, as earlier stated, there had not been any flames when they had reached the track.
- 6.44. As soon as he saw that they were surrounded by flames he stopped momentarily and it is at that stage that he lost sight of the Landrover. The smoke was pitch black and the flames were fierce being about 15 to 20 feet high with airborne embers. Mr Griffith switched his headlights on but could only see the edge of the track on the right side of the utility. Visibility was restricted to no more than a metre to the front and right of the front fender of the vehicle. He continued to drive in these circumstances. At a point about 100 metres west of the gate he encountered the Landrover. It was stationary on the left-hand side of the road. He had not actually seen it stop. The lights were on and the offside wheels were about three feet off the track and parallel to the fire track. Mr Griffith stopped alongside the Landrover. Mr Griffith felt that the fire had come from his right or the northern side of Borlase Road, even though he had not actually seen flames approaching. Mr Griffith expresses some confusion in his statement as to where the fire had come from. He said it seemed that someone had just dropped the fire on top of them and that everything around them seemed to explode. Mr Griffith said that when he stopped he thought that his vehicle might protect the Landrover having pulled up alongside of it, because he had an impression that the direction of the travel of the fire was from his right-hand side, being from the north. It appeared that the Landrover had stopped with its front against a metre high yakka bush that was well alight.

- 6.45. Mr Griffith then described what took place. I do not need to describe this in detail but it is plain that Mr Griffith underwent a horrific experience. The Landrover was significantly more affected by fire than the utility. Mr Griffith sought refuge at first in the interior of the utility but then at one point alighted and sought further refuge under the vehicle. The difference in the extent of the damage to the two vehicles is probably explained by the fact that the utility was parked on the bare earth surface of Borlase Road whereas the Landrover was situated in vegetation that burnt fiercely. Mr Griffith probably owes his life to the fact that his utility at all times remained on that bare earth surface.
- 6.46. It is suggested that Mrs Griffith's vehicle became stuck on one or more yakka bushes in the roadside vegetation when she was endeavouring to utilise the verge to execute a U-turn. That may well be the case<sup>543</sup>.
- 6.47. Meanwhile, Natalie Borlase had been making frantic efforts to obtain information about her family. She and her husband, who had discharged himself from hospital, endeavoured to return to Borlase Road. A roadblock that had been set up near the junction of Flinders Highway and Tod Highway interrupted their journey. A person by the name of Stewart Lamming-Endemann, a man not previously known to Natalie Borlase, offered to drive her to her property on Borlase Road. He and Natalie Borlase drove to the property via Tod Highway and Borlase Road. Mr Griffith was located taking shelter under his utility. Mrs Griffith and the two children had perished in the Landrover. In agreeing to drive Natalie Borlase to her property, Mr Lamming-Endemann could not have known precisely what he might encounter. Although the immediate danger on Borlase Road had passed, he was not to know that. He is to be commended for his actions in driving Natalie Borlase to the location and rescuing Mr Griffith.
- 6.48. Mr Griffith was very badly burnt. He was hospitalised in Port Lincoln and then in Adelaide.
- 6.49. Can the time of their deaths be ascertained?  
The precise time at which Mrs Griffith and the two Borlase children lost their lives can only be reconstructed within limits. As seen earlier, Mrs Griffith was at the premises at least until 11:37am at which time telephone records show that her

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<sup>543</sup> Exhibit C54, page 10

conversation with Natalie Borlase concluded. Other persons unsuccessfully attempted to call the premises at 11:45am, 12:04pm and 12:09pm. Natalie Borlase made her first unsuccessful call at 12:16pm. Mr Griffith thought that the telephone conversation between his wife and daughter occurred whilst he was on his second to last observation run. However, that observation run was the one that had taken him several kilometres along the Flinders Highway. He had returned from that run, he says, at 11:15am or 11:20am. His understanding of the phone conversation was that Natalie Borlase had indicated that she could see smoke from Port Lincoln but that his wife Judy had said to her daughter that the smoke was not near them. Mr Griffith understood that Natalie Borlase had then said that she would go and see what she could find out and would call back. He understood that his daughter had attempted to ring back but by then could not get through. That account would accord with Natalie Borlase's.

- 6.50. The significance of the time at which unsuccessful phone calls were made to the Borlase premises landline is complicated by the fact that at some point the power to the Borlase premises went off. There is no evidence as to the precise time at which this occurred. A further statement taken from Natalie Borlase sworn on 12 October 2007 reveals that the landline was connected to cordless phones that required an electricity supply<sup>544</sup>. When the electrical power source to the phones was disconnected, the phones would not operate. Thus, the fact that the series of calls to the house commencing with that of Tania Edwards at 11:45am were not answered is not necessarily accounted for by Mr and Mrs Griffith and the children having already left the house. Although the power must have been on at 11:37am when the telephone conversation between Natalie Borlase and her mother terminated, it could have failed prior to 11:45am. The failure of anyone to answer the 11:45am call, or the subsequent calls, is consistent with Mr and/or Mrs Griffith still being in the house but not hearing the phone ringing because of the power outage. Mr Griffith was not present at the house at the time the phone conversation between his wife and his daughter occurred between 11:35am and 11:37am. He heard about it after he had returned from one of his observation runs, he thinks the second to last from which he returned at 11:15am or 11:20am. He also says that his last observation run occurred at about 11:30am after the dog had become agitated and he had noticed that the power had failed. These times I find cannot be correct because the power must have been on

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<sup>544</sup> Exhibit C52a

at 11:37am when the phone conversation between Natalie Borlase and Mrs Griffith was terminated. Mr Griffith in my view is mistaken as to time, or possibly even mistaken as to which observation run he was on when the call occurred. It may be that the phone conversation occurred when Mr Griffith was on his final observation run because it is more in keeping with the time that Mr Griffith ascribes to that final run. In any event it is clear that by the time Mr Griffith returned to the house for the last time, accepting his observations as I do, fire was in the Wanilla Forest and flames were at the railway line, east of the forest and east of the Tod Highway. Mr Griffith stated that from the time that he left the McKean premises on that final run, had returned to the house, loaded the two vehicles and driven to the gate on the way out, only about 5 or 6 minutes had elapsed. If in fact the telephone conversation between his daughter and his wife had occurred on Mr Griffith's final run, he and Mrs Griffith may well have been out of the house by midday and the deaths occurred not long thereafter. All that can be said with any certainty, however, is that the deaths occurred some time after 11:37am.

6.51. What relevant public warnings were issued?

Mr Griffith stated that he was not aware whether his daughter and her husband had formulated a specific bushfire plan. However, he was aware of the fact that his son-in-law Darren had put in five tanks of 25,000 litres each for rainwater and that there was also a line from the dam in which water could be pumped via an electric pump. As earlier observed, Mr Griffith had only a vague idea of the CFS 'Stay or Go' policy. In addition, the only information that Mr Griffith had in the course of the morning was from his own observations. However, it is obvious that Mr Griffith was very much taken by surprise by two things. Firstly, it is clear that he had not anticipated that the fire would come in his direction at all and only learnt for the first time that it indeed had when he saw the vast amount of smoke in the Wanilla Forest and flames along the railway line. Secondly, Mr Griffith was taken by surprise by the suddenness of the fire overwhelming them once they were exposed on Borlase Road.

6.52. I have already referred to the fact that Mr Griffith had not been listening to the radio. However, it is pertinent to observe what information, if any, would have been available to him had he done so.

6.53. No CFS phase warnings were issued on the Monday. According to Mr Vogel he prepared the first CFS phase warning in relation to the fire on the Tuesday at

10:10am. This was in response to information received from the fireground that the fire had '*jumped containment lines*'<sup>545</sup>. Mr Vogel's log records a phase 1 warning at 1013 hours. The document itself bears the time of 1010 hours. It was faxed to CFS State Headquarters at 1014 hours. It was then faxed from there to the Australian Broadcasting Commission (ABC) at Collinswood at 10:22am. There is no evidence as to the time this phase warning was initially broadcast. The warning advised the public that a bushfire was burning in the area '*six kilometers (sic) north east of Wangary*' and was moving in a '*southerly direction*'. The actual warning was in these terms:

'Residents in the area of the fire are advised to ensure that the security of their properties and stock is adequate to meet the possible potential threat to their properties. All windows and doors should be closed and arrangements made to care for aged or infirm persons.

Keep listening to this station for further information as to any developments. Fire Service units are already combating the fire.'<sup>546</sup>

The document stated that the warning must not be broadcast after midday.

- 6.54. The fire breakout or breakouts, to which this warning referred, obviously related to that (or those) that occurred near Yorkies Crossing. Although the warning stated that the fire was moving in a southerly direction, for the most part it was moving in a south-easterly direction. I accept Mr Griffith's statement that he had not been listening to the radio. He would not have heard the warning in whatever terms it was expressed. In any case, it would not have told Mr Griffith much more than what he already knew from his own observations, made during his first sortie that morning to the top of the Borlase Road hill. However, the warning would no doubt have served to encourage Mr Griffith to keep listening for developments.
- 6.55. Mr Lock at Wangary was in contact with Mr Grant Shepperd and was noting Mr Shepperd's observations on his map. Mr Lock says in his statement to the police<sup>547</sup> that he noted that Mr Shepperd advised him that the fire had entered the Wanilla Forest at 11:37am. However, in evidence when referring to the times that he had noted on his map<sup>548</sup>, he corrected that time to 11:40am. In fact, the time of 11:37am as recorded on the map was the time when Mr Neil Ackland had reported to Mr Lock

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<sup>545</sup> Exhibit C241, page 16

<sup>546</sup> Exhibit C241, Document 40510

<sup>547</sup> Exhibit C223a, page 16

<sup>548</sup> Exhibit C223b

that there was fire at the parking bay on Flinders Highway just to the west of Wanilla Forest<sup>549</sup>. It is to be noted that 11:37am was the time at which Natalie Borlase and Mrs Griffith terminated their telephone conversation. Mr Shepperd had observed the wind change to the west at 11:44am. At that stage he was at a location near the junction of Flinders Highway and Forrest Road, which is effectively the western extension of Borlase Road where it meets the Tod Highway. Mr Shepperd then proceeded along the Flinders Highway to its junction with Tod Highway where he met Angela Whillas. Ms Whillas states that she had arrived at that location at 11:48am. She saw the fire ‘crown’ over the Tod Highway<sup>550</sup>. At that stage Mr Shepperd contemplated travelling up to Borlase Road and proceeding along that road to the east. Ms Whillas persuaded him not to do that as it was believed at that time that Borlase Road was impassable at its eastern end. Whether it was or it was not, it would have been a foolhardy thing for Mr Shepperd to have done at that stage and under those conditions. Instead, it was decided that Mr Shepperd would make his way to North Shields via Hyde Road which was to the east, and warn residents along the way. Mr Whillas adopted a similar strategy with respect to McFarlane Road to the west.

- 6.56. Constable Jarrad Ayres states that he arrived at the Flinders Highway/Tod Highway junction at 11:53am having seen the fire travel through the Wanilla Forest towards Tod Highway at what he says was an ‘*alarming speed*’<sup>551</sup> that he estimated to be at least 40 kilometres per hour.
- 6.57. Mr Michael Walsh and his family were staying at premises on the south-eastern corner of the Borlase Road and Tod Highway junction opposite the Wanilla Forest. His parents-in-law, Ian and Christine Ryan owned the premises. This location is, of course, further to the west than the Borlase premises and much closer to the forest. Mr Walsh detected smoke at about 10am on the Tuesday morning. As a result of a conversation that he had with a local resident, Mr Walsh decided to explore its source. He drove along Forrest Road on the southern edge of the forest and then onto the Flinders Highway heading north-west to the Coffin Bay turnoff. He could see smoke from a fire which he estimated to be 10 kilometres north of his location. Mr Walsh states that he knew that there had been a fire on the Monday but that radio broadcasts

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<sup>549</sup> Transcript, page 8155

<sup>550</sup> Exhibit C225, page 5

<sup>551</sup> Exhibit C157, page 3

had led him to believe that it had been totally under control. Even when he made his observations at the Coffin Bay turnoff on the Tuesday morning, Mr Walsh thought that the fire appeared to be innocuous. He stated that he had *'no fear that the fire was out of control and we had the local radio station on AM765 and there was no warning'*<sup>552</sup>. AM765 is the frequency for 5CC, a local Port Lincoln commercial station.

- 6.58. Not long after Mr Walsh returned to the Ryan property, an unknown male person came to the house and warned them that the fire was in the forest and that they should leave immediately. Mr Walsh decided to do so. A few minutes later a police patrol manned by Officers Hirschausen and McLean came to the premises and gave them the same advice. Constable Hirschausen knew the usual occupants of the premises, Mr and Mrs Ryan. Mr Walsh estimates the time at that stage was about 11:30am. Mr Walsh made certain preparations to leave. He noticed at some point that the power had gone off. Ultimately, after what must have been a very disturbing experience, Mr Walsh and his family were able to leave. They proceeded in a southerly direction along Tod Highway. At the time they left, the fire was only about 200 metres away. Embers were being blown along the driveway and there was a red glow in the forest. On the Tod Highway Mr Walsh had to drive through flames and thick black smoke. When they eventually emerged into clear air, stubble in the paddocks to his right was alight and burning quickly. They drove towards Port Lincoln. En route Mr Walsh heard the phase 1 warning that advised that the fire was 6 kilometres north of Wangary. I infer that Mr Walsh at no stage heard any warning that related specifically to the Wanilla Forest area. Either it had not been created by then or it was not broadcast either then or at all.
- 6.59. Officers Hirschausen and McLean did not travel any further east along Borlase Road than the Ryan premises. After advising those present to leave, they travelled north along the Tod Highway and stopped at the intersection with Exchange and Charlton Gully Roads where they directed traffic away from the location of the fire. They then travelled east along Charlton Gully Road and made their way to the Lincoln Highway in the vicinity of North Shields. Constable Hirschausen thought the time was about 11:30am at that stage. Again, this time appears to be an estimate only. Senior

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<sup>552</sup> Exhibit C49, page 3

Constable McLean places that time as being about 12:30pm<sup>553</sup>. I think that is a more realistic time.

- 6.60. It is in the light of the above events, and the observations made by the relevant persons involved in those events, that any warnings about the proximity of the fire to residences on Borlase Road come to be examined. Mr Griffith did not have any warning of the fire's approach other than from his own observations. He did not listen to the radio. Mr Walsh had been listening to the radio and had heard nothing, or nothing of relevance to his situation. Very late in the piece, he received a warning from a resident and then from the police. The police did not venture further along Borlase Road. I do not say this critically. To do so would have been to have placed themselves in immense danger and it cannot be certain that a change in the fortunes of Mr and Mrs Griffith and their grandchildren would have been guaranteed. As it was, it appears that the two officers only went to the Ryan residence because of Constable Hirschausen's and Senior Constable McLean's familiarity with it. There is no evidence that the officers knew of the existence of the Borlase premises, or for that matter the existence of any other residences on Borlase Road. In any case, it is clear from Constable Hirschausen's and Senior Constable McLean's statements that, having warned those at the Ryan's premises, they considered that their duties lay elsewhere, namely preventing traffic from entering what was plainly becoming a very dangerous stretch of the Tod Highway.
- 6.61. A phase 1 warning was raised in relation to the Wanilla Forest area. Mr Vogel at CFS Region 6 Headquarters instigated this. Mr Vogel has logged against an entry timed at 11:47am '*fire in forest Wanilla*'<sup>554</sup>. It is to be remembered that Mr Shepperd had informed Mr Lock of the Wanilla Forest fire at 11:40am. Mr Vogel appears to have created the phase 1 warning at 11:52am. This warning advised the public that a bushfire was burning in the '*area of the Wanilla Forest*' and moving in an easterly direction. It gave the usual advice and information about ensuring security of property and stock. It is not known whether, and if so when, the phase 1 warning for the Wanilla Forest was broadcast. As seen, the only warning that Mr Walsh heard was the phase 1 warning relating to a location 6 kilometres north of Wangary. He heard this well after the time that he left the Borlase Road premises. Other evidence from a representative of the radio station 5CC would suggest that the Phase 1 warning

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<sup>553</sup> Exhibit C145, page 4



for Wangary was broadcast at 12:03pm<sup>555</sup>, which it is to be observed was after the time of midday, beyond which the CFS had stipulated the warning was not to be broadcast. It is inconceivable that if a phase 1 warning for the Wanilla Forest had been broadcast at or around the same time, Mr Walsh would not have heard and remembered that as well. The phase 1 warning for the Wanilla Forest, if broadcast at all, clearly could not have been broadcast before 11:52am, the time it was created. By then, the die may already have been cast as far and Mr and Mrs Griffith and their grandchildren were concerned. It is even possible that the tragic incident at Borlase Road had occurred by then. Even if the phase 1 warning had been broadcast as soon as it was created, and even if Mr Griffith had heard it, it would only have told him what he already knew, namely that the fire was in the forest. If anything, it would have misled Mr Griffith insofar as it asserted that Fire Service units were already combating the fire when, as far as the Wanilla Forest and the area immediately to its east was concerned, that was not the case. A phase 2 warning seems to me to have been designed to assist citizens situated some kilometres from the area to which it relates, in this case the Wanilla Forest. However, if one is situated adjacent to the forest, and in the direct path of the fire, it would not be particularly helpful. This is especially so if the fire is fast moving as it was known to be here. A phase 2 or even a phase 3 warning, both of which at least convey a sense of urgency, would have been more appropriate and would have provided information that was far more relevant to Mr Griffith's situation. A phase 2 warning advises citizens to consider evacuating their property. A phase 3 warning advises citizens not to evacuate the area and to keep off the roads. However, it is perhaps somewhat academic as Mr Griffith was in any case not listening to the radio. In addition, the warning was probably not broadcast in time, if at all, for Mr Griffith to hear it and act upon it.

6.62. One thing is clear. What Mr Griffith required was a better understanding of the immediacy of the peril that he and his family were actually in.

6.63. Would it have been safer to remain at the premises?

Darren and Natalie Borlase's house was destroyed in the fire. The shed, which stood some 20 metres from the house, remained intact. The Bushfire CRC examined the remains of the house. The report of Blanchi and Leonard in this regard was tendered

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<sup>554</sup> Exhibit C241a

<sup>555</sup> Exhibit C315, page 2

to the Inquest<sup>556</sup>. There are a number of different mechanisms by which fire might destroy a house. This particular residence, in the opinion of Blanchi and Leonard, was destroyed by ember attack. The house of Diane Borlase just to the south was not burnt. The fact that the house of Darren and Natalie Borlase burnt, does not of itself imply that had Mr and Mrs Griffith and their grandchildren remained at the property they would not have survived. Clearly if they had remained in the house during its consumption by fire, the outcome would not have been favourable. However, as Blanchi and Leonard point out, the results from the 1983 survey after the Ash Wednesday bushfires showed that people played an important role in house survival, by extinguishing both the ignition of a house and the burning material around it. In addition, one of the underlying themes behind the 'Stay or Go' policy is that in most cases once a fire front has passed, and it is safe to do so, one should exit the house. By exiting the house one can then assess the level of damage to the house and, if possible, extinguish small fires, or if the house is fully involved in fire then move to a safe area away from the house. In any event, it cannot be known with certainty whether if Mr and Mrs Griffith and the children had remained in the house until the passing of the fire front, they would have survived. Suffice it to say, their chances of survival may have been enhanced if they had so remained. The critical factor in these deaths was the decision to leave at a time when it was unsafe to do so. That decision unfortunately was based on insufficient information about the speed at which the fire would reach their position.

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<sup>556</sup> Exhibit C321

**7. The circumstances surrounding the deaths of Neil George Richardson and Trent Alan Murnane**

- 7.1. Mr Richardson aged 54 years and Mr Murnane aged 30 years were residents in the Cockaleechee area near Cummins. Mr Richardson was a farmer. Mr Murnane had recently gone into business with a man by the name of Patrick Head. These men had been involved in fighting the fire on the Monday, using farm firefighting appliances that were privately owned.
- 7.2. Early on the Tuesday morning Patrick Head's father, Anthony Head, attended at the fireground. Patrick and Anthony Head were in touch with each other via mobile telephone. Patrick Head and Mr Murnane were at Mr Murnane's shed, working on a trailer they were building for their new business. They had been working there since about 8:30am that day. Their intention was that they would attend the fireground if it became necessary. Patrick Head gave evidence before the Inquest, as did his father Anthony. Patrick Head's statement was also tendered at the Inquest<sup>557</sup>. Patrick Head described the wind at their location in Cummins as being very strong and blowing from the north-west. Dust was being blown into the shed through the door. At about 10:10am Patrick Head telephoned his father who indicated at that stage that everything at the fireground was under control. He suggested that his son and Mr Murnane wait at the shed until further notice. He telephoned his father again at 10:24am<sup>558</sup> and by then it was obvious that things at the fireground had very much taken a turn for the worse. Anthony Head suggested that Patrick Head and Mr Murnane enlist another local resident, Mr Jim Holman. Mr Holman possessed a utility with a fire unit on the back. Patrick Head telephoned Mr Holman at 10:28am to arrange a lift. Mr Richardson also had a farm firefighting utility. An arrangement was made that Mr Holman and Mr Richardson would meet Patrick Head and Mr Murnane at Cummins in about 20 minutes time.
- 7.3. The four of them met as arranged and they then travelled to the fireground in the two utilities. Mr Holman drove his Nissan Navara utility and Patrick Head travelled with him. Mr Richardson had a Toyota Landcruiser utility and he and Mr Murnane travelled in that vehicle. They made their way to the fireground through Edillillie

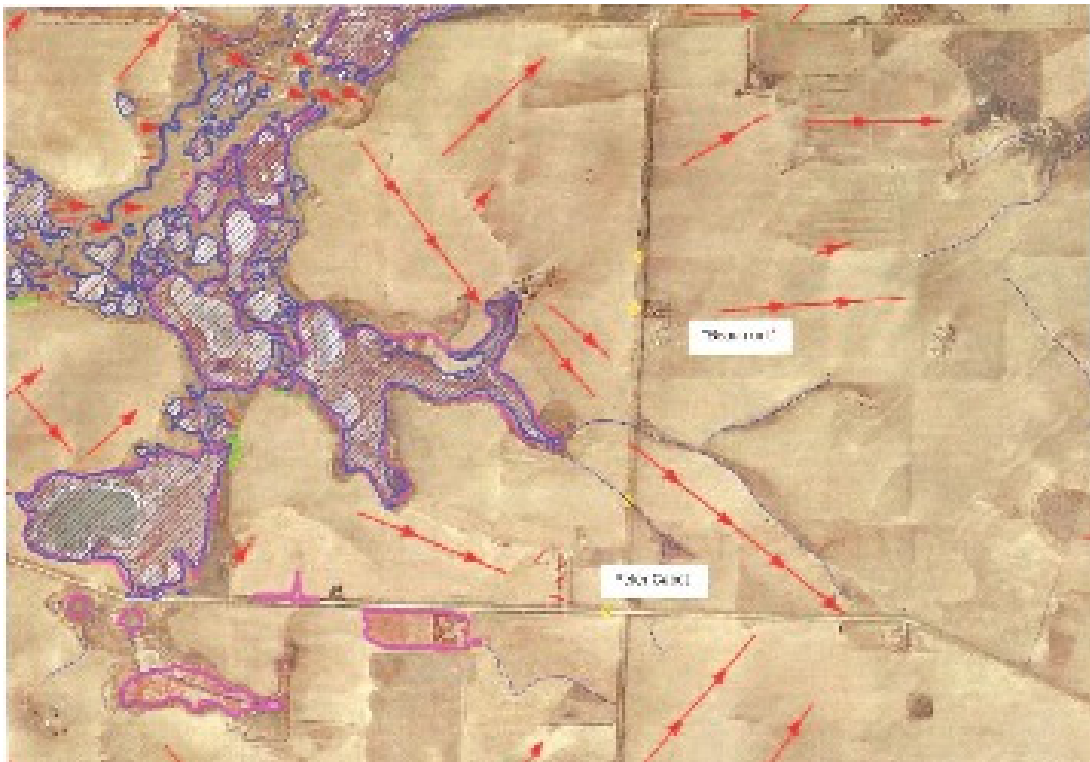
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<sup>557</sup> Exhibit C178

<sup>558</sup> These times are taken from Patrick Head's telephone records

which is on the Tod Highway, and ultimately arrived at Settlers Road at its intersection with Warunda Road.

- 7.4. Settlers Road runs in a north-south direction. Warunda Road runs in an east-west direction. Approximately 3.5 kilometres south of that intersection, Settlers Road intersects with Yorkies Gully Road to the west and Exchange Road to the east. Approximately half way along Settlers Road, between the junctions of Warunda Road and Yorkies Gully Road, is the homestead of the farm belonging to Mr Graham Giddings. The homestead and shed are on the eastern side of Settlers Road and are only a very short distance from the road itself. There was at that time a filled inflatable swimming pool adjacent to the homestead. The property is known as Beaumont. The relevant roads and the Beaumont property can be clearly seen on the map produced below:



Settlers Road is the north/south road running up the middle of the map, with Yorkies Gully Road crossing its southern end, and Warunda Road at the northern end. For the purposes of this map, please disregard the red directional arrows.<sup>559</sup>

- 7.5. Settlers Road is a dirt road and like most of the roads in the district has native vegetation along both its sides.

<sup>559</sup> Exhibit C281z(a) figure 15

- 7.6. The two utilities occupied by Messrs Holman, Head, Richardson and Murnane travelled to the Beaumont premises. Their intention was to assist in protecting that property if fire were to threaten it. Their efforts in this regard were, as were the efforts of most farmers, wholly uncoordinated. There appears to have been no communication with CFS as to their deployment in this instance.
- 7.7. Prior to their arrival two other farm firefighting units and their crews had already arrived at Beaumont. Mr Darryl Puckridge and his son Owen were already there with their farm firefighting appliance. Another man by the name of Andrew Green was present with his unit, and another person who worked for Mr Graham Giddings, Robbie Flavel, was also in attendance.
- 7.8. Also in attendance at the premises were two CFS trucks. They were the Tumby Bay and Yallunda Flat appliances, both of which had been tasked by CFS command to attend at the Beaumont premises. By that time it was obvious that the fire had emerged from the swamp into the surrounding stubble paddocks. At that time it was severely threatening the property of Mr Peter Cabot. In addition, the transcripts of the CFS radio transmissions that are part of Exhibit C222l reveal that at 11:05am concern was also being expressed about fire potentially threatening the Beaumont premises. At 11:13am a further transmission requested CFS units to be made available for house protection. The response was that the Tumby Bay and Yallunda Flat appliances would be tasked to attend the Beaumont premises. At 11:17am the Officer in Charge of the Tumby Bay appliance, Mr Brad Holliday, radioed Wangary Control advising that his appliance and the Yallunda Flat appliance were about to arrive at Beaumont. The transmission reveals that Mr Holliday's intention at that time was to there make observations as to what was taking place in respect of the fire.
- 7.9. I heard evidence from Brad Holliday. His witness statement was also tendered to the Inquest<sup>560</sup>. Mr Holliday told me that while he was at the property he observed a fire cross Settlers Road at a location about a kilometre to the south of the Beaumont premises. He did not recall having received any prior warning that fire had broken out or that it was approaching Settlers Road. However, although he had seen no sign of flames before he saw the fire cross Settlers Road, he had seen a lot of smoke. Mr Holliday gave me the impression that he did not at that stage detect any immediate danger to the persons situated at the Beaumont premises. However, he did observe

that a number of men with their farm firefighting appliances were wetting down areas around the house, clearly against the possibility of fire reaching that location. Mr Holliday told me that he did not anticipate any imminent wind change that would place anyone in immediate danger. He knew that there was meant to be a wind change during the day but told me that he was not entirely sure when it was meant to take place.

- 7.10. Darryl Puckridge and his son Owen had originally intended to take their farm firefighting appliance to the Cabot house which Mr Puckridge understood was under threat. However, while travelling south along Settlers Road towards Cabot's, he could see the fire to the western side of their position and so they decided to stop at the Beaumont premises and work there. As well, he had heard on the UHF radio that Mr Cabot's house had been saved. Mr Darryl Puckridge, whose statements I received in evidence<sup>561</sup>, stated that he could see the fire coming across the flats to the west of Settlers Road and concluded that the fire was travelling towards, and therefore threatening, the Beaumont premises. It is apparent from his statements that aside possibly from Mr Flavel, he and his son were the first to arrive. As to who arrived first is of little consequence. Messrs Holman, Head, Richardson and Murnane arrived in their vehicles at some point and those present all began to pour water on various locations around the house. The owner of the property, Mr Graham Giddings, was not present.

7.11. CFS presence at the Beaumont premises

The two CFS crews were not actively involved in the protection of the Beaumont homestead. The impression I obtained from Mr Holliday's evidence was that the two CFS crews, having not detected any immediate danger to the Beaumont premises, were there at that stage simply to observe what was taking place in relation to the fire. It was while they were present making their observations that Mr Holliday witnessed the fire cross Settlers Road to the south. The fire at that point was heading in a southeasterly direction and I infer from that that the fire was being driven by the northwesterly wind that had picked up earlier in the morning. Mr Holliday told me that the only communication between the two CFS crews and the farmers who were at the property occurred when they told the farmers that they were going to investigate the fire that they had seen cross Settlers Road to the south. On the other hand, Patrick

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<sup>560</sup> Exhibit C93

Head told me that he did not speak to any of the CFS personnel at any time whilst they were there. In any case, it is clear from Mr Holliday's evidence that there was no discussion between members of the CFS and the farmers about whether the latter should remain in that location. Mr Holliday could remember no discussion along those lines, but simply recalled that they told the farmers that they were going down to investigate the fire that had crossed the road<sup>562</sup>. He could not recall whether he detected any concern on the part of the farmers about the fire approaching their location. Other than witnessing with his own eyes the fire cross over Settlers Road some distance to the south, Mr Holliday told me that he was not aware of any warning or information that the fire had broken out from any particular location. He said he was not aware of any information that the fire was approaching Settlers Road or that specific location on Settlers Road. In particular, he had no recall of any information to the effect that the fire was breaking out and approaching from a location to the west. Mr Holliday was asked:

Q. When you left the area of the fire, did it cross your mind that the fire might reach the Beaumont premises, or was it heading in a direction that you thought did not have that potential.

A. I'm not really sure.

Q. Did you give that any thought at all.

A. Not really sure.<sup>563</sup>

- 7.12. Mr Holliday could not recall whether he had invited any of the farmers to go with him. In my view it is clear that no invitation was made. The CFS radio transmission transcripts record that at 11:31am the Tumby Bay appliance told Wangary Control that the fire had jumped the road about a kilometre south of the Beaumont premises. At 11:35am the Tumby Bay appliance sent another radio message to Wanilla Control seeking information as to whether there were any other appliances that could be tasked to the fire south of the Beaumont homestead. The communication suggested that at least one or two more appliances would be required. At 11:36am Tumby Bay is recorded as having advised Wangary that the wind seemed to be changing and '*blowing back towards the car at Giddings' house there*'<sup>564</sup>. It is not clear whether Tumby Bay and Yallunda Flat were still at Beaumont when the 11:36am communication was made.

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<sup>561</sup> Exhibits C31 and C70

<sup>562</sup> Transcript, page 7154

<sup>563</sup> Transcript, page 7156

<sup>564</sup> Exhibit C222l, page 202

7.13. Mr Holliday told me that when they left the premises they travelled south along Settlers Road. The farmers remained at Beaumont. The CFS appliances turned into the paddocks on the eastern side of Settlers Road and a further radio transmission at 11:41am supports Mr Holliday's evidence that the fire at that location was by then out of control. The fire was in stubble. Mr Holliday told me that they were unable to contain the fire because at that point his recollection was that the wind changed and strengthened. The wind had swung around from the west and had created severe difficulty for the two appliances. In addition, the appliances were starting to run low on water. A decision was made that they would abandon the area. The two appliances moved in a northerly direction through the paddocks to the east of Settlers Road and to the east of the homestead. At 11:43am a further transmission was made from the Tumby Bay appliance advising Wanilla Control that they were leaving the area and were unable to return to the house (clearly a reference to the Beaumont premises) because the fire was '*just running wild*'<sup>565</sup>.

7.14. The decision to leave the Beaumont premises

Patrick Head told me that he had noticed the departure of the two CFS appliances. He said that although there was a lot of smoke, he still had no idea where the fire was. He and his three companions made a decision to leave the location in their two farm firefighting appliances. Patrick Head stated that the wind had changed and had picked up, and as they drove onto the road, the smoke and dust intensified. He became aware at one stage that the wind had come around to the west. Mr Head explained the decision to vacate the location in these terms (Pee Wee is Mr Richardson):

'Yes, I think the smoke had started to intensify a bit and I think Darryl and Pee Wee had been talking - Neil had been talking - yes, it's time to get out of here in case it starts to come across. So we or Trent and Pee Wee just got water from that blow-up swimming pool I said about, and they started to pull out. We turned around and there was a couple of like barbecue gas bottles near the house, so Darryl's son Owen and I grabbed them and ran them out on to the - like in the middle of the dirt track into the driveway, so they wouldn't blow up next to the house.'<sup>566</sup>

7.15. The convoy of three vehicles then left. Darryl Puckridge said that the convoy left Beaumont at about 11:30am, Patrick Head said they left at about 11:35am. These times would be reasonably accurate in the light of information in Mr Head's telephone records that I will mention presently. Andrew Green led in his utility. He

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<sup>565</sup> Exhibit C222I, page 203



was its sole occupant. Messrs Holman and Head followed in Mr Holman's vehicle. Both occupants of Mr Holman's vehicle were in its cabin. The utility occupied by Mr Richardson and Mr Murnane then followed. Mr Richardson was driving and Mr Murnane was on the back of the utility. Mr Head said that his final image of Mr Murnane was of him leaning over the fire unit on the back of the utility. Mr Head told me that they had some appreciation of the fire's proximity because of the smoke but they had no idea of what they were about to experience. Mr Head said that by then the wind had probably gone right around and had picked up. The convoy turned right onto Settlers Road and headed north. As they pulled out onto the road they were inundated with dust and smoke and struck with a very strong wind. All they could see of Mr Green's vehicle were the tail-lights. Mr Head's impression was that Messrs Richardson and Murnane were right behind them when they left. Mr Holman attempted to contact Mr Richardson on his UHF radio to tell him to turn back but received no response. A couple of hundred metres down the road the heat and smoke became more intense. At that stage Mr Head said that the vehicle he was in was overwhelmed by flames from all directions. He was able to determine, however, that the fire had come from the west across the stubble paddock. Mr Head said that he and Mr Holman *'just went like buggery until we got to the crossroad'*<sup>567</sup>. At that crossroad, namely the intersection of Settlers Road and Warunda Road, they met Mr Green who had managed to get through before them, but Mr Richardson and Mr Murnane were no longer part of the convoy and were nowhere to be seen. Mr Head told me that his telephone records reveal that he endeavoured to call Mr Murnane's mobile telephone at 11:43am, 11:45am, 11:48am and 12:02pm. An attempt was also made to call their vehicle on the UHF radio. All attempts to contact Messrs Murnane and Richardson failed. It is to be noted that 11:43am was the time at which the Tumby Bay appliance had called Wangary Control and said that they could not get back to the house. At 11:41am they had first advised that the fire was out of control.

- 7.16. Mr Darryl Puckridge, his son Owen and Mr Flavel had elected to stay at Beaumont. Puckridge Snr had seen Mr Richardson fill up the tank on his utility with water from the swimming pool. After that he did not see them again. He assumed correctly that

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<sup>566</sup> Transcript, page 916

<sup>567</sup> Transcript, page 919

they had all left together. Mr Puckridge made it clear in his statement that he drew the conclusion that the fire was rapidly approaching and that conditions were out of control. He, his son and Mr Flavel sought refuge from the fire behind some sheds. Mr Puckridge in one of his statements described the conditions at this time in these terms:

'... the weather was blowing its guts out, it was really hard. It was really hot, I don't know the temperature but it was very hot. From my experience, with wind that strong and the heat mixed together, with a fire heading in our direction it was a recipe for disaster.'<sup>568</sup>

He described the air as if it was being vacuumed up. When the fire approached, Mr Puckridge likened it to a fireball, and that when it struck the side of the shed it was like a '*mini explosion*'<sup>569</sup>. When it passed, they decided to abandon the position where they had taken refuge and return to the house. At that point they could see that one shed was on fire, a bale of hay was alight and that trees were burning. Mr Puckridge and the others tried to save the house by pouring water on burning eaves. They stayed at Beaumont for perhaps another 20 to 30 minutes. In due course Mr Darryl Puckridge and his son Owen left Beaumont. Like the convoy that had gone before them they turned right into Settlers Road and headed north. Visibility was still very poor at that stage but by then the fire front had passed, as had the immediate situation of danger. After travelling 200 or 300 metres north along Settlers Road they encountered a badly burnt and deceased person lying in the middle of the road. That person was later identified as Mr Richardson. Approximately 67 metres further along the road Mr Richardson's utility was located. It was facing in a northerly direction. The driver's door of Mr Richardson's utility was open and the glass of the windows had exploded outwards. The vehicle had clearly been overwhelmed by fire. In due course the remains of Mr Murnane were discovered in the rear tray of the vehicle. The image over the page depicts Settlers Road and the Beaumont property:

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<sup>568</sup> Exhibit C70, page 17

<sup>569</sup> Exhibit C70, page 18



- 7.17. I deal elsewhere with the precisely identified source of the fire that engulfed Mr Richardson's utility. Suffice it to say that it is obvious that the fire, as Mr Head identified, came from a westerly direction across the stubble paddocks and that it had originated in the swamp to the west of those paddocks. I also repeat here that in my view this fire did not originate in that part of Mr Cabot's property marked Area C on Exhibit C176b, or originate from Mr Cabot's backburn.
- 7.18. It is clear to me that after the fire front had crossed Settlers Road under a north-westerly wind, as seen by Mr Holliday of the Tumby Bay CFS, the wind changed from the north-west direction to the west. It also intensified. What had been the northern flank of the fire that had proceeded across the stubble paddocks to the west of Settlers Road, had become to all intents and purposes a fire front and it was that fire, intensified by the flammable roadside vegetation, which engulfed Mr Richardson's vehicle<sup>570</sup>. Mr Gould reported as follows:

'Near the fatality site on Settlers Road the fire rate of spread doubled at the time of the wind change and would have been very intense fire burning across the road and in the roadside vegetation.'<sup>571</sup>

<sup>570</sup> Transcript, pages 17524 and 17525

<sup>571</sup> Exhibit C175b, page 39

Mr Gould suggested that the leaf freeze seen at the site indicated a westerly wind at that point and suggested that the deceased had been caught in a dead man zone situation. The dead man zone phenomenon occurs when a relatively benign fire flank becomes a highly dangerous fire front upon a change of wind direction. It is a well recognised hazard of firefighting.

Mr Andrew Cabot, who was on the Yallunda Flat appliance, describes conditions on Settlers Road in these terms:

'... the fire was burning in stubble and crossing Settlers Road. The fire was burning through Peter Cabot's property and through roadside vegetation on Settlers Road and coming towards us. The flames of the fire were about ten feet higher than the power lines on Settlers Road. The flames were spiral shaped and moving fairly quickly.'<sup>572</sup>

7.19. The Tumby Bay and Yallunda Flat CFS appliances had made their way north. I have already referred to the transmission at 11:43am in which it was indicated by the Tumby Bay crew that they could not get back to the house. At 11:51am a further transmission from the Tumby Bay appliance stated among other things that at that time they were situated on the western side of the fire and that they could not get 'back in anywhere'<sup>573</sup>. Mr Holliday told me that they did not actually see the Giddings property (Beaumont) during their journey north to Warunda Road<sup>574</sup>. When asked why it was that he had not returned to the property he said 'I'm not really sure. Whether it was because we couldn't get back in there, I'm not sure'<sup>575</sup>. In my view the transmissions made from the Tumby Bay CFS appliance at 11:43am and 11:51am illustrate that the reason they did not go back to the property was that fire prevented them from doing so.

#### 7.20. Communication between the farmers and the CFS

The evidence is clear that the farmers present at the Beaumont premises and the CFS crews were all acting independently of each other. There was little or no communication between them and certainly no cohesion. Mr Holliday told me that if he had foreseen danger to the farmers, he would not have left that location. He told me that there were no signs of flame at the time that he left. He was asked:

'Q. Say if you had some fire or smoke coming from the north-west towards the property at the time you left it, would you have taken any steps in relation to the safety of any person, do you think.

<sup>572</sup> Exhibit C138, page 2

<sup>573</sup> Exhibit C222l, page 204

<sup>574</sup> Transcript, page 7155

<sup>575</sup> Transcript, page 7158

A. Yes, because that road's very dangerous to try and get along.

Q. But what about the people at Beaumont.

A. Yes, I probably would have.<sup>576</sup>

When asked as to whether it crossed his mind that the fire might reach the Beaumont premises, Mr Holliday said that he was not really sure whether he had given any thought to that at all. However, Mr Holliday did say that if he had foreseen that the wind change would drive the fire from a south-easterly direction to an easterly direction, he probably would not have left the Beaumont premises. He said:

'Well, if I knew that the wind change was going to be then, and it was going to be ferocious, I wouldn't have gone in there.'<sup>577</sup>

- 7.21. The evidence is clear to me that Mr Holliday as the Officer in Charge of the Tumby Bay appliance had little or no relevant information about the ferocity of the fire, or of the imminent dangerous wind change when he made the decision to leave the Beaumont premises. He had no real understanding of the forecast or anticipated wind changes and had no real appreciation of the danger that was going to be posed to any person travelling along Settlers Road. I am confident, having seen Mr Holliday in the witness box, that had he appreciated the danger he would have stayed with the farmers. In hindsight, the decision by Mr Darryl Puckridge to remain at the Beaumont premises and take shelter while the fire front passed was obviously the correct one. There is no reason to suppose that had the others stayed, they would not have been similarly protected, either by the house or by other structures on the property. As with the CFS crews, it is plain that none of the men that left in the three vehicles had a full appreciation of the danger in which they were placing themselves. They had no real information of an imminent wind change. They did not appreciate that a wind change would present an immediate danger were they to venture onto a road that had a great deal of flammable vegetation on its edges. This was in my view a classic case of Mr Richardson and Mr Murnane being caught in the dead man zone on the change of a wind where the fire flank suddenly becomes the fire front. This is a notoriously dangerous phenomenon which, given the weather forecast, was something that ought to have been anticipated and allowances made therefore. The difficulty of course is that unless one is in possession of accurate information, decisions such as those made by the gentlemen who decided to leave would be

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<sup>576</sup> Transcript, page 7162

<sup>577</sup> Transcript, page 7153

inherently flawed, and their survival would be dependent more on good luck than good strategy.

- 7.22. There were other near misses upon the change of wind direction in this vicinity. The Lipson CFS appliance was attending the fireground as part of the Tumby Bay strike team when they were caught in what firefighters refer to as a ‘flash over’<sup>578</sup>. The appliance was being driven in a westerly direction along Exchange Road towards the fireground when they encountered fire in the paddocks. The Officer in Charge, Mr Richard Ware, instructed the driver to turn around and while the appliance was in the process of attempting this they were overwhelmed with flames. Unable to complete the turn the appliance continued to drive in a westerly direction through the flames until reaching a safe location. The two crew members on the back of the appliance, Messrs Troy Holliday and Toomas Piip both received burns before they were able to pull the protective shield over themselves for protection. Both men required medical treatment for their injuries. The crew of the Coultas CFS appliance was also subjected to an ordeal. This appliance was in the paddocks marked A on Exhibit C176b. They had been fighting breakout fires in that area and at one point went to the location marked ‘TANK’ in order to refill. The occupants of that appliance describe a wind change from the west or south-west while they were at that location. The wind change was accompanied by what some have described as a ‘fireball’ or a ‘wall of flame’ coming towards them from a general westerly direction. The Coultas appliance escaped the fire only after the driver, Mr Bruce Morgan, ran down a fence post and manoeuvred the vehicle over the post and the fencing wire. They were then able to make their way east and then north. There is no evidence as to the precise time of this incident but it must have occurred at around the time of Mr Richardson’s and Mr Murnane’s deaths. Mr Morgan and others describe a ‘red flag’ warning being broadcast very shortly thereafter.
- 7.23. A red flag warning occurs when a situation of imminent danger is perceived, such as a wind change, and is broadcast to CFS appliances via the GRN. The Coultas appliance acknowledged receiving the warning at 11:46am. Private farm firefighting appliances do not receive such a warning as they are not connected to the GRN. However, the warning can be passed verbally from a CFS crew to a farm appliance depending of

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<sup>578</sup> Exhibit C125, page 4

course on their proximity. Alternately, it can be transmitted over the UHF radio which CFS vehicles and farm appliances (generally) possess in common.

- 7.24. There is no evidence that this occurred here. The earliest reference to a red flag warning is contained in the Region 6 log where at 11:41am there is a reference to 'DGO1 Red Flag Warning'<sup>579</sup>. DGO1 was Mr Robert Maddern<sup>580</sup>. Wangary Control records reveal at 11:43am 'Ap DG1 Red Flag warning wind change'<sup>581</sup>. The first acknowledgment by a CFS appliance appears to be that of Tumby Bay at 11:44am and of Lincoln at the same time. It therefore appears that the red flag warning was broadcast some time between 11:41am and 11:44am.
- 7.25. Mr Morgan said that around the time he heard the red flag warning, he also heard on the UHF radio a panicked voice seeking help because the person's utility had stopped. He thought he heard this transmission probably before he heard the warning. He thought the time was between 11:30am and 11:45am. There is no evidence that anyone in the convoy containing Messrs Richardson and Murnane received either a formal notification of an imminent dangerous wind change or the red flag warning. In my view either scenario is highly unlikely.
- 7.26. I heard evidence from Mr Roger Pepworth, who is the Fire Prevention Officer for the Tumby Bay District Council and also the Captain of Ungarra CFS, which is part of the Tumby Bay CFS Group. Mr Pepworth told me that in his Brigade it is their practice to always advise farmers over the UHF if a red flag warning has been issued. He said that this was an effective way of advising farmers of the situation as long as the warning was explained so that farmers understood the conditions that they were going to encounter<sup>582</sup>. Mr Jeffrey Klitscher, a past President of the South Australian Farmers Federation said that in his own personal experience he has been advised of wind changes by CFS through the UHF radio and that it was important, in the opinion of the SAFF that all CFS trucks are fitted with UHF radios for that particular purpose, that is to communicate important wind change information to farmers who are assisting them<sup>583</sup>.

<sup>579</sup> Exhibit C203, page 5 (Region 6 CFS Radio Log)

<sup>580</sup> DGO is the Deputy Group Officer

<sup>581</sup> Exhibit C203, page 16 (CFS GRN014 Radio Log)

<sup>582</sup> Transcript, page 14698 and 14699.

<sup>583</sup> Transcript, page 16056

7.27. It is more likely that when the convoy of farmers left Beaumont, they were acting on their own wits as Patrick Head has more or less suggested. This to my mind was a highly unsatisfactory state of affairs, but it appears to have been the way of things at the time. Farmers acted quite independently, both from the emergency services and from each other. While their actions were courageous and their motives were laudable, their activities and movements were ad hoc and occurred without proper regard for their own safety. Farmers had no proper and reliable means of receiving relevant information. In fighting fires of this magnitude and ferocity they, like the majority of their fellow citizens of the Lower Eyre Peninsula that morning, were essentially hostages to fortune.

7.28. Was the wind change expected?

The wind change that was experienced on the fireground was not unpredicted nor unexpected. The State-Wide Fire Weather Forecast issued at 4:20pm on Monday 10 January 2005 predicted a Grassland Fire Danger Index for the following day of 63 and 114 for Coles Point and Port Lincoln Airport respectively and north-westerly winds of 40 kilometres per hour strengthening to 50 kilometres per hour from the south-west. The change was forecast to be a 'fresh to strong and gusty west to south-west wind change' and was forecast to occur between 1000 hours and 1400 hours<sup>584</sup>. The CFS Region 6 Fire Weather Estimates, which is a document produced by CFS Region 6 headquarters based on the information they have received from the Bureau of Meteorology and is sent out to all Group Officers in the region, referred to the conditions as being:

'Dry. Hot to very hot with strengthening northerly winds ahead of a southwest to south wind change in the west during the morning, extending throughout during the day and becoming fresh to strong in the afternoon.'<sup>585</sup>

The 12 hour forecast issued at 6:45pm on the Monday referred to the change being forecast to develop between 10am and 2pm local time<sup>586</sup>. The 12 hour forecast issued at 4:05am on Tuesday 11 January 2005 referred to a predicted west to south-west change between 1100 hours and 1400 hours. The evidence would suggest that the wind change occurred some time between 11:30am and 11:45am. The change was said to have been accompanied by strengthening winds. Both the time and nature of the wind change occurred as predicted. The Bureau of Meteorology Report

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<sup>584</sup> Exhibit C235

<sup>585</sup> Exhibit C235a



Summary<sup>587</sup> suggests that the movement and orientation of the wind change was also accurately represented in forecast maps provided to the CFS. There is no evidence that these maps were provided to the Incident Management Team on the Tuesday, but they depict little more than the information that was already available from the written forecasts to which I have already referred. In short, it is difficult to argue with the assertions of the BoM that the wind change predicted for the Tuesday morning occurred as predicted. The BoM makes this observation about the wind change:

'A significant wind change which moved through the fire ground around the time of most intense burning exacerbated the problem confronting both fire combatants and residents of the area, by converting the relatively narrow head of the fire into a broad rapidly moving fire front.'<sup>588</sup>

This description essentially encapsulates the well-understood phenomenon that has already been referred to in these findings as the 'dead man's zone'.

- 7.29. Those on the fireground seemed to have very little information about the predicted wind change. I have already referred to Mr Holliday's state of knowledge. He was the Captain of the Tumby Bay appliance. Indeed, few had much of an idea of the predicted weather conditions at all. Mr Ross Pope, the Sector Commander of the Scrubby Sector said in evidence:

Q. Did you have any indication as to weather forecasting at that time.

A. Not at that hour of the morning.

Q. So, what, you hadn't been told anything by Maddern when you set out.

A. Not that I can recall.<sup>589</sup>

Mr Steve Nettle, the Wangary Captain and Sector Commander of the Yorkies Crossing Sector told me:

Q. Were you aware of the forecast for the Tuesday.

A. No I wasn't.

Q. You didn't know it was going to be a bad day.

A. No.

Q. That's at the time that you went out there.

A. At the time we went out there, I didn't have any idea of what the weather was going to be like that day.

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<sup>586</sup> Exhibits C221 and C181I

<sup>587</sup> Exhibit C221

<sup>588</sup> Exhibit C221, page 46

<sup>589</sup> Transcript, page 4731

Q. Were you given any information whilst you were at Wanilla as to the weather.

A. No.<sup>590</sup>

Mr Damien Puckridge, the Edilillie CFS Captain and Sector Commander of the Lady Franklin Sector said:

Q. You didn't know of the weather forecast at the stage and nothing was mentioned to you at the time.

A. No, I wasn't briefed on the weather forecast at all. I had no idea the conditions that we were about to be put under.<sup>591</sup>

The evidence of these three men is particularly compelling. On the Tuesday morning, they were the sector commanders of the three sectors most at risk under the forecast conditions. The fact that they had not been briefed on the weather conditions in general and the impending wind changes, is in my view very surprising.

### 7.30. Conclusions

It is difficult to determine what the outcome would have been if the farmers had received better information about the perilous situation they were in. It is not known when exactly it was that the decision was made to leave Beaumont in relation to the departure of the Tumby Bay and Yallunda Flat CFS appliances. Mr Holliday communicated that the situation was out of control at his location at 11:41am. At 11:43am he reported his inability to return to the house and that the fire was '*just running wild*'<sup>592</sup>. It was shortly after that that Patrick Head first attempted unsuccessfully to contact Mr Murnane by phone. It seems that by then Messrs Richardson and Murnane had probably perished. The precise time of the red flag warning cannot be determined. It is highly unlikely that it was broadcast in time for it to have been passed on to the farmers. Certainly, after Tumby Bay and Yallunda Flat left Beaumont, it was not going to be passed on by word of mouth. It is possible that by the time the red flag warning was broadcast, the two gentlemen had already died. In any event, it is speculative as to whether it would have made any difference to their decision not to remain at Beaumont. Suffice to say, if they had remained at Beaumont, like Darryl Puckridge, his son and Mr Flavel, they probably would have survived.

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<sup>590</sup> Transcript, page 4069

<sup>591</sup> Transcript, page 1135 and 1136

<sup>592</sup> Exhibit C222l, page 203

**8. The circumstances surrounding the death of Helen Kald Castle**

- 8.1. Mrs Castle was 54 years of age when she met her death on Tuesday, 11 January 2005. Mrs Castle and her husband Trevor Castle occupied premises situated at 20 Dorward Street, North Shields. North Shields is situated on Boston Bay approximately 11km north of Port Lincoln. The township is situated between the Lincoln Highway and a narrow beach. There is a jetty at the beach. North Shields is 35 kilometres to the south-east of the original fireground.
- 8.2. North Shields is a relatively small settlement consisting in the main of residences. There is a hotel at North Shields. There is also a caravan park at the town's southern end which is known as the Port Lincoln Caravan Park. The caravan park catered for both temporary and permanent residence. Dorward Street runs in a roughly north-south direction for most of the length of the town. Number 20 Dorward Street was on the eastern or sea side of the street. The premises consisted of a shop, which was quite close to the street frontage, and a residence at the rear. Mr and Mrs Castle lived in the residence. The shopfront was the North Shields Post Office until 1992. Mr and Mrs Castle had converted the shop into the Karlinda Shell Museum. The main entrance to the building off Dorward Street led into the Shell Museum. At the rear of the museum was a door leading to the residence. At the rear of the residence was a bathroom that had a window overlooking the rear yard of the premises. The property was only a very short distance from the beach. That distance could easily be walked in a matter of seconds. The premises' proximity to the beach and jetty is illustrated in Exhibit C208j produced over the page



- 8.3. Mrs Castle met her death after she elected to remain in the premises during the passing of the fire front through North Shields. Her body was located in the bath in the bathroom at the rear of the premises. It is evident that Mrs Castle had thought that refuge from the fire might be successfully sought in the bath. The building was completely gutted and all that stood after the fire were essentially the external and some internal walls of the building. The roof had collapsed.
- 8.4. Mrs Castle was the only resident of North Shields to lose her life. There was a large measure of destruction in North Shields, in the main at the southern end of the Port Lincoln Caravan Park. However, the fire seems to have been quite selective in its destruction. It appears that narrow fingers of fire penetrated the town from the west and residences that were in the path of those fingers were burnt. Much of the destruction and damage was said to have been caused by ember attack preceding the front.
- 8.5. Mr Castle worked at DI Fishing Company Pty Ltd in Port Lincoln. Mrs Castle was a schoolteacher, but at that time it was school holidays. Mr Castle went to work in Port Lincoln on the morning of Tuesday, 11 January 2005. Mrs Castle remained home. Mr Castle provided a statement to the police<sup>593</sup>. The statement was given on

<sup>593</sup> Exhibit C37

Thursday, 13 January 2005. Mr Castle does not provide any information in the statement about his knowledge of the fire on the Tuesday morning, nor discusses what if anything he and his wife had talked about in respect of the Wangary fire. However, he stated the following:

'Our fire plan was to leave the house and go to the beach in the case of fire. I cannot explain why she didn't leave the house.'<sup>594</sup>

I take it from that statement that the plan that Mr Castle was referring to was a general plan and not necessarily a plan in relation to this particular incident. As things were to transpire, many of the North Shields residents successfully sought refuge at the beach. In fact, a CFS phase warning advised residents who were electing to evacuate their dwellings that they could assemble at the beach which was described in the warning as a 'designated safe area'. Whether people did that in response to the warning or whether they did so anyway is another matter.

- 8.6. The telephone records of DI Fishing at Port Lincoln reveal that early on the Tuesday afternoon two telephone calls were received from the telephone of Mr and Mrs Castle at North Shields. Mr Castle described a telephone conversation that he conducted with his wife at about 12:30pm that day. She telephoned him as he was having lunch at his place of work. That is the only conversation with his wife that he has described. However, another employee of DI Fishing by the name of Hazel Paxton, whose statement I received in evidence<sup>595</sup>, stated that she received a telephone call from Mrs Castle at about 12 noon and received a second telephone call from her at about 12:45pm. There appears to be a record of only two telephone calls from the Castle residence at North Shields to DI Fishing, one at 12:29pm, the other at 12:51pm. I do not think anything turns on the exact number of telephone calls that were made. It is evident that the two calls of which there are a record were made by Mrs Castle. She was the only person at the premises that afternoon. The calls undoubtedly concerned the approach of the fire and Mrs Castle's worries in that regard. I discuss these communications in more detail below.

#### 8.7. Conditions at North Shields

There are a number of statements from residents of North Shields that have been tendered before me. As well, I heard evidence from Mr Grant Shepperd of the CFS as

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<sup>594</sup> Exhibit C37, page 5

<sup>595</sup> Exhibit C38

to the progress of the fire across the Lower Eyre Peninsula during the Tuesday. Certain observations made by him were logged at Wangary Control by Mr Jeffrey Lock. This material sheds light on the circumstances in which Mrs Castle found herself.

- 8.8. Mr Shaun Roberts' statement was tendered at the Inquest<sup>596</sup>. He and his wife were at home in North Shields on the Tuesday. He was aware that there had been a bushfire the day before, but did not know the exact location of it. At about 12:30pm he noticed a lot of thick black smoke in the distance, but did not believe that he was in any danger. He consequently went back to work. He said he had been listening to the local radio station most of the morning but had not heard any fire warnings. In addition, nobody from the CFS had attended at their house to issue any warning. On his way back to work he noticed flames on the top of the hill to the west of North Shields. He decided to return home but was unable to do so in his vehicle. He returned to his house on foot and by this time his wife and his children were already in their car. He told them to seek refuge at the beach. They did and they survived. Their house was totally destroyed as were two sheds, two boats and a motor vehicle. Mr Roberts said that his family did not have a fire action plan given their proximity to the beach. Being a CFS volunteer he was aware of the 'Stay or Go' policy. Mr Roberts' information about the approaching fire was gleaned from his own observations.
- 8.9. Mrs Rio Rawles<sup>597</sup> lived with her husband and children at premises at Murray Drive, North Shields. Mrs Rawles was aware on the Monday that there were fires in the Wangary and Marble Range area, but at that time she and her family did not consider that they were in any danger. On the Tuesday, her husband assisted with catering in respect of the firefighters in the Marble Range district. In the morning Mrs Rawles noticed that the air was a bit hazy but that there was no fire around her property. At about 12:30pm the power went off at her premises. At about that time Mrs Rawles had a visitor from FAYS. The visitor did not say anything to her about fires other than to say that it was smoky and windy. At about 1pm Mrs Rawles received a call from her sister who also lives at North Shields close to the beach. Her sister was upset because a house had burnt down in North Shields. At that stage Mrs Rawles had no idea that the fire was even in the town. As a result of her sister's telephone

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<sup>596</sup> Exhibit C60 – Mr Roberts lived in a house on Lincoln Highway, North Shields

call she looked outside and saw that trees were alight and that the exterior was very dark, hot and smoky. Mrs Rawles grabbed her daughter and ventured out onto the Lincoln Highway. Mrs Rawles was barefoot. Her daughter was only wearing a nappy. Mrs Rawles states that she was nearly struck by a vehicle on the highway. She was picked up by the vehicle's occupants and was taken to a weighbridge near the Port Lincoln Airport, just north of North Shields. She stayed there for about 15 minutes. A fire truck approached and the firefighters told them all to follow them to the airport where they sought refuge. Mrs Rawles' house and shed were completely burnt to the ground. Mrs Rawles stated that she and her family were not aware of a 'Stay or Go' policy, but were aware of an advertising campaign that encouraged residents to clear debris near their homes. Apart from receiving the telephone call from her sister, Mrs Rawles did not receive any other warning about the approaching fire. Her family had not discussed any evacuation plan in relation to their property.

8.10. Mr Sean Egan's statement was tendered at the Inquest<sup>598</sup>. Mr Egan and his wife occupied a permanent site at the Port Lincoln Caravan Park at North Shields. On the morning of the Tuesday he was travelling to Streaky Bay on the West Coast of the Lower Eyre Peninsula when he noticed smoke in his rear vision mirror. He was listening to 5CC, which is a local radio station, and the advice at that stage was that there was a fire heading towards Wanilla. Upon arrival at Streaky Bay, a friend advised him that the fire had affected North Shields. The structures on Mr Egan's site at the Port Lincoln Caravan Park were totally destroyed. Mr Egan was not aware of the CFS 'Stay or Go' policy.

8.11. Mr Bill Whitbread's statement was tendered at the Inquest<sup>599</sup>. Mr Whitbread also occupied a site at the Port Lincoln Caravan Park at North Shields. On the Tuesday morning he was in Port Lincoln. He was already aware from the previous day that there had been a fire in the Wangary area. Whilst in Port Lincoln, Mr Whitbread saw smoke blowing over the city and concluded that the fire had broken out again. Mr Whitbread did not believe at that stage that the fire would threaten North Shields, but became aware during the morning of a wind change. He nevertheless concluded that it would be safe for him to have lunch at the Grand Tasman Hotel in Port Lincoln. The power went off at the hotel. He heard on ABC Radio 891 that the bushfire was

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<sup>597</sup> Exhibit C62

<sup>598</sup> Exhibit C58

<sup>599</sup> Exhibit C51

heading towards North Shields. He decided to return home immediately, but was stopped by a roadblock on the Lincoln Highway. The structures on his site were completely destroyed together with a vehicle, trailer and boat. Mr Whitbread had lived in the caravan park for about 20 years. He never considered the park to be at risk of bushfire. He was aware of the CFS 'Stay or Go' policy.

- 8.12. Mr Derek Feltus' statement was tendered at the Inquest<sup>600</sup>. Mr Feltus owned a site at the Port Lincoln Caravan Park and was at home when the fire came through North Shields. Mr Feltus stated that about 5 minutes before the fire reached his position, he had received a telephone call from his mother. She told him that she had heard on the radio that people should move to the water. Mr Feltus had seen nothing on television. He stated that he had no warning that the fire was coming towards his location. As to whether he had any bushfire plan, Mr Feltus stated:

'I had no plan to leave this place in the event of a fire as I thought it would not happen to us.'<sup>601</sup>

By the time Mr Feltus had gathered his family into his vehicle, the fire was burning the caravans at the far end of the caravan park. Burning embers preceded the fire front in the vicinity of the caravan park. Mr Feltus went to the beach with other residents where he and his family survived.

- 8.13. Mrs Ivy Treagus lived with her husband on their farm at Greenpatch. Greenpatch is about 10 to 15 kilometres inland from North Shields. They did not have their television on. Mrs Treagus was unaware of the existence of fire warnings. I infer that she was not listening to the radio either. Members of her family either telephoned or came to her property to discuss the fire. No particular concern was expressed until about 11:30am when her grandson came to her property. She saw smoke at that stage. Her husband, however, did not believe they were in any danger. Later her son telephoned to tell her that the CFS had advised him that she and her husband should stay put at Greenpatch because the CFS did not believe they were in any danger.
- 8.14. Clearly not convinced, Mrs Treagus again examined the conditions, and she and her husband then left. They drove to North Shields where the Mobil proprietor told them that the CFS had advised refuge at the beach. By then, there were flames '*shooting*

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<sup>600</sup> Exhibit C82

<sup>601</sup> Exhibit C82, page 2



*across the road around us*<sup>602</sup>. They drove to the beach where they sheltered from embers under the jetty. The wooden posts of the jetty were too hot to touch. Many people were evacuated from the beach at North Shields by boat.

- 8.15. Mrs Treagus states that she and her husband were at no stage approached by the CFS nor emergency services. Their only action plan was to evacuate in the event of a fire and that they did. It will be remembered that a CFS phase 1 warning had been compiled at 11:52am for the Wanilla Forest area advising that the fire was moving in an easterly direction. Exhibit C91a reveals that the Treagus property on McFarlane Road was about 9 kilometres almost due east of the Wanilla Forest. It is not known whether the phase 1 warning was broadcast. It seems that Mr and Mrs Treagus would not have heard it anyway, but clearly the warning was relevant to their circumstances. A CFS phase 2 warning for North Shields, Poonindie, Louth Bay and Greenpatch areas was first broadcast at 12:49pm. This was the warning that advised refuge at the beach. It appears that Mr and Mrs Treagus arrived at the Mobil Service Station at North Shields at a time after the phase 2 warning was broadcast.
- 8.16. Mr and Mrs Treagus lost their house, sheds, farm implements and a vehicle in the fire.
- 8.17. Mr Ian Giblin's statement was tendered at Inquest<sup>603</sup>. Mr Giblin lived with his wife at 12 Dorward Street, North Shields. The only information Mr Giblin possessed about the fire on the Monday was that it was near Cummins. He said that he received this information on the radio. That information was inaccurate insofar as it related to the Cummins area. Be that as it may, Mr Giblin stated that he did not think too much about that information as the fire was so distant and in any case, it sounded like it was under control. At about midday on the Tuesday, Mr Giblin noticed that the sky had a threatening look about it and also noticed that there were cinders and smoke coming from the west. Mr Giblin commenced preparing his property for fire and some time later saw flames coming over the hill from the north-west towards his house. The water supply in North Shields eventually ceased. Mr Giblin and his wife decided to go to the beach to seek refuge. At one point Mr Giblin was in a reserve next to the Castle premises and could hear the glass windows of the shell museum blowing out. He could see flames inside the museum and saw that the roof was glowing red with the heat. He could hear banging and crashing from the museum which was consistent

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<sup>602</sup> Exhibit C59, page 2

<sup>603</sup> Exhibit C69

with the roof caving in. At that point Mr Giblin saw Mr Castle drive into Dorward Street. Mr Castle asked Mr Giblin if he had seen his wife Helen. Mr Giblin told him that he had not. Mr Giblin and his wife remained at the beach and after about 20 minutes witnessed the arrival of firefighters in their vehicles. He could not tell if it was MFS or CFS. In all, Mr Giblin and his wife remained at the beach for about an hour. Mr Giblin lost his car and carport in the fire, but fortunately his residence was spared. His neighbour's house directly to the north was completely destroyed by fire. Mr Giblin observes that at no stage did they receive any orders to evacuate the house. Mr Giblin said that the decision to leave the house was made because he felt that they did not have a chance if they stayed. Mr Giblin was sure that he would lose their home. Although this did not eventuate, one can understand his reasons for thinking otherwise.

8.18. What warnings were issued to the public?

At 12:19pm Mr Simon Vogel the Region 6 Duty Officer in Port Lincoln spoke on the telephone with Mr Robert Maddern. Their consensus was that the fire, travelling as it was by that stage in a general westerly direction, would not be contained and would go all the way to the east coast. Mr Vogel made a decision to issue a phase 2 warning for the North Shields, Poonindie, Louth Bay and Greenpatch areas. He did not have any information at that time as to the speed at which the fire was moving but concluded that it would reach the coast '*sooner rather than later*'<sup>604</sup>. Another decision was made at the same time that people should be advised to relocate to the beach. It is said that previous experience had shown that the beach could be a relatively safe haven.

- 8.19. As a result, at 12:22pm Mr Vogel prepared the phase 2 warning to which I have referred and this was faxed to CFS State Headquarters immediately. Mr Vogel did not fully complete the phase 2 warning form in that he neglected to sign it. The draft warning advised the public that a bushfire was burning in the Wanilla area and was moving towards North Shields, Poonindie, Louth Bay and Greenpatch in an easterly direction. The warning advised residents in those areas, or any persons between the face of the fire and those towns, that they should consider evacuating their property if they believed their previous precautions against fire would not give adequate protection of their lives or property. The warning went on to advise people who chose

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<sup>604</sup> Exhibit C241, page 22

to evacuate their premises that they may assemble at a designated safe refuge area which was located at the beach. There does not appear to have been any phase 1 warning for the North Shields area.

- 8.20. At 12:23pm Mr Vogel spoke to the CFS Chief Officer, Mr Euan Ferguson, and advised him that the fire would hit the sea between Louth Bay and North Shields. Poonindie is north of North Shields and Louth Bay is north of Poonindie.
- 8.21. At 12:27pm Mr Vogel spoke to Chief Inspector Malcolm Schluter of the South Australia Police. He advised Chief Inspector Schluter that the fire would reach the sea between Louth Bay and North Shields. There was some discussion about declaring the incident a major emergency and activating the Division Emergency Operation Centre (DEOC).
- 8.22. At 12:34pm Mr Vogel spoke to Mr Robert Maddern advising him that the phase 2 warning had been executed for the east coast of the Lower Eyre Peninsula.
- 8.23. At 12:35pm Mr Vogel contacted Mr Ferguson and made a request that there be a declaration of a major emergency and that the DEOC be activated.
- 8.24. At 12:37pm Mr Vogel received a telephone call from Mr Leigh Miller of CFS State Headquarters who advised that Mr Vogel had neglected to sign the phase 2 warning and asked Mr Vogel to resend it. As a result of a power failure, Mr Vogel was unable to do that, so it was agreed that Mr Miller would authorise the warning and have it implemented. Also, at 12:37pm, Mr Grant Shepperd who had been following the fire's progress advised Wangary Control that a front was heading straight towards the Lincoln Highway and North Shields. At that stage the fire front was about a kilometre west of the Lincoln Highway. When Mr Shepperd arrived at Lincoln Highway he noticed that traffic was still using the road notwithstanding the heavy smoke that was blowing across it. Mr Shepperd made a request via the GRN radio that police close the highway as it was estimated that the fire was 4 minutes from North Shields. This is recorded in the Wangary communication log as having occurred at 12:44pm.
- 8.25. The phase 2 warning was first broadcast on ABC at 12:49pm and again at 1:28pm, 1:47pm and 1:52pm. It will be observed that the phase 2 warning created at 12:22pm sat at State Headquarters for 15 minutes before Mr Miller rang Mr Vogel about it

being unsigned. There was a further delay of 12 minutes before it was broadcast. That can hardly be regarded as acceptable particularly when it was becoming obvious that the fire was moving quickly.

8.26. At 12:42pm Mr Vogel was advised that the fire was '*four minutes from North Shields*'<sup>605</sup>. Mr Vogel stated that this information took everyone by surprise as they were not expecting the fire to impact the location so quickly. As a result, a phase 3 warning was prepared for North Shields specifically and was faxed to CFS State Headquarters. The phase 3 warning bore a time of 12:48pm and was first broadcast by the ABC at 1:15pm. The warning advised the public that a bushfire was burning in the North Shields area and was moving towards North Shields. Residents still remaining in that area were advised not to evacuate the area and to keep off the roads. It will be seen that at the time the phase 2 warning was first broadcast at 12:49pm, the fire would have almost reached, if not had reached, North Shields. The other point worthy of note is that the phase 3 warning was created a minute before the phase 2 warning was first broadcast. The phase 2 warning was redundant insofar as it related to North Shields before it was even broadcast and was inappropriate insofar as it contemplated residents of North Shields evacuating their homes at that very late stage.

8.27. The phase 3 warning was first broadcast on ABC at 1:15pm and again at 1:28pm, 1:47pm and 1:52pm.

8.28. What awareness did Mrs Castle have of the approaching fire?

I cannot identify the sources of information Mrs Castle had that the fire was approaching North Shields, but it is clear that she had made certain observations of her own as to its approach. Mr Castle in his statement said that he first had contact with his wife on the Tuesday afternoon at about 12:30pm. As seen earlier the telephone records of DI Fishing would suggest that the first call was made from the Castle residence to DI Fishing at 12:29pm. I think it is a fair inference that the 12:29pm call was the call made to Mr Castle which he thought happened at about 12:30pm when he was having lunch. The phase 2 warning was first faxed to CFS State Headquarters at 12:22pm and it was not until 12:37pm that Mr Miller advised Mr Vogel that the document had not been properly prepared. The phase 2 warning was not broadcast until 12:49pm which was indeed after Mrs Castle had rung her husband at 12:29pm. During that telephone conversation Mrs Castle was quite upset.

She told her husband that she knew that the bushfire was coming her way and that she could see orange on the hill some distance to the west of North Shields. She said that conditions had then gone black. Mr Castle stated that he reassured his wife and told her that he was returning to their North Shields home. The information from his wife appears to be the first piece of information that Mr Castle received that suggested all was not right at North Shields. Mr Castle stated that throughout the day he had been speaking to the CFS or the SES on Winter's Hill, which is the hill overlooking Port Lincoln, and had been advised by them that North Shields was '*going to be ok*'<sup>606</sup>. That may well have been the case at one point in time while the wind was heading in a south-easterly direction towards Port Lincoln, but once the wind had changed, North Shields was very much under threat.

- 8.29. The 12:29pm phone conversation appears to be the only conversation that Mr Castle conducted with his wife that afternoon. Some minutes after he concluded the conversation he left work and drove out onto the Lincoln Highway with the intention of returning to his home in North Shields. Having been stopped by a roadblock initially, eventually he and a friend were able to proceed. Mr Castle stated that he arrived at North Shields at 1:30pm. By then his house was completely alight and unfortunately Mrs Castle still remained within it. Mr Castle had no way of establishing that at the time. The fire was too intense.
- 8.30. Ms Paxton, the DI Fishing employee, stated that she spoke twice to a woman whom she believed to be Mrs Castle, the first call from Mrs Castle being received at 12 noon and the second at about 12:45pm. There is no record of a telephone call being received at DI Fishing from Mrs Castle at 12 noon. In any event, in my view it is highly likely that Mr Castle spoke to his wife later than 12 noon. However, Ms Paxton does have a recollection that in one of the conversations, if there was more than one, that Mrs Castle indicated to her that she had been told to evacuate her home due to the bushfire heading her way. Ms Paxton attributes that piece of information as having been imparted by Mrs Castle in the 12 noon, or earlier, call. Ms Paxton said that she tried to locate Mr Castle but he had already left DI Fishing to go home. The second telephone call from the Castle residence to DI Fishing is recorded as having taken place at 12:51pm. It was a call of only 21 seconds duration. The time of this call would not be inconsistent with it being the telephone call that Ms Paxton said was received by her at about 12:45pm. Ms Paxton said that on this occasion Mrs Castle

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<sup>606</sup> Exhibit C241, page 24

advised that her husband had not yet arrived home. She said that the house had caught alight and that she would be staying in the house. Ms Paxton told Mrs Castle to take every precaution. Ms Paxton said that she immediately telephoned the SES who said that they were sending someone to the area immediately. A distillation of the telephone conversation or conversations that Ms Paxton conducted with Mrs Castle is that although Mrs Castle had been told or advised to evacuate her home, for some reason Mrs Castle had, contrary to that instruction or advice, decided to stay in the house.

- 8.31. It is not known whether Mrs Castle heard the phase 2 or phase 3 warnings. Other than what she may have told Ms Paxton about being instructed to evacuate the house, it remains uncertain whether Mrs Castle received any other communication about the fire or received any sound advice as to what to do in the event of the fire reaching her location. It is to be observed that the phase 2 bushfire warning which was created at 12:22pm, and not broadcast until 12:49pm, advised residents that they should *'consider evacuating their property if they believe their previous precautions against fire would not provide adequate protection'*<sup>607</sup> (my underlining). It did not unequivocally instruct anyone to whom the warning was directed to actually evacuate the property. The warning advised those persons who decided to evacuate to assemble at the beach. The advice to assemble at the beach is consistent with Mr and Mrs Castle's fire plan as described in the last paragraph of his statement. It also seems consistent with what other people understood they would do in the event of an emergency such as this. I do not know whether Mrs Castle interpreted the phase 2 warning, if she heard it, as being a positive instruction to actually evacuate, or whether she considered it to be an advice to think about doing that. Her subsequent actions in remaining in the house would seem to fly in the face of any understanding on her part that she should actually evacuate the premises.
- 8.32. On the other hand, the phase 3 warning created at 12:48pm and broadcast for the first time at 1:15pm advised residents not to evacuate *'the area'*. It did not purport to provide any advice as to whether residents should evacuate their premises, as opposed to the area in general. In any case, it seems that at 12:51pm, the time of her conversation with Ms Paxton, her house was alight and she had decided to stay. She probably did not hear the phase 3 warning, broadcast as it was for the first time at 1:15pm.

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<sup>606</sup> Exhibit C37, page 2

<sup>607</sup> CFS Phase 1 Warning Proforma

- 8.33. I do not know why Mrs Castle decided to remain in the house. The 'Stay or Go' policy does not require nor advise citizens to remain in a burning house and to thereby place themselves in mortal danger by doing so. Even if Mrs Castle decided to remain in the house and endure the passing of the fire front this would not mean that she should remain in the house while the house continued to burn. The policy envisages the passing of the fire front and then the evacuation of the premises, with a view, hopefully, to being in a position to extinguish the fire if it has taken hold of the structure. It is also puzzling as to why Mrs Castle did not in any case go to the beach in accordance with what she and her husband had discussed in general terms. It appears that Mrs Castle thought that she would obtain sanctuary by remaining in the house for the duration. She placed herself in a bath of running water and placed a blanket over herself<sup>608</sup>. It is not known why Mrs Castle thought that this strategy would protect her. The only other reference to such a strategy is contained in the statement of Mrs Diane Borlase who stated that she might have contemplated doing the same thing. It is a strategy that is for the most part not to be recommended. For one thing, even though there might be some superficial attraction to the notion that protection will be afforded by the water, how does one avoid the inhalation of smoke? Secondly, inevitably the structure will ultimately disintegrate. Collapsing and/or burning roofing material will descend upon the person taking refuge. This is clearly what happened in this case.
- 8.34. The CFS literature about bushfire preparation and survival that was available to the public at the time of this fire was tendered to the Inquest<sup>609</sup>. Book 1 of this literature is entitled 'Preparing for Bushfires'. Book 3 is entitled 'Living Through a Bushfire'. Neither document refers to immersion in a bath as a means of personal protection. The preparation document advises the filling of sinks, baths and buckets with water and advises one to remain in a room that has water in it as the fire front arrives, but does not suggest actual immersion. There is probably no reason why one should not immerse oneself in water while the fire front arrives and recedes. However, the 'Stay or Go' policy does not dictate that one should remain in the house while it continues to burn unchecked. The document entitled 'Living Through a Bushfire' advises that after the fire front has passed it is usually safe to return outside. The document also specifically advises against taking shelter in a swimming pool as one's face, head and lungs will be exposed to radiant heat, smoke and superheated air. One would be

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<sup>608</sup> When the premises was examined by police forensic scientific examiners the cold water tap was in the 'on' position

<sup>609</sup> Exhibit C94c

exposed to the same dangers in a bath. It is perhaps necessary for the CFS to spell out the dangers of taking shelter in a bath.

- 8.35. The only hint as to why Mrs Castle may have adopted the strategy of remaining in the house and in the bath is contained in the statement of Mr William Scott Tuplin who is a police officer stationed at the Elizabeth CIB<sup>610</sup>. Mr Tuplin, among other police officers, examined the interior of the gutted premises. Mr Tuplin observed that the bathroom in which Mrs Castle's remains were found was situated on the eastern side of the premises. However, both exits from the premises were north of the bathroom, either through the shell museum or through the rear door. Mr Tuplin stated that he was told by a neighbour who lived across the road from Mrs Castle that the northern side of the premises caught fire first and that might explain why Mrs Castle did not leave the premises. No further elaboration on that possible explanation is given. It seems that the inference that might be drawn is that Mrs Castle became trapped in the south-eastern section of the structure and that in order to exit the premises as a whole, she would have had to brave the flames at the northern end of the premises. The Bushfire CRC examined the ruin of the Castle premises. They have suggested that egress from the premises probably would have been viable. Blanchi and Leonard report as follows:

"The only example of loss of life in or immediately surrounding a structure is property id30 in North Shields. The deceased was said to have been sheltering in the bath in the bathroom of the structure.

The structure was not in close proximity to grass land and or continuous forest fuel which and did not receive direct flame or radiation from an advancing fire front. The surrounding showed signs of ember attack of a moderate level.....

It appeared that the majority of these embers originated from urban fuels in the house block across the road from the structure. .... The wind carrying these embers across the road onto the structure and surrounding combustible elements.

Ignition from ember attack is highly probabilistic, the house design would have provided many gaps for ember entry; however the most likely cause of house ignition would have been ember ignition of the combustible items or structures around or built against the structure. .... It is likely that conditions outside the structure would have been uncomfortable but remained tenable before during and after the house ignition due to the distance from continuous fuels. Egress appeared to be viable through the front of the structure onto the street even if items were burning around the house.

It appears that an occupant who remains vigilant throughout the exposure would be able to identify the time in which a structural ignition poses a greater risk to life than the

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<sup>610</sup> Exhibit C40



surrounding environment and decide to leave the structure. In this case it appeared that sheltering in an area with no visual cues did not provide the opportunity to acknowledge the point in which they should leave the structure.’<sup>611</sup>

If Mrs Castle was not in fact trapped in the house, it is perhaps understandable that she thought that she was once the fire had taken hold of the premises. However, this would not explain why Mrs Castle decided to remain at the premises and not go to the beach earlier and at a time when she had an opportunity to do so. It is to be remembered that nearly half an hour passed between her telephone conversation with Mr Castle at 12:29pm and her conversation with Ms Paxton at 12:51pm. There is no suggestion that at 12:29pm the house was on fire. It would be remarkable if she had not mentioned that fact to her husband if it had been case. There seems to have been enough time for Mrs Castle to have decided to leave the premises and for her to have implemented the decision to do so before the fire took hold of the building, remembering that according to Mr Shepperd, the fire was still a kilometre west of the highway at North Shields at 12:37pm. Other residents of North Shields had time to evacuate to the beach.

8.36. Emergency services present in North Shields

Mr Shepperd, who had been following the fire in his CFS command vehicle since it first broke away, witnessed the fire enter North Shields. Mr Shepperd stopped on the Lincoln Highway to the south of North Shields in an attempt to stop vehicles from driving further north on the Highway and possibly being engulfed by the fire. Mr Shepperd requested police assistance whilst at this location and that call was logged at 12:44pm. Mr Shepperd told me that at that time, he could tell the fire had entered North Shields as he could hear gas bottles exploding<sup>612</sup>.

- 8.37. After being relieved by police at the roadblock, Mr Shepperd entered North Shields and could see several houses burning and that the Shell museum had only ‘*just begun to burn*’<sup>613</sup>. He said there was at least one MFS appliance working in North Shields at that time.

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<sup>611</sup> Exhibit C321, pages 53 to 55

<sup>612</sup> Transcript, page 7799

<sup>613</sup> Transcript, page 7802

- 8.38. Mr Trevor Wise, the Officer in Charge of the Port Lincoln Metropolitan Fire Service, established a forward command post at the North Shields roadhouse at about 1:40pm. Mr Wise said that on his arrival:

'....the fire had severely impacted on NORTH SHIELDS with numerous houses, cabins and caravans on fire with the Southern end of the caravan park virtually wiped out.'<sup>614</sup>

- 8.39. The water supply to North Shields had ceased by then, as the water pipeline had collapsed after fire had gone over it. Mr Wise said that appliances were having to fill up with water from a tanker that was parked at the roadhouse.

- 8.40. Mr Wise was advised by a local resident that fears were held for Mrs Castle in her home, but at that time he said that the house was 'red hot' and it was impossible to get close to. Appliances doused Mrs Castle's property with water until the fire eventually went out around 4pm<sup>615</sup>.

- 8.41. Mr Trevor Rodda, the Captain of the Cleve CFS, gave a disturbing description of the conditions at North Shields during the height of the firestorm. Mr Rodda was directed to attend North Shields when his strike team first arrived in the area. Mr Rodda said that the conditions experienced by the Cleve and Wharminda appliances whilst travelling south on the Lincoln Highway to reach North Shields were extreme. The two other appliances in his strike team, Arno Bay and Cowell, were unable to travel through the conditions. Mr Rodda said:

'On the Highway we were confronted by extreme conditions. It was extremely hot with flash over flames coming over the vehicle, dust and intense smoke. There were trees alongside the road exploding into flames as we drove past. The crew members on the rear of my vehicle were operating the 'fog nozzle' as we drove past the burning trees and when the conditions were extremely hot. I spoke with the crew on the cabin intercom to check on their welfare. They informed me that they were alright. The smoke and dust were so intense that I followed the white centre lines on the road. That was the only way that I could negotiate my direction.'<sup>616</sup>

- 8.42. On their arrival at North Shields, the Cleve and Wharminda CFS appliances were involved in the protection of several houses against the fire.

- 8.43. The Section 40 notice served on the Castle premises

Evidence was adduced during the course of the Inquest that prior to January 2005, the Castle premises had been issued with a notice pursuant to Section 40 of the Country

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<sup>614</sup> Exhibit C39a, page 5

<sup>615</sup> Exhibit C39, page 3

<sup>616</sup> Exhibit C106, page 3

Fires Act 1989 (repealed). Section 40 creates a regime that imposes a duty on landowners in the country to take reasonable steps to protect property on the land from fire and to prevent or inhibit the outbreak of fire on the land, or the spread of fire through the land. A responsible authority, namely the local council, may issue a notice to a landowner in effect requiring the landowner to remedy any breach of that duty within a time specified in the notice. If the notice is not complied with, council has the power to undertake the relevant work on the property and to bill the landowner for the cost. The notice may be varied. Failure to comply with the notice may attract prosecution. The prosecuting authority is the council.

- 8.44. The notice on Mr and Mrs Castle's property had been issued by the Lower Eyre Peninsula District Council on 20 September 2004. Ms Sonia Ayers who was the General Inspector of the Lower Eyre Peninsula District Council, told me that the notice related to hazardous vegetation that existed mostly in the rear yard of the premises. Ms Ayers also told me about a complaint that had been made regarding furniture on the footpath at the front of the house. On one inspection of the premises there was a large pile of grapevine cuttings at the front of the property. Ms Ayers told me that the Section 40 notice that required the removal of that material related to both the rear and front sections of the property. There was no direct evidence of the state of the property immediately before the fire went through. No inspection of the property had taken place since December 2004. Brevet Sergeant Fisher told me that when he inspected the gutted premises after the fire, it appeared that the premises had been affected by one of the 'fingers' of fire that had been driven through North Shields by the strong westerly wind. Structures directly across Dorward Road to the west had also burnt. Brevet Sergeant Fisher told me that the vegetation and flammable material that had clearly still existed in the rear yard, and which had burnt, probably had not contributed to the conflagration of the building itself because the rear yard was to the lee of the fire's approach. One can readily understand this and I accept Brevet Sergeant Fisher in relation to that issue. However, Brevet Sergeant Fisher also told me this:

'Unfortunately, this house had a lot of gear around it on the outside, right up to windows and doors, general junk and rubbish, and unfortunately that held the fire there underneath windows, and allowed the fire to enter the house.'<sup>617</sup>

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<sup>617</sup> Transcript, page 16128

Brevet Sergeant Fisher also described the situation as follows:

'Yes, there was a lot of stuff up against the windows behind that tree between the small brick wall and the front of the house that would have kept it there. The fire was hot enough, and as it came through the flames were such that the heat would have, I believe, fairly well broke the windows almost immediately. It was that hot that you couldn't stand there, it was so hot. You needed to protect your face, you would have got superficial burns, that is how hot it was.'<sup>618</sup>

As seen, Mr Leonard and Ms Blanchi concluded that the Castle premises had ignited from ember ignition of the combustible items or structures around or built against the structure. However, it is not possible to determine the precise contribution that combustible material around the structure had made to this conflagration. Given the fact that the house was right in the path of the fire, and given the fact that it was in any case susceptible to ember entry, it seems to me that it is impossible to say that the house would not have burnt down in any event. In addition, Mrs Castle seems to have been determined to remain in the house come what may, notwithstanding that she had an opportunity to evacuate to the beach.

- 8.45. An issue arose during the Inquest about the undesirability of Council failing to enforce Section 40 notices, and in particular granting extensions for compliance. It appears that this particular Section 40 notice was never enforced and was the subject of at least one extension. A motion was moved by some members of the community at a council meeting in October 2004 that no extensions be granted in respect of Section 40 notices generally, but it was defeated. Although it is impossible to say in this case whether a failure to enforce the Section 40 notice meant that there was still in existence a dangerous build-up of flammable material around the structure that ultimately contributed to the tragedy here, and while the debate about this was not fully developed in the Inquest, the comment still needs to be made that generally speaking, one would have thought that immediate enforcement for non-compliance with a Section 40 notice (or its now equivalent) would be the rule rather than the exception, whether that be by way of the Council executing the work itself and charging the cost to the owner (which it has power to do), or by prosecution. One would have thought that this must be especially so during or approaching the bushfire season.

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<sup>618</sup> Transcript, page 16129

**9. The circumstances surrounding the deaths of Jody Maria Kay, Graham Joseph Russell, Zoe Russell-Kay**

- 9.1. Mrs Jody Kay aged 33 years lived with her husband Damian Kay and their family at Hirschausen Road, Poonindie. Poonindie is a small settlement on the Flinders Highway just north of the Port Lincoln Airport, and therefore also north of North Shields. It is approximately 35 kilometres from the original fireground. The settlement is for the most part on the eastern or sea side of the highway. Hirschausen Road runs east from the highway to the beach. The road is approximately 2.3 kilometres long. The Kay premises were on the southern side of Hirschausen Road. It was two residences in and therefore not far from the highway. Mrs Kay had two children. The eldest, Graham Russell, was aged 13 years. Graham attended school in Adelaide where he normally resided with Damian Kay's brother Jarrad. Graham was spending the summer holidays in Poonindie with his family and so was there on Tuesday, 11 January 2005. The Kays' daughter Zoe Russell-Kay, was aged 11 years. She resided with Mr and Mrs Kay at Poonindie. She had been spending part of the summer holidays in Coffin Bay. She had only returned to Poonindie at approximately 8:30am on the Tuesday.
- 9.2. Damian Kay had been working night shift at Coles Express and returned home to Poonindie some time between 6am and 6:30am on the Tuesday morning. Mr Kay had a medical appointment that day at The Queen Elizabeth Hospital in Adelaide. Mrs Kay dropped him at the airport at about 7:40am that morning. Mr Kay did not return to Poonindie until very late that afternoon, well after the fire had gone through.
- 9.3. Mr Kay owned a 1996 Ford station wagon registration number VWI-393. Mrs Kay occasionally drove the vehicle. The vehicle was at her disposal on the Tuesday.
- 9.4. I have already referred in the previous section to the CFS phase warnings that were issued and broadcast in relation to the North Shields, Poonindie, Louth Bay and Greenpatch areas. The first phase warning, a phase 2, advised people who were minded to evacuate their homes to seek refuge at the beach. The second warning, a phase 3, did not relate to any settlement other than North Shields. As far as my investigations reveal, there was no phase 3 warning specifically for Poonindie. This meant that there was no phase warning advising Poonindie residents who were still remaining in the area to keep off the roads. It will be recalled that the phase 3

warning for North Shields did give that advice in respect of that specific location. The earlier phase 2 warning in respect of Poonindie advised that residents who were choosing to evacuate their premises could assemble at a designated safe refuge area, namely the beach which in the case of Poonindie was a couple of kilometres along Hirschhausen Road to the east. It will be remembered that the phase 2 warning was broadcast at 12:49pm, 1:28pm, 1:47pm and 1:52pm. As it transpired a number of Poonindie residents did successfully seek refuge at that beach.

9.5. Mrs Kay and her children met their deaths when, in order to escape the fire, they left their premises in their car and crashed into a tree. I will return to the circumstances of that incident presently.

9.6. What was Mrs Kay's awareness of the fire?

Police investigations prior to this Inquest have revealed that Mrs Kay communicated with a number of people on the Tuesday prior to her leaving the Hirschhausen Road premises with her children. Those communications in the main related to the approaching fire and her intentions in relation to it. Mr Damian Kay made two statements to the police which were tendered to the Inquest<sup>619</sup>. Mr Kay stated that before going to Adelaide on the Tuesday morning he had understood that the bushfire was near Wanilla which he estimates is about 50 kilometres from his residence<sup>620</sup>. In fact it is somewhat less than that being about 35 kilometres as the crow flies. At the time that he left to travel to Adelaide he was not concerned about the fire because he did not think it would travel as quickly as it ultimately did. Mr Kay stated that he and his wife had spoken about a bushfire plan in general terms. He does not claim that he and Mrs Kay had discussed the existing bushfire as of the Monday evening and Tuesday morning, nor what she should do if the fire were to threaten her at Poonindie. Mr Kay and his wife did have further telephone communication about the fire some time later in the day. Mr Kay stated that as far as any general bushfire plans were concerned, their plans contemplated that he would be present in any incident and that he would be able to drive their vehicle. Mr and Mrs Kay had discussed a strategy of staying at home in a slow moving fire. For a '*hot fire*'<sup>621</sup> they had an expectation that the police and the CFS would advise them when to evacuate. Mr Kay stated that he was not aware of any CFS 'Stay or Go' policy and was not sure whether his wife had

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<sup>619</sup> Exhibit C41 and Exhibit C41a

<sup>620</sup> Exhibit C41, page 2

<sup>621</sup> Exhibit C41, page 4

any understanding of it either. In the event, the premises at Hirschausen Road that they occupied were not burnt and would have provided a safe refuge for Mrs Kay and the children. This was so notwithstanding the fact that the area surrounding the house was charred. There is no evidence as to whether Mr and Mrs Kay had any expectation or understanding as to how effective or otherwise the house would be as a fire refuge. Suffice it to say, Mrs Kay's decision to leave the premises was borne out of a desire to flee the Poonindie area and one can only assume that she was not confident that the house would provide safe refuge.

- 9.7. We know that Mrs Kay spoke to her husband on the telephone about the approach of the fire and exchanged text messages about that as well. Mrs Kay also exchanged a text message with a Mr Frank Wesner of Coffin Bay. Mr Wesner had been the person looking after her daughter Zoe. He had only dropped Zoe at the house at Poonindie earlier that morning. Mrs Kay also spoke to her next-door neighbour, Mrs Deborah Wallace, about the approach of the fire. All of these communications no doubt occurred at a time before Mrs Kay left her house with her children in the family car. In none of those communications does Mrs Kay purport to have any clear understanding of what she should do, nor does she demonstrate any knowledge of the existence of the CFS phase warning that advised persons who were choosing to leave Poonindie that they should go to the beach. There is no evidence that anyone from the emergency services, including SAPOL, attended at Poonindie at a time when Mrs Kay was still at her residence.
- 9.8. The telephone conversation between Damian Kay and Jody Kay occurred possibly at about 1pm or 1:30pm. Mr Kay stated that he was at his brother Jarrad's place in Adelaide when at about 1pm his brother woke him to tell him that his wife had phoned and that he should ring her. Mr Kay also said that he received a text from his wife to the same effect at about that time. A text message was sent from Mrs Kay's mobile phone to her husband's phone at 1:17pm<sup>622</sup>. Mr Jarrad Kay in his statement stated that Mrs Kay had telephoned his house at about 1:30pm and it was then that he had woken his brother and advised him to call Mrs Kay<sup>623</sup>. The Kays' neighbour, Mrs Wallace, stated that at about 11:30am she had been advised that the fire was at North Shields, only a few kilometres south of Poonindie and that she then spoke to Mrs Kay. She told Mrs Kay, who did not appear to have heard anything about the fire up to that

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<sup>622</sup> Exhibit C342, Annexure A, page 2

point, that the fire was '*pretty close and that we should leave*'<sup>624</sup>. The time of 11:30am is unlikely to be accurate, as the fire had not even reached the Wanilla Forest by that stage. Mrs Wallace stated that she received some further information as a result of which she decided to leave Poonindie and go to Tumby Bay, which is also on the Lincoln Highway several kilometres to the north. Mrs Wallace stated that it was a little after midday when she made that decision. Again, that time may be incorrect. She then collected her children and her dog and drove into Mrs Kay's driveway. She again spoke to Mrs Kay and told her that she was going to Tumby Bay. Mrs Kay gave Mrs Wallace the impression that she also was going to leave straight away. Mrs Wallace noticed that their family car was in the driveway. That was the last time that Mrs Wallace saw or heard of Mrs Kay and the children.

- 9.9. It is not possible to establish with certainty the time at which Mrs Kay's conversations with Mrs Wallace occurred in relation to her telephone conversation with her husband. In any event it is quite clear that by the time she spoke to her husband, Mrs Kay was quite concerned about the approach of the fire. Mr Kay stated that in the telephone conversation his wife sounded worried, although not panicky. She asked him what he thought they should do. Mr Kay told his wife that she had three options; the first was to go to Port Lincoln which meant that she would have to travel south along the highway; the second was to go to the beach which meant that she would have to travel east, and the third option that Mr Kay explained to his wife was for her to travel to Louth Bay which meant that she would have to travel north along the highway. The beach option would have simply involved Mrs Kay driving along Hirschausen Road, 2 kilometres to the east and away from the fire's approach. When Mr Kay spoke to his wife she indicated that she had spoken to someone else about the fire, but Mr Kay did not know to whom she had spoken nor whether it had been in person or by telephone. It may well be that Mrs Kay was referring to her conversation or conversations with Mrs Wallace, her next-door neighbour. Mr Kay advised his wife to collect the family photographs, the clear message being that if she were to evacuate the premises she should take them with her. Mr Kay stated that Mrs Kay '*said she was going to hang around*'<sup>625</sup>, presumably meaning that for the time being she intended to stay at the premises. Mr Kay does not purport to have challenged his wife about that stated intention. This was the last verbal

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<sup>623</sup> Exhibit C42

<sup>624</sup> Exhibit C43, page 2

<sup>625</sup> Exhibit C41, page 3



communication that Mr Kay had with his wife. Later, at times that Mr Kay could not exactly remember, he received text messages from his wife. One of the messages advised Mr Kay that everything was in the car. This could have meant either that Mrs Kay was about to leave the Poonindie premises in the car or that she was catering for that contingency. Mr Kay does not purport to have given his wife any further advice about this strategy.

- 9.10. The only other known communication that Mrs Kay conducted with any person is the exchange of text messages with Mr Wesner. Mr Wesner, who had returned to Coffin Bay after bringing Zoe back to Poonindie, later became aware that the fire was approaching Poonindie. He sent Mrs Kay a text message as follows:

'I hear there's a big fire down your way - are you guys OK?'

He received a reply in these terms from Mrs Kay:

'I don't know what to do - I'm fuckin scared'<sup>626</sup>

This response naturally aroused Mr Wesner's concern. He tried to phone Mrs Kay but could not get through.

- 9.11. The relevant telephone records reveal that the text message was sent from Mr Wesner's phone to Mrs Kay's phone at 1:46pm. The records reveal that Mrs Kay sent her text message to Mr Wesner's phone at 1:48pm. The records of Mr Wesner's mobile telephone reveal that he attempted to call Mrs Kay at 1:51pm. This call was not answered. No other calls to Mrs Kay's telephone for the rest of the day were answered. Mrs Kay's mobile telephone records reveal that her telephone received text messages at various times during the afternoon. The records demonstrate that there was no response from her telephone, either by way of a call or text message, after her response to Mr Wesner at 1:48pm.
- 9.12. Mr Wesner's exchange of text messages with Mrs Kay probably occurred after her telephone conversation with her husband.
- 9.13. It is evident that at some time after these telephone communications had taken place, Mrs Kay and the children left the Hirschhausen Road premises in the family vehicle and proceeded north along the Flinders Highway. They crashed into a tree on a property owned by Mr and Mrs McLachlan. Mrs Dianne McLachlan and her family

resided on rural property on the eastern side of the Lincoln Highway at Poonindie. Their property is only a few hundred metres north of the Hirschhausen Road junction. Their house and other buildings are situated opposite the junction of Flinders Highway and the Koppio/White Flat Road. The Koppio Road junction is on the western side of Flinders Highway. The burnt out vehicle containing the remains of Mrs Kay and her children was located in a clump of trees on the McLachlan property. It is clear that the vehicle left the bitumen surface of Flinders Highway as it travelled north, crossed the eastern verge of the highway, ploughed through fencing and continued to travel across paddocks where it ultimately struck trees near the McLachlan homestead. I have already referred to the causes of death of the three occupants. It is obvious that there was a significant impact between the vehicle and the trees.

#### 9.14. Conditions at Poonindie

The state and proximity of the fire to the Kay residence at the time Mrs Kay and her children evacuated can be ascertained with reasonable accuracy from the statements of Mrs Wallace and Mrs McLachlan<sup>627</sup>. Mrs Wallace may be incorrect as to the times quoted in her statement, but it is clear that she is describing the prevailing circumstances at a time before Mrs Kay left the Poonindie premises. Mrs Wallace said that to begin with she had noticed that there was smoke everywhere outside. She said that she was advised in due course that the fire was at North Shields. Mrs Wallace left Poonindie just after she had driven into Mrs Kay's driveway and had spoken to Mrs Kay. She stated that at that time the smoke was very thick. During her journey to Tumby Bay Mrs Wallace stated that she could not see any further than 40 metres in front of her vehicle and had to illuminate the headlights for the entirety of the journey. Mrs Wallace stated that at one stage the smoke behind her vehicle was like a '*mushroom cloud*'<sup>628</sup>. Mrs Wallace, whose house was on the western side of the Kay premises, stated that the house was basically untouched, except for smoke damage resulting from a partly open window. There was also some damage to fences and gardens. It is evident from Mrs Wallace's statement that the situation at Poonindie at the time she left, which was at a time before Mrs Kay left, was quite threatening. Mrs Wallace's statement is silent as to whether she had heard the phase 2 warning for North Shields/Poonindie.

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<sup>626</sup> Exhibit C44, page 2

<sup>627</sup> Exhibits C19 and C19a

<sup>628</sup> Exhibit C43, page 2

9.15. Mrs McLachlan describes other relevant circumstances about the situation at Poonindie. She made two statements to the police<sup>629</sup>. Mrs McLachlan was at home on the Tuesday morning with her two young granddaughters. Her husband, son and daughter-in-law had earlier driven to Port Lincoln. Mrs McLachlan stated that at about 11:30am or 11:45am she was alerted to the smell of smoke. Mrs McLachlan discerned that there must have been a fire to the south-west of her location at that time. Conditions deteriorated over time. As a result of speaking on the phone to her husband and to another person, she decided to leave her premises with the grandchildren. Mrs McLachlan stated that it was about 1pm when she loaded the grandchildren and her dogs into her vehicle and left through the front gate of the property. Mrs McLachlan kept a number of horses on the property but did not have enough time to consider their safety as *'the fire, smoke and heat were getting unbearable and very dangerous'*<sup>630</sup>. Mrs McLachlan assessed the situation as being extremely serious and felt that the fire was going to consume the house. As she was driving to the front gate with the grandchildren, her husband, son and daughter-in-law arrived. They all made their way to the beach in a number of vehicles via Hirschausen Road. I gather that after leaving the property they drove along Flinders Highway and then executed a left turn into Hirschausen Road.

9.16. In Mrs McLachlan's second statement taken on 24 May 2005 she stated that when leaving her house she did not see any vehicles crashed on her property. The position where Mrs Kay's vehicle was ultimately to crash was only 800 metres from the McLachlan house and 200 metres from the highway. I infer that at the time Mrs McLachlan's premises were evacuated no person in her vehicle or that of her husband's noticed a crashed vehicle on the property. Mrs McLachlan was familiar with the premises on Hirschausen Road that was occupied by the Kay family. Her niece, Jackie, owned the premises. In Mrs McLachlan's first statement taken on 13 January 2005 she stated that as she drove along Hirschausen Road she looked at the house. She said the following in her statement:

'I can't remember seeing any vehicles at the house at that time because I was just more interested in Jackie's house. It looked okay.'<sup>631</sup>

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<sup>629</sup> Exhibits C19 and C19a

<sup>630</sup> Exhibit C19, page 2

<sup>631</sup> Exhibit C19, pages 3

However, in Mrs McLachlan's second statement taken on 24 May 2005, she stated that as she passed the premises on their way to the beach she did in fact see that there was a vehicle parked in front of the house. Although Mrs McLachlan was not entirely certain where the vehicle was parked, she stated that there was definitely a vehicle on the property. It will be remembered that according to Mrs Wallace the Kay's vehicle was parked in the driveway at the time Mrs Wallace left for Tumby Bay. I accept Mrs McLachlan's assertion in her second statement that there was a vehicle still parked on the Hirschhausen Road property. I infer that at that time Mrs Kay had not left the premises. The inference is reinforced by the fact that neither Mrs McLachlan nor any member of her family had seen the crashed vehicle on their property when they evacuated it.

- 9.17. As to the time that Mrs McLachlan may have seen the Kay vehicle still at the house, Mrs McLachlan stated that before she left she had received a telephone call from her son Adam's mobile telephone, the records in respect of which indicate that the call was received at 1:24pm and lasted for 196 seconds. Mrs McLachlan in her statement of 24 May 2005 estimated that 20 minutes would have elapsed from that telephone call to the time when she started to leave her property. Mrs McLachlan stated that she would have passed by the Kay premises about 3 to 5 minutes after leaving her own property. It is therefore likely that Mrs McLachlan passed by the Kay premises at about 1:50pm and that Mrs Kay and her children were still there at the time. I do not know whether Mrs Kay heard any phase warnings. I also do not know precisely what time Mrs Kay left the premises.
- 9.18. It is to be observed that the phase 2 warning for Poonindie was broadcast at 1:47pm and 1:52pm. It advised that residents should consider evacuating their property and that those choosing to do so could assemble at the beach. While at 1:50pm it was probably still safe to proceed down Hirschhausen Road to the beach, going out onto the highway from that time onwards may have been an entirely different matter. There was never any phase 3 warning issued for Poonindie that would have advised residents not to evacuate and to keep off the roads. In any event, there is no evidence that Mrs Kay's actions were influenced by phase warnings.
- 9.19. Mrs McLachlan's observations in my view establish that conditions at Poonindie had become extremely threatening by the time Mrs Kay left her premises. As to the conditions at Poonindie and how they may have adversely affected the ability to

control a motor vehicle, bearing in mind the smoke, the statement of Mr David Lawrence Hill is also relevant<sup>632</sup>. Mr Hill, who resided in Port Lincoln, owned and operated a farm near White Flat. White Flat is approximately 8 kilometres to the north-west of Poonindie. A bitumen road connects Koppio and White Flat with the Lincoln Highway at Poonindie. The junction of the two roads, as mentioned earlier, is opposite the McLachlan's property on the highway. The junction therefore is only a matter of about one hundred metres from the position where Mrs Kay's vehicle collided with trees on the McLachlan property. Mr Hill's vehicle collided with a barrier at the junction because of poor visibility due to smoke.

- 9.20. Mr Hill had been aware on the Monday that there was a fire at Wangary but had not been particularly concerned given its distance from White Flat. At about 11:45am on the Tuesday morning, he was advised that there was ash and dense smoke in the air at his White Flat farm. As a result Mr Hill, together with another man, decided to drive to his farm. They left Port Lincoln in Mr Hill's utility at about 12:30pm intending to take the Lincoln Highway to the White Flat turnoff at Poonindie and then travel up the Koppio Road. At a point about halfway between Port Lincoln and North Shields, approximately 6 kilometres from Port Lincoln, Mr Hill observed flames coming over the hill to the west of the highway at a speed that he estimated to be in excess of 50 kilometres per hour. Mr Hill described it as a wall of fire exceeding 100 metres in height and about 300 or 400 metres in length. On seeing this Mr Hill retreated to a position about a kilometre back towards Port Lincoln. Having waited at this location for a little time, Mr Hill decided to resume his attempt to get to his farm and to advance along the Lincoln Highway towards North Shields and Poonindie. During the course of this journey he described visibility on the highway as being bad. He could only advance at a speed of about 30 kilometres per hour, with hazard and headlights illuminated. At North Shields Mr Hill described buses and caravans burning in the caravan park. Mr Hill stopped his vehicle opposite the North Shields service station where he describes flames being '*everywhere*'<sup>633</sup>. He decided to continue north towards Poonindie. He observed that a vehicle had been in a collision, and a little further along the highway Mr Hill encountered a number of vehicles stopped on the side of the road. The conclusion was obvious that it was too dangerous to travel any further north at that stage so he waited there for some time.

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<sup>632</sup> Exhibit C114

<sup>633</sup> Exhibit C114, page 3

Mr Hill ultimately continued his journey and again proceeded north along the Lincoln Highway. Again, Mr Hill could only drive at about 30 kilometres per hour due to the thickness of the smoke blowing from the west. However, by the time he reached Poonindie the conditions at that stage were still clear and there was no evidence of fire at that location. Mr Hill executed his left turn towards White Flat at the junction and had proceeded about 2 kilometres when a fireball crossed the road in front of his vehicle. It had approached from the south-west and was heading in a north-easterly direction. Mr Hill described the flames as being about 200 or 300 metres high and about 500 metres in length, yet the only vegetation involved was grass. The whole hillside was '*just red*'<sup>634</sup>. Mr Hill estimated the flames to be travelling at about 70 kilometres per hour. Mr Hill stated that the wind must have changed from a westerly direction to a south-westerly direction at that stage.

- 9.21. Not surprisingly, Mr Hill decided to turn around and head back towards the highway. He hesitated momentarily and thick grey smoke caught up to his vehicle. Mr Hill proceeded. Visibility was severely restricted. All he could see was the white centre line on the bitumen. Mr Hill described the smoke as becoming worse and stated that heavy red grit and dirt was being thrown up as well. Mr Hill's headlights could not penetrate the smoke. At the junction of Lincoln Highway and the White Flat/Koppio Road, Mr Hill stated that visibility was absolute zero. Mr Hill was still proceeding at a speed of 30 or 40 kilometres per hour. Mr Hill proceeded in a straight line and the next thing that he saw was a traffic barrier in his headlights. Mr Hill collided with that barrier. The barrier was on the eastern side of the Lincoln Highway directly opposite its junction with the White Flat/Koppio Road. In other words, Mr Hill had proceeded across the junction without knowing it and was stopped by the barrier at the other side. A burning tree nearby was showering sparks and flames. Mr Hill had difficulty getting out of the vehicle because a traffic sign had wrapped itself around his door. In addition, a steel signpost was enveloping the tail shaft of the vehicle. Mr Hill was only able to extricate himself from the situation by getting out of the vehicle and manually placing it into 4WD. At that stage the church on the north-western corner of the junction was being threatened by burning debris. Mr Hill then proceeded to his farm where he stayed for the rest of the afternoon. His sheds were well alight and his house was also starting to burn when he arrived. All of those structures were destroyed.

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<sup>634</sup> Exhibit C114, page 4

- 9.22. Mr Hill does not state the time of the incident in which his vehicle hit the barrier at the junction of the Lincoln Highway and the Koppio Road and quite clearly he did not notice whether or not Mrs Kay's vehicle had suffered its collision at that stage. However, Mr Hill stated that his collision occurred about 60 metres from the location where he understood Mrs Kay's vehicle had collided with trees on the McLachlan property. Mr Hill is very probably correct when he said that the conditions experienced by Mrs Kay and her children would have been the same as the conditions that he experienced. Mr Hill stated that he was simply unable to see anything in front of his vehicle because of the thickness of the sand and the smoke in the air.

9.23. Conclusions

I find that at or some time after 1:50pm Mrs Kay and her children left their property at Hirschausen Road, Poonindie in the family vehicle. It is clear that Mrs Kay made that decision in the belief that the house and her family were under an extreme and immediate threat from the approaching fire. Mrs Kay obviously decided it was not a good idea to remain in the house. She may have been influenced by Mrs Wallace's decision to go north to Tumby Bay. In addition, none of the options that she had discussed with her husband had involved her remaining in the house. What is clear is that Mrs Kay left the premises when it was too late and at a time when it was unsafe to do anything other than go east to the beach. The probability is that Mrs Kay encountered conditions on the Lincoln Highway very similar to those experienced by Mr Hill, namely almost zero visibility. As she travelled north on the bitumen carriageway of the highway, I find that she involuntarily left the road not being able to maintain visibility, then ploughed through the fence and continued, probably also in extreme conditions, until the vehicle was brought suddenly to rest by the trees just to the south of the McLachlan homestead. I have in my preliminary findings referred to the causes of death of the three individuals. The impact damage to the vehicle suggests that it was travelling at a considerable speed. The statement of Senior Constable Gary Hancock of SAPOL Major Crash Investigation Unit suggests that the speed may have exceeded 80 kilometres per hour. There was no evidence of braking prior to impact which is consistent with Mrs Kay not having seen the trees due to poor or nil visibility. I was unable to determine the precise cause of death in relation to Zoe Russell-Kay. Nothing has emerged in the Inquest that has shed any further light on the actual cause of her death.

- 9.24. Mrs McLachlan and her family located the Kay's vehicle when they returned from the beach late in the afternoon. The McLachlan house had not been significantly damaged. As earlier observed, nor had the Kay residence in Hirschausen Road. The Wallace premises next door also survived. Mrs Kay and her children would have survived had they stayed in their house. They would also have survived if they had proceeded to the beach at around the time Mrs McLachlan did so. Mrs McLachlan said that there were several people at the Poonindie beach and it is clear that all of them survived the experience, notwithstanding that fire and smoke were badly affecting that area as well. Mrs McLachlan had never heard of the CFS 'Stay or Go' policy. She had an awareness of CFS phase warnings, but like many people had a flawed understanding of them. For example, her understanding of a phase 3 warning was that it advised one should leave one's location and proceed to a safe place. That is not the case, as we know. A phase 3 warning tells people in effect to remain where they are and certainly to keep off the roads. Mrs McLachlan did not have any formal plans in the event of a bushfire. Mrs McLachlan stated that the members of her household contemplated simply using common sense in such an event. They would decide whether to leave or stay depending on the circumstances that prevailed at the time. She stated that there was an accord in her household that in most circumstances the beach would be the safest refuge. While in this particular instance the beach was the safest refuge, in order to reach it Mrs McLachlan and her family members had to venture out onto the Lincoln Highway. Clearly at that stage the highway had not become the hazard that it was to become when Mrs Kay endeavoured to leave the area. In this regard it is probable that Mrs McLachlan and her family made the decision to leave the premises at a fortuitous time. It is equally as probable that Mrs Kay decided to evacuate the location when it was too late. Accordingly, while the beach was ultimately proved to be a safe refuge, its quality as a safe refuge depended very much upon the timing of one's efforts to get there and the route one would have to take. A phase 3 warning that would have advised people to stay off the roads would at that stage have been more appropriate advice than the advice that people could assemble at the beach which was the tenor of the phase 2 warning broadcast at 1:47pm and 1:52pm in respect of Poonindie. In any event, there is no evidence that Mrs Kay was listening to the radio or heard any CFS phase warning.
- 9.25. There does not appear to have been any activity by the emergency services in the Poonindie area at any time approximate to Mrs Kay's ordeal or that of the McLachlan family.



**10. The risk posed by the fireground on the Monday night and Tuesday morning**

10.1. There are three fundamental considerations relating to the risk that was posed by the state of the fireground overnight:

- a) The likelihood or otherwise of the fire breaching so called 'control lines'; in other words, were breakouts likely or not?
- b) Would breakouts be controllable or uncontrollable?
- c) What consequences could be expected if an uncontrollable breakout or breakouts were to occur?

10.2. Any consideration of the risk posed by the fireground, and in particular a proper consideration of each of the three matters mentioned in the preceding paragraph, would in turn require consideration of further matters that pertained to this fire and its environs. There were a number of obvious factors that needed to be addressed in any evaluation of the risk posed. The obvious considerations were the forecast weather and the actual weather, the fuel available to be burnt, the terrain and the proximity of human life and assets.

10.3. The weather

At 4:30pm on Monday, 10 January 2005 a teleconference was conducted involving personnel from the Bureau of Meteorology and the CFS. A state-wide weather forecast compiled that afternoon<sup>635</sup> indicated that the entire State of South Australia would on the Tuesday be affected by high temperatures and fire danger indices (FDIs) in excess of 50. The FDI is a rating that takes into account maximum temperature, dew point, relative humidity, wind and the state of the vegetation which for the entire State, save and except for the Lower South East, was said to be 100% cured. The curing state of grassland is expressed as the fraction of dead material in the sward and has an important influence on the ability of a fire to spread across the landscape. It also affects its rate of spread. The curing for Lower Eyre Peninsula, in respect of the regions pertaining to both the Coles Point and Port Lincoln Airport automatic weather stations, was 100%. An FDI in excess of 50 is said to present an extreme fire danger. The state-wide weather forecast compiled on the Monday afternoon suggested that the Lower Eyre Peninsula would be subjected to FDIs of 63 and 114 in respect of the

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<sup>635</sup> Exhibit C235

Coles Point and Port Lincoln Airport locations. The forest FDI at Port Lincoln Airport was said to be 93, also an extreme forecast. The forecast at that stage predicted temperatures in the mid 30s, very low relative humidity and wind speeds from the north-west of 40 and 45 kilometres per hour with a south-westerly change involving wind speeds of 50 kilometres per hour. The times at which the wind changes were predicted were, a) in respect of Coles Point on the east coast of Lower Eyre Peninsula, between 10am and 2pm, and b) for Port Lincoln Airport between 11am and 3pm.

10.4. What needs to be borne in mind of course is that FDIs and the extreme nature of weather forecasts do not contain within them any assumption as to the existence or otherwise of any fire in the locations that are the subject of the forecasts. At the time at which the state-wide forecast was compiled and disseminated on the Monday afternoon, there was already in existence on the Lower Eyre Peninsula a fire of some significance. What has to be further borne in mind is that this state of affairs continued to exist overnight and into the Tuesday morning. Needless to say, the forecast conditions as revealed by the state-wide forecast promulgated on the Monday afternoon, involved state-wide fire bans. Lower Eyre Peninsula already had a fire. By the late Monday evening it had burnt 1800 hectares of vegetation.

10.5. The CFS Region 6 fire weather estimates for the Tuesday expressed the following general forecast for that region:

'Dry. Hot to very hot with strengthening northerly winds ahead of a southwest to south wind change in the west during the morning, extending throughout during the day and becoming fresh to strong in the afternoon.'<sup>636</sup>

10.6. A further 12 hour forecast was obtained from the BoM based upon details obtained from the fireground at 1806 hours on the Monday. This forecast was faxed to Lincoln Base at 1850 hours. It is Exhibit C1811 and also part of Exhibit C224b and Exhibit C240. It is set out over the page.

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<sup>636</sup> Exhibit C235a

**BUREAU OF METEOROLOGY**  
SOUTH AUSTRALIAN REGIONAL OFFICE

IDS20311

**12-HOUR FIRE FORECAST**

Issued at 1845 hours on Monday, 10 January 2005

Location of fire : Wangary [Eyre Peninsula]

Time requested : 1817

**Existing Conditions at Fire**

Time	Temp	DP	RH	Wind (km/h)			Weather/Sky
	(C)	(C)	(%)	Dir	Speed	Gust	
1800	35		10	W	18	26	

Observation from Coles Point AWS at 1730 Wind WNW 13 gust 25km/h. Temp 30 Dew point 2.5 RH 17%.

**Forecast for next 12 hours**

Time	Temp	DP	RH	Wind (km/h)			Grassland		Forest		
	(C)	(C)	(%)	Dir	Speed	Gust	FDI	FDR	FDI	FDR	
1900	33	-2	10	W	20	25	22	VH	43	VH	
2200	30	0	15	SW	20	25	18	H	32	VH	
0100	27	2	20	NE	25	35	20	H	28	VH	
0400	23	3	25	NNE	30	45	22	VH	23	H	
0700	30	0	15	NNW	35	50	45	VH	46	VH	

Dry and clear. Winds turning northeast overnight and then freshening from the north early Tuesday. Temperatures rising rapidly during the morning.

**FAXED**

Time 1850 (Hrs) Date 10/1/2005  
By DPK (Init) To Lincol base

**Outlook for following 12 hours**

Dry and mostly sunny with freshening northwesterly winds ahead of a milder SW change developing between 1000 and 1400 local time. Northwest winds up to 45 km/h. SW winds up to 50 km/h following the change. Max temp near 37 degrees. Minimum RH of 5% prior to the change.

Please ensure regular weather observations are passed back to the Fire Weather Forecaster.  
Please request a 4-day forecast, if required, to assist with longer term planning.

Grassland Fire Danger Index (FDI) and Rating (FDR) is calculated using the CSIRO Grassland Meter, assuming fuel is 100% cured. McArthur's Forest Fire Danger Index (FDI) and Rating (FDR) is calculated assuming a Drought Factor of 10.

- 10.7. This forecast related to the period between 1900 hours on the Monday and 0700 hours on the Tuesday morning. There is no basis for saying that this forecast in any way ameliorated the seriousness of the state-wide forecast that had been promulgated earlier that afternoon. This forecast predicted for 7am a temperature of 30°C, a relative humidity of 15% and a wind speed of 35 kilometres per hour gusting to 50 kilometres per hour from the north-north-west. The grassland FDI was predicted to be 45 at that time. Bearing in mind the state-wide forecast for the Tuesday, as it

related to the Lower Eyre Peninsula, the only conclusion that could be drawn from this more detailed forecast was that after 7am the FDI would only escalate. The concern that ought to have been naturally generated by this forecast would have been reinforced by the 'Outlook for the following 12 hours', namely that there would be a) freshening north-westerly winds ahead of a milder south-west change involving winds of up to 50 kilometres per hour following the change, and b) a maximum temperature of 37°C and a minimum relative humidity of 5%, an extremely low figure.

- 10.8. A further 12 hour weather forecast was issued at 0405 hours on the Tuesday morning, having been requested at 0340 hours from the fireground<sup>637</sup>. It will be observed that the predicted conditions for 0400 hours were the same as those that had been quoted in the earlier forecast issued at 1845 hours. The forecast conditions for 0700 hours as per the later forecast were not as severe as what had been predicted in the earlier forecast. However, it is clear that the forecast issued at 0405 hours on the Tuesday morning stated that by 10am there would be high temperatures, low humidity, winds of 45 kilometres per hour gusting to 55 kilometres per hour from the north-north-west and an FDI of 122 which is of course extreme. The forecast predicted rapidly rising temperatures and a drop in humidity after sunrise. The west-south-west change was predicted to occur between 1100 hours and 1400 hours. The table within the forecast suggested that the wind from the west might be in place by 1300 hours but would involve wind speeds of 45 kilometres per hour gusting to 60 kilometres per hour. Even at that point the FDI was predicted to be 85, still extreme.

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<sup>637</sup> Exhibit C221, page 63 and also part of Exhibit C240.

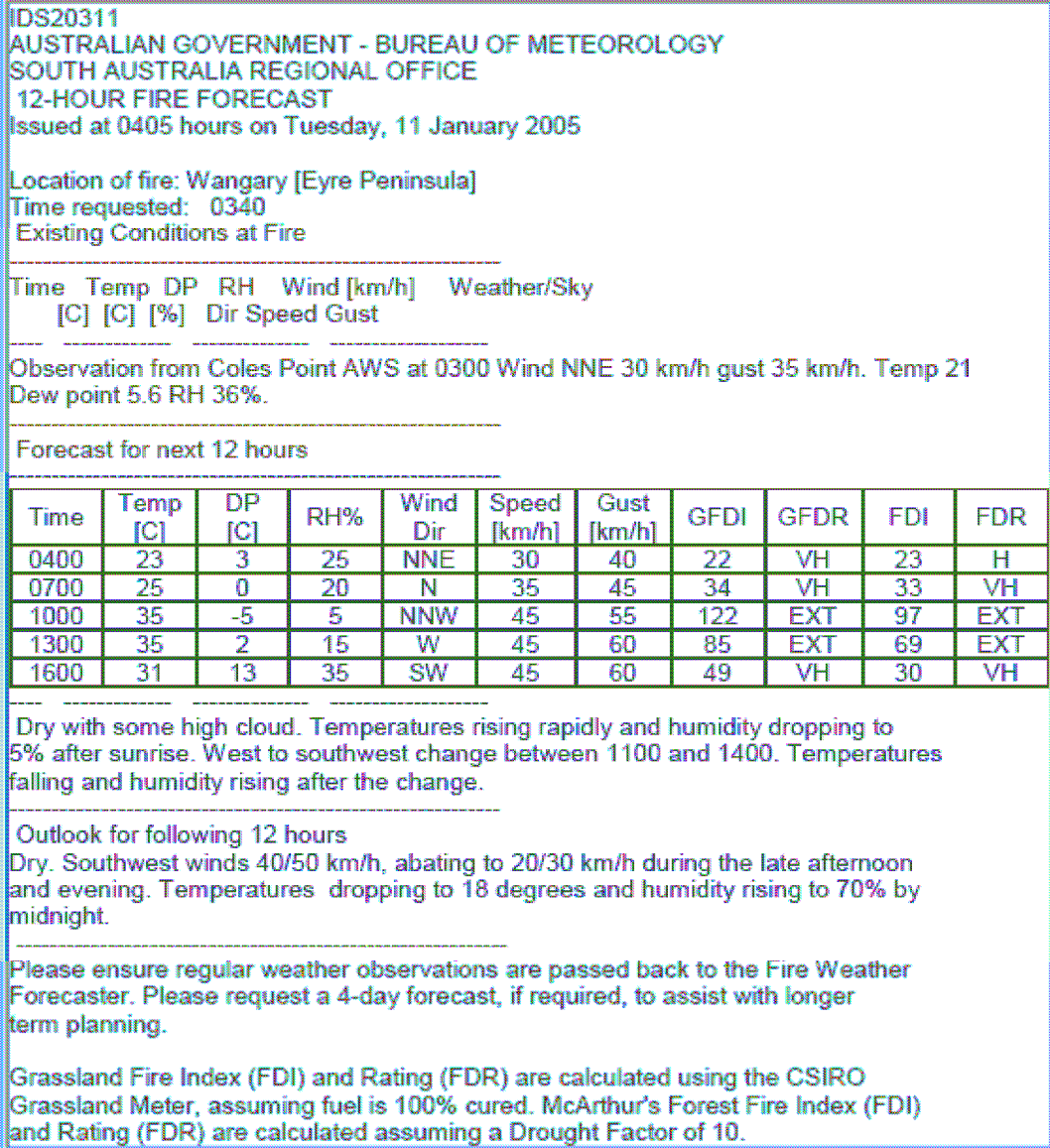


Figure B.3.2 12 Hour spot forecast issued 0340 11 January 2005.

- 10.9. The state-wide forecast issued on the Monday afternoon if anything was confirmed in all of its facets by the forecast that was obtained at 0405 hours. These forecasts it seems gave rise to colourful description. For example, Mr John Prideaux the BoM forecaster who spoke at the teleconference on the Monday afternoon, is said to have described the Tuesday forecast in terms of '*potentially one of the most severe days in the past few years*'<sup>638</sup>. Others recall Mr Prideaux saying that he had never seen anything like these conditions before. Mr Maddern who was at the conference said that his impression was that it 'was going to be one of the most significant fire weather days that the State had had for quite some considerable time'<sup>639</sup>. Mr Maddern was nevertheless to derive some comfort from the later, more specific

<sup>638</sup> Exhibit C280b, EF19

<sup>639</sup> Transcript, page 8623

forecast for the Wangary area to which I have already referred to. It is difficult to see how any comfort could have been derived from any information that was generated and received either from or about the fireground in terms of the weather. The 0405 hours forecast prompted Mr Joseph Tilley who was an experienced professional firefighter with the Department of Environment and Heritage on the Lower Eyre Peninsula, to say that if he had been a Planning Officer and had received that forecast he would have '*had kittens*'<sup>640</sup>. In plain English, Mr Tilley suggested that he would have been concerned about the likelihood of successfully containing a fire of the size in question, particularly as it had areas of inaccessible swamp and burning sugar gums.

Q. You just absorb that, if you look at the forecast for the following 12 hours from 0400 hours to 1600 hours on the Tuesday and can I in particular draw your attention to the FDI at 10 a.m. on the following morning of 122.

A. The the grassland FDI, yes.

Q. And wind from the north-north-west at 45 km/h gusting to 55 and the temperature's already 35 degrees by 10 a.m., assuming you were still planning officer at this fire and at about 4.30 you received this forecast would you do anything as a result of receiving this forecast.

A. After I had had kittens I would probably be looking for someone else.

Q. Hoping for an early shift change.

A. Too right. After receiving that based also on my own personal experience, I would be concerned about the likelihood of successfully containing a fire of that size with hot fireground and such a large perimeter to maintain.

Q. Particularly given that the fire is, in parts, in inaccessible swamp, complicated.

A. Yes, that's certainly a large factor in that.'<sup>641</sup>

Mr Tilley did not strike me as a man who was given to being wise after the event. Unlike many other witnesses, Mr Tilley tended to eschew hindsight prognostications when asked to give them. In respect of the risk, however, he did not hold back. Unfortunately, for reasons that are not clear, Mr Tilley's expertise was not called upon overnight.

10.10. It is worthwhile mentioning here that it was suggested in the course of the Inquest that a climactic phenomenon known as a 'dry slot' had accounted for the very adverse firefighting conditions that were encountered on the Tuesday and that such a

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<sup>640</sup> Transcript, page 14328

<sup>641</sup> Transcript, page 14328

phenomenon had not been predicted. A dry slot is said to be a mass of super dry air that is drawn down from high altitudes. It is said that the super dry air reduces relative humidity from about 20% to about 3% at ground level and that this has a profound effect on the dryness of the vegetation. A relative humidity of around 3% is an extremely low level. The severe reduction in relative humidity, and the consequent reduction in dryness of the vegetation, is said to constitute a potential trigger for a fire to become uncontrollable. Mr Andrew Watson who is a meteorologist with the BoM told me this:

'... if that phenomenon occurred during the course of a burning fire, and if it did have the effect of reducing the relative humidity to levels below the value it had prior to that, then, yes, it would have - the impact would be to dry the fuel that hadn't yet been combusted further, making its combustion temperature lower, and it more likely to burn and more likely to burn intensely.'<sup>642</sup>

10.11. Mr Watson told me that in his view there was no evidence that an unforecast dry slot had any impact on these events. His belief was that the BoM forecasts predicted that the atmosphere was going to be very dry during the day in any event. The impact of any dry slot was not present because the air mass was virtually devoid of moisture anyway. Mr Watson pointed to the prediction that at 10am the relative humidity was forecast to be 5%, representing a drop from 20% at 7am. In addition, a relative humidity as low as 7% was predicted in the state-wide weather forecast the afternoon before. The relative humidity of 5% predicted for 10am as expressed in the forecast provided at 4:05am, was the kind of relative humidity that would be associated with a dry slot in any case. Accordingly, there was nothing in what a dry slot may have generated that was not in any case predicted for the time of 10am. It will be seen that much of the fire activity as far as breakaways were concerned occurred at around that time.

10.12. The 4:05am forecast was not the first forecast to predict very low relative humidity in relation to the fireground. I refer here to the fact that the forecast issued at 6:45pm on the Monday evening referred to a predicted minimum relative humidity of 5% prior to the south-west change developing between 10am and 2pm.

10.13. The other salient point made by Mr Watson was that he did not see any significant difference or inconsistency between the predicted grassland FDI as expressed within the state-wide forecast compiled on the Monday afternoon and that predicted in the

4:05am forecast on the Tuesday morning. Insofar as an FDI of 114 was predicted to exist at Port Lincoln Airport, this was virtually the equivalent of 122 as forecast to be in existence at the fireground at 10am.

- 10.14. In short, there was ample material provided by BoM from which an inescapable conclusion could be drawn that conditions on the Tuesday morning would mean that any breakout of fire would be difficult to contain if not unstoppable in the extreme conditions.

10.15. The vegetation and fuel load

The grasslands to the south and east of the overnight fireground were continuous. Mr Gould in his report stated that fire behaviour was determined by the physical structure of the fuel bed<sup>643</sup>. Although there are many different grasses and cereal stubble crops on the Lower Eyre Peninsula, for the purpose of predicting fire spread, the grassland could be classified under three general groups with similar structural characteristics. Those were 1) natural grass, 2) improved pasture - cut and or grazed/cereal stubbles and 3) well eaten out pastures (heavily grazed). Mr Gould stated that the main characteristic that influenced the spread of fire in these groups was the continuity of the fuel bed, that is, how unbroken the fuel bed is. The height of grass has the greatest influence on flame height, and the fuel load is the main factor in affecting fire intensity. All of those factors were important in determining how difficult it would be to suppress a fire, and to assess the responsiveness of fire to changes in the weather. The terrain to the south and east of the overnight fireground included pasture/grassland types including cereal crops and stubble fields (wheat, barley, lupin and canola) which had either been grazed or ungrazed. As seen, the grasslands were subject to 100% curing.

- 10.16. There was also native vegetation to the south and east of the overnight fireground that consisted of a diverse range of vegetation communities which could be grouped into three major types, namely 1) mallee – the dominant vegetation type in the Lower Eyre Peninsula with a wide variety of species, 2) woodlands – dominated by sugar gums and sheoak trees and 3) forest plantation – consisting of pine or eucalypt hardwood. Directly to the south-east of the fireground was the Murrumbidgee Conservation Park situated on the western side of Settlers Road some 7 kilometres from the fireground.

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<sup>642</sup> Transcript, page 16944

<sup>643</sup> Exhibit C175b, page 16



To the south-east of the Murrumbidgee Conservation Park was the Wanilla Forest, situated in the corner of land between the Tod Highway and the Flinders Highway, which was 14 kilometres from the fireground. The Wanilla Forest was predominantly an old pine plantation with small compartments of eucalypt plantation with understorey fuels of litter, grasses and scattered shrubs. Native vegetation also occurred in other conservation reserves, roadside vegetation and scattered patches on farmlands.

- 10.17. The paperbark swamp had a large variety of vegetation within it, consisting mainly of thatching grass, swamp paperbark (or tea tree), melaleucas, mallee (or eucalypt), saltbush and samphire. Mr Cabot told me that all of that vegetation, with the exception of the samphire as it is a succulent, would be good burning material<sup>644</sup>.
- 10.18. Dr Gould said that the characteristics of swampy fuels are patchy in that there are some areas with thick patches of sedges and shrubs and then other areas with very sparse fuels and salt pans<sup>645</sup>.
- 10.19. There was some considerable disagreement between witnesses during the Inquest as to whether vegetation in swamps could be successfully blacked out, that is extinguished completely. The general consensus from those that argued that a swamp could successfully be extinguished all agreed that it would be very hard work for CFS crews to undertake and that the swamp area would still need to be continually monitored to watch for flare-ups from residual burning matter in the root systems and stumps. Dr Tolhurst, Mr Gould, Mr Ferguson and Dr Smith were all in agreement that blacking out of swamp vegetation is possible.
- 10.20. Approximately 15% of the area burnt by the Wangary fires was non-agricultural land consisting of native vegetation, conservation reserves and other forest, shrub land, and sedgeland vegetation (ie. swamps). The overwhelming majority of vegetation burnt in the Wangary fire consisted of grasslands that existed to the south and east of the overnight fireground and later in the course of the fire to the north-east. This grassland in the main consisted of stubble from harvested crops and pasture. Of particular significance was the existence of canola stubble which has a high oil content, burns vigorously and is difficult to extinguish in unfavourable conditions.

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<sup>644</sup> Transcript, page 3624

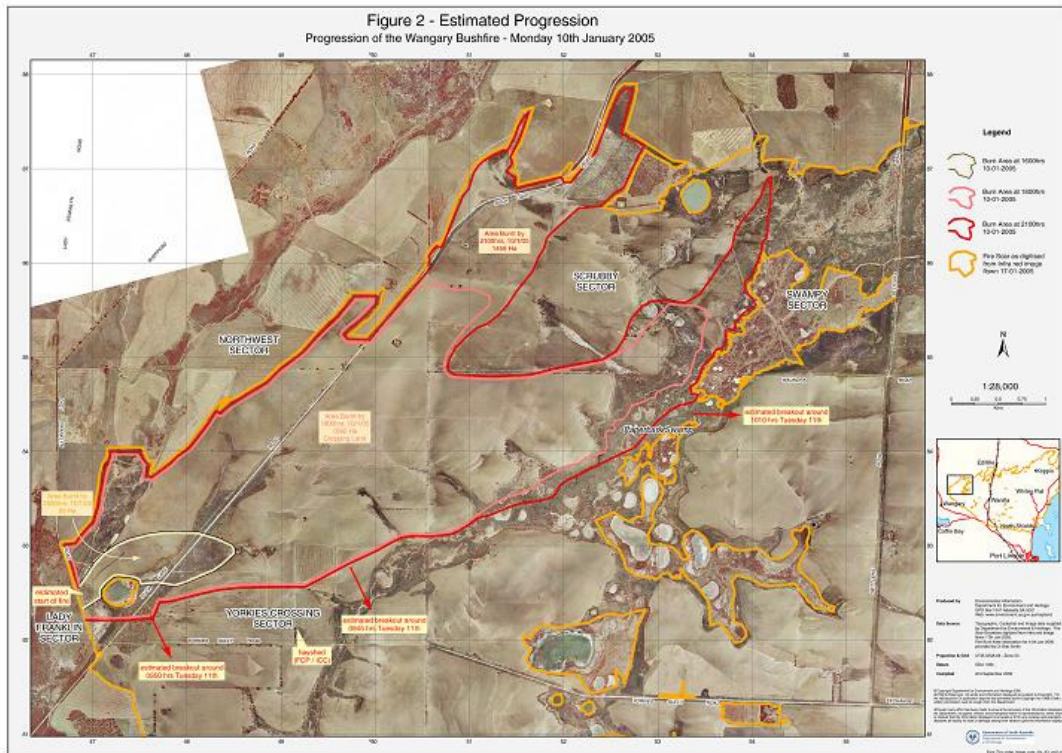
<sup>645</sup> Transcript, page 17284

- 10.21. The fuel load between the overnight fireground and the east coast of the Lower Eyre Peninsula was essentially unbroken except for roads.
- 10.22. It will be seen from the weather forecasts that the locations most at risk from an escape of fire under a north or north-westerly wind were those areas to the south and south-east of the overnight fireground. In addition, the areas of land at risk from a wind change to the west were clearly those areas to the east of the fireground.
- 10.23. Mr Gould suggested in his report that with a fire danger index of 50+, involving as it does a fire danger rating of extreme, a direct attack on the head of the fire in an average pasture carrying 4 tonnes per hectare will fail. Under similar conditions, in a forest involving dry eucalypt carrying 12.5 tonnes per hectare, fire suppression is virtually impossible on any part of the fire due to the potential for extreme and sudden changes of fire behaviour<sup>646</sup>.
- 10.24. Clearly therefore, with an essentially unbroken fuel load of grassland and other vegetation with an extreme fire danger rating, any fire both in grassland and forest was always going to be extremely difficult to combat. This was a matter that in my view was not entirely unpredictable.
- 10.25. Terrain

The south-eastern flank of the fire was approximately 7 kilometres long. This flank extended from a location near Mr George Hull's premises in a south-westerly direction through the paperbark swamp which essentially divided Mr Cabot's property from that of Mr Troy Siegert and then into grassland and stubble on Christopher Hull's property, culminating at its south-western corner in the vicinity of the sugar gums situated at the junction of Duck Lake Road and Yorkies Gully Road. Given the forecast that has already been referred to, this was the most vulnerable flank of the fire as far the Tuesday morning was concerned. Its vulnerability stemmed from the fact that predicted northerly and north-westerly winds would fan fire towards the south or south-east.

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<sup>646</sup> Exhibit C175b



10.26. The cultivated area to the south and east of the paperbark swamp on Mr Cabot's property consisted of stubble of various kinds. The area immediately to the east of the swamp consisted of canola stubble which burns very intensely once alight. Towards the northern edge of the swamp on Mr Cabot's property there was wheat stubble which also burns well. There was canola and wheat stubble also in the area marked C on Exhibit C176b. Areas B and C on Exhibit C176b were essentially bordered by Settlers Road to the east and Yorkies Gully Road to the south. Native vegetation existed along both thoroughfares. In particular, there was dense native vegetation along the sides of Settlers Road in the vicinity of premises 'Beaumont' which was occupied by Mr Graham Giddings. Messrs Richardson and Murnane met their deaths on the Tuesday morning in the vicinity of that property.

10.27. Much of the paperbark swamp was inaccessible to vehicles, including 4WD CFS appliances. However, some CFS appliances were able to penetrate the swampy area in the vicinity of the hundred line that divided Mr Cabot's property from Christopher Hull's property. In addition, the swampy area north of Warunda Road on George and Les Hull's property was also penetrable by CFS appliances. Graded breaks were created in some parts of the swampy area north of Warunda Road.

10.28. Human life and assets at risk

To the south-east of the fireground lay many farming properties and homesteads. To the immediate south and east of the fireground were the farming properties of Mr Graham Giddings of Beaumont Farms Nominees Pty Ltd, Mr D S Oats, Mr Kelvyn Starke, Mr Tim Nelligan and Mr Cabot and Christopher Hull. Beyond those farms were other farming properties including that of Mr G S and K S Charlton on which there was a homestead situated on Gerschwitz Road. A number of properties and homesteads were situated to the immediate east of the Wanilla Forest, including properties occupied by the Ryan family, the McKean family and the Borlase family. There were two homesteads on the Borlase property. The homesteads on Borlase Road in each instance were situated on or near the southern side. Further to the east were many other farming properties and homesteads, including those in the Greenpatch district.

10.29. Also to the south-east of the fireground was the township of Wanilla some 15 kilometres distant from the fireground. On or situated near the south-east coast of the Lower Eyre Peninsula were the townships of Louth Bay, Poonindie and North Shields, and of course the heavily populated city of Port Lincoln. Port Lincoln was situated as the crow flies some 40 kilometres south-east of the fireground. Port Lincoln had a population of 14,270.

10.30. It is worth noting that in 2003 Mr Maddern, who was the Group Officer at that time and several other members of the Lower Eyre Peninsula CFS Group undertook a TEWT, which is a tactical exercise without troops. This TEWT effectively covered the same area that this fire consumed. Mr Maddern told me that he arranged the TEWT to assist the local Incident Management personnel gain experience in managing a major incident. Mr Maddern put together an incident which started mid-morning at Wanilla on a fire ban day. The fire was affected by northerly winds with a significant wind change to the west about two hours after the fire started. Mr Maddern told me that it was a real 'eye-opener' to them as to at how quickly the fire reached Port Lincoln under those simulated conditions.<sup>647</sup> Mr Maddern's exercise had the fire travelling from Wanilla to Port Lincoln in two hours. Mr Maddern said that from memory around 10 people participated in this exercise, including Mr Chambers,

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<sup>647</sup> Transcript, page 14915

Mr Branson and Ms Post. When asked what occurred as a result of undertaking this exercise, Mr Maddern said:

'It was left as a desktop exercise, but I think it highlighted the fact that we needed to be very much aware of making those sort of calculations as part of our incident management, and this is where it comes back into that planning process, that we are perhaps a bit light on doing some of this planning, what may happen in certain situations.'<sup>648</sup>

10.31. Although the townships on the south-east coast of the Lower Eyre Peninsula were several kilometres away, it is to be remembered that the extreme fire danger rating was forecast to last for several hours according to the 4:05am forecast to which I have referred. Within that period of several hours, there was also a predicted wind change that was to present problems of its own. A breakout of fire from the overnight fireground, driven by an unabated north-west wind would reach Port Lincoln if not controlled. An early wind change to the west would ameliorate that work. A late or unrealised wind change would increase that risk.

10.32. The actual risk

There was a substantial body of evidence as to the actual risk. A number of farmers had identified it at a very early stage. That there was a substantial risk to life and property engendered by this essentially uncontrolled fireground was in reality obvious. Christopher Hull was so concerned about the fire as it existed on his property on the Monday afternoon and evening that he spoke to the CFS about the possibility of backburning on his property to the south of the swamp and north of Yorkies Gully Road. Mr John Giddings expressed concern to the CFS at the Wanilla Hall at about 11pm about the potential for the sugar gums on Duck Lake Road to ignite uncontrollably. Mr Terry Secker, a farmer from Wanilla, also went to the Wanilla Hall where he said he spoke to a woman about his concerns. Mr Brian Foster of Coultas telephoned the CFS on the Monday evening and spelt out to them the difficulties with the southern perimeter of the fire as it extended from Mr Cabot's property to the vicinity of the junction of Lady Franklyn Road and Duck Lake Road. Mr Charlton Jnr and Snr ventured early on the Tuesday morning to the fireground because of their concern as to the risk it posed to their property to the south-east. Mr Cabot sent his wife away on the Tuesday morning in the expectation of breakouts.

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<sup>648</sup> Transcript, page 14971

10.33. Mr Euan Ferguson clearly acknowledged the risk, or indeed myriad of risks, that were presented by this fire. Mr Ferguson suggested that an Incident Management Team would need to consider a worst case scenario. He did not detect any evidence of such consideration. Neither did I. He said this:

'A. No, I think it's actually a very valid question, because in fact the worse case scenario would have been a breakaway from the fire at some stage during the extreme fire danger conditions and in considering that worse case scenario, if I had been there, and they probably would have done some calculations using the fire rate of spread metres, and then said: if we happen to get an escape at the worst period in the day, then we're likely to get a rate of spread in the order of this, which probably would have come out in the order of 10, maybe 11 km/h, which is actually quite significantly less than some of the rates of spread observed or reported by Jim Gould. I think that's where they would have gone to because with the onset of a wind change there could have been any combination of scenario with the wind change impacting because if the breakaway scenario had occurred at 7 o'clock in the morning, with strong freshening northerly winds it would have been a very much south-easterly spread, gone right down, probably past Port Lincoln and then you would have a massive eastern flank to deal with. But if the breakaway had been with the wind change, it would have been just a north-easterly progression of the fire, so there would have been between those two extremes, any number of scenarios, so there would have been a zone of potential risk, possibly one of the other scenarios that they would have been considering would have been a new fire, and indeed, if there had been a new fire start hypothetically just south of this fire, about the same time, one would have got a very similar result, but if there had been a new fire start perhaps north of Cummins, it will have been a similar result but further up. So there's a limit to what they might have played out but they probably would have said: point escape here, some distance of south easterly travel, then with the influence of a south easterly wind change.'<sup>649</sup>

Mr Ferguson described the fire reaching Port Lincoln as being a '*logical possibility*' that would need to be contemplated, particularly if the wind change were to have occurred later rather than sooner<sup>650</sup>. In fact, Mr Ferguson in his statement said this in respect of the overnight fireground:

'The first thing to note about this fireground is that it presents an extreme complexity of fuel and weather conditions complicated by poor access and a swamp. It is one of the more challenging strategic planning situations I can ever recall.'<sup>651</sup>

Mr Ferguson also said:

'The key problems that one would hope would be identified at this stage are that the fire is in the swamp and that it is uncertain as to how it will behave there, ie. it may simply

<sup>649</sup> Transcript, pages 18595 and 18596

<sup>650</sup> Transcript, page 18597

<sup>651</sup> Exhibit C280a, page 41

extinguish itself there or it may flare up under the influence of strong winds and hot and dry conditions.’<sup>652</sup>

10.34. Mr Stuart Lawson, who is the Deputy Chief Officer of the CFS, in his evidence agreed with the proposition that given the complexities of the fire on the Monday night and the weather forecast for the following day, there was a significant risk to the public for the following day if the fire got out<sup>653</sup>.

10.35. Dr Tolhurst in dealing with the various options that may have been employed to contain the fire overnight, stated in his first report, in respect of the consequences of failure of containing the fire, the following:

‘Consequence of Failure

- An escape from the fire boundary with forecast conditions for Tuesday would mean that escapes are likely to be uncontrollable.
- Area to south and east of fire area is highly populated and productive farmland Port Lincoln within range of an early escape.
- Fire could potentially spread for 12 hours under Very High to Extreme fire danger conditions on Tuesday – potential spread is therefore 10’s of kilometres to the south or east.’<sup>654</sup>

10.36. Dr Tolhurst made similar acknowledgements in his evidence. Dr Tolhurst expressed the view that in simple terms the fire was probably going to escape from the overnight fireground. He said that in his experience one really required about two days to adequately black out the edge of a fire in order to call it controlled, bearing in mind the severity of the weather for the following day. Dr Tolhurst believed that the chance of containing the fire was less than 50%<sup>655</sup>. In such a situation what one strives for is minimisation of the impact rather than the prevention of any impact of the escape of fire. In expressing the view that escape of fire from the overnight fireground was likely, Dr Tolhurst referred to three factors as bearing on that issue. He said:

‘Well, three factors, I guess. One is the severity of the weather conditions that were forecast, particularly the strong winds with the dry conditions. Secondly, yes, there was the way in which the fire had burnt on Monday meant that you had a very long exposed edge for areas to potentially escape under a strong northerly wind. Thirdly, the fact that that edge was also in difficult fuel through the swamp and, well, to some extent the sugar

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<sup>652</sup> Exhibit C280a, page 47

<sup>653</sup> Transcript, page 17173

<sup>654</sup> Exhibit C281, page 34

<sup>655</sup> Transcript, page s19141 and 19142

gum as well so the most hazardous edge of the fire was the one that also had the worst fuel.' <sup>656</sup>

- 10.37. Dr Tolhurst, in the context of dealing with the desirability of water bombing aircraft at the fireground, acknowledged that there was an expectation that the fire was almost certain to escape somewhere, based upon the fact that there was a fire which could not be fully blacked out '*with the best efforts in the world*' and bearing in mind the severe fire weather conditions forecast for the following day.
- 10.38. There were several other acknowledgements in the course of the evidence made by witnesses who were involved in the fighting of this fire that breakouts of fire from the overnight fireground were inevitable if nothing was done to prevent or minimise the risk of that happening. Mr Ross Pope, the Wanilla CFS captain agreed that it would be a serious oversight if there had been no containment measures undertaken on the Monday evening for the south-eastern flank of the fire<sup>657</sup>. Mr Napier was also of that view, saying it would be an area of concern if no work had been undertaken on the south-eastern flank on the Monday night<sup>658</sup>. Mr Neil Ackland, the Captain of Kapinnie CFS agreed that it would be inevitable that fire would come out of an area if no work had been done to prevent it<sup>659</sup>.
- 10.39. Ms Angela Whillas, who was the Incident Controller for the overnight shift of the Incident Management Team said in her oral evidence that she was also of the view that breakouts were likely given the weather forecast for the Tuesday and that her view was made clear to the incoming Incident Management Team. Ms Whillas later said that she did not actually state to the incoming Incident Management Team on the Tuesday morning that she considered breakouts were likely as she considered that the level of experience that the members of the incoming Incident Management Team had meant that it would be obvious to them that breakaways were to be expected that day.

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<sup>656</sup> Transcript, page 19142

<sup>657</sup> Transcript, page 4784

<sup>658</sup> Transcript, page 5148

<sup>659</sup> Transcript, page 4371



## 11. Actual weather

- 11.1. At the time of the fire the Bureau of Meteorology (BoM) operated two automatic weather stations (AWS) on the Lower Eyre Peninsula. One at Coles Point, about 18km to the west of the fireground on the coast, and one at the Port Lincoln Airport which is on the eastern side of the Peninsula just north of North Shields, approximately 35 km from the fireground. The Coles Point AWS records the current weather conditions once each hour, while the Port Lincoln AWS records the weather conditions every 30 minutes.
- 11.2. I have already mentioned previously that the BoM advised the Inquest that neither of these weather stations would give a truly accurate reflection of the weather conditions experienced in the Wangary region on 10 and 11 January 2005. Mr Watson from the BoM indicated that in relation to the Coles Point AWS, the temperature at the fireground would probably have been higher and the relative humidity probably lower. In relation to the Port Lincoln AWS the reverse applies, the temperature at the fireground would probably be lower, the relative humidity probably higher and the wind speed at the fireground would probably have been lighter<sup>660</sup>.
- 11.3. Weather conditions for the afternoon of Monday 10 January 2005
- The following table depicts the forecast weather conditions by the BoM for Monday 10 January 2005 and the actual weather conditions that were recorded at these two automatic weather stations throughout the Monday afternoon. The actual recorded weather readings are from Exhibit C221d and the fireground readings have been sourced from various CFS radio logs.

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<sup>660</sup> Exhibit C221a

Location (time)	Maximum Temp (°C)	Relative Humidity (%)	Wind conditions (wind speed in km/h)	Grassland FDI
<b>State wide weather forecast issued by BoM for Monday 10 January</b>				
Coles Point	33	13	NW 25 with change to the SW 32 between 1300 and 1700 hours	28 Very High
Port Lincoln AP	32	14	NW 25 with change to the SW 28 between 1400 and 1700 hours	27 Very High
<b>Actual weather conditions recorded around 2:30pm on Monday 10 January</b>				
Coles Point (1432)	31.6	17	NW 24 gusting to 30	23
Port Lincoln AP (1434)	38.4	5	W 43 gusting to 56	119
<b>Actual weather conditions recorded around 3:30pm on Monday 10 January</b>				
Coles Point (1532)	31.9	14	NW 22 gusting to 28	22
Port Lincoln AP (1534)	38.6	5	W 48 gusting to 63	156
<b>Actual weather conditions recorded early evening on Monday 10 January</b>				
Fireground reading by Mr Lock (1806)	35.4	10	W 17.9 gusting to 26.5	
Coles Point (1832)	30.2	19	WSW 13 gusting to 19	9
Port Lincoln AP (1804)	36.7	6	W 43 gusting to 54	108

11.4. As can be seen from the above table the predicted forecast for conditions at Coles Point were reasonably accurate. However the forecast conditions for Port Lincoln were under estimated quite markedly and actually meant that this forecast produced what is referred to as a ‘missed event’. A ‘missed event’ occurs when the forecast conditions are significantly inaccurate. In fact, if the Grassland Fire Danger Index for Port Lincoln Airport had been accurately forecast, it would have resulted in the CFS declaring Monday 10 January a fire ban day in that region. However, there is no evidence that this ‘missed event’ impacted on anything that transpired on the Monday.

11.5. The weather teleconference between CFS and BoM

The Bureau of Meteorology contacted Mr Leigh Miller, Deputy State Coordinator of the CFS on Monday afternoon to advise that they were predicting a day of extreme fire danger for Tuesday 11 January. As a result of this contact, Mr Miller convened a teleconference for 4:30pm that afternoon.

- 11.6. During the fire danger season a weather teleconference is held between the Bureau, CFS and the Department of Environment and Heritage every week on a Thursday. Teleconferences are also organised whenever there is a extreme fire danger forecast for the following day.
- 11.7. Mr John Prideaux was the BoM forecaster who spoke to the CFS during the teleconference. The relevant CFS members involved in this briefing were:
- Mr Euan Ferguson, Chief Officer, CFS
  - Mr Brenton Keen, Deputy Chief Officer, CFS
  - Mr Leigh Miller, Deputy State Coordinator, CFS
  - Mr Simon Vogel, Regional Duty Officer, Region 6
  - Ms Sonia Post, Regional Training Officer, Region 6
  - Mr Owen Glover, the State Air Resources Coordinator, CFS
  - Ms Krista St John, Media Liaison Officer, CFS
  - Mr Robert Maddern, DGO 1, Lower Eyre Peninsula Group
  - Mr Brian Trigg, Group Officer, Cleve Group (now Eastern Eyre Group)
- 11.8. Mr Maddern and Mr Trigg were in CFS Headquarters in Adelaide that day having taken part in a State Volunteer Management Committee meeting and were invited to sit in at the conference. They would not normally be involved in such a discussion.
- 11.9. Mr Prideaux briefed the CFS on the predicted conditions for the following day and was recorded by Mr Ferguson in his personal log as saying that the Tuesday was going to be ‘potentially one of the most severe days in the past few years’<sup>661</sup>. Mr Ferguson in his oral evidence told me that he also recorded Mr Prideaux as informing them that they did not expect there to be a lot of wind over the West Coast (Lower Eyre Peninsula region) overnight and that the wind would spring back to the north towards dawn<sup>662</sup>.
- 11.10. This record of Mr Prideaux’s comment is supported by others present at the teleconference who recall him saying words to a similar affect. Mr Miller, the DSC

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<sup>661</sup> Exhibit C280b, EF 19

<sup>662</sup> Transcript, page 17846

had a recollection that Mr Prideaux said that 'he had never seen anything like it before' and that he took that to mean that it was going to be 'pretty significant fire weather the next day'. Mr Maddern told me that he recalls the BoM person indicating that the new day 'was going to be one of the most significant fire weather days that the State had had for quite some considerable time'<sup>663</sup>.

11.11. Mr Vogel, the Regional Duty Officer for Region 6 said he did not recall Mr Prideaux's making such a statement but on his own admission said that he could not remember a lot of detail about the teleconference as he was busy dealing with the fire at the time and in fact left the teleconference part way through<sup>664</sup>.

11.12. Ms Sonia Post, the Region 6 Training Officer, also took part in the teleconference. She told me that she did not recall Mr Prideaux making the statement as recorded by Mr Ferguson, but did note that there were fire bans in all districts across the state so in her mind that made it a particularly significant day<sup>665</sup>.

11.13. Weather conditions on the Monday evening

As already mentioned, the BoM issued a 12 hour forecast from 1900 hours on Monday evening aimed specifically at the fireground area<sup>666</sup>. In formulating this forecast the BoM forecasters took into consideration the data from the Coles Point AWS and also the weather conditions recorded by Mr Lock at Christopher Hull's hayshed just after 6pm. This forecast was issued at 1845 and the details of the forecast and the actual conditions overnight are set out over the page.

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<sup>663</sup> Transcript, page 8623

<sup>664</sup> Transcript, page 12784

<sup>665</sup> Transcript, page 11956

<sup>666</sup> Exhibit C1811

Location (time)	Maximum Temp (°C)	Relative Humidity (%)	Wind conditions (wind speed in km/h)	Grassland FDI
<b>BoM fireground forecast - 1900</b>	33	10	W 20gusting to 25	22 Very High
Coles Point (1932)	28.4	27	S 20 gusting to 28	13
Port Lincoln AP (1934)	30.2	19	S 17 gusting to 20	12
<b>BoM fireground forecast - 2200</b>	30	15	SW 20 gusting to 25	18 High
Coles Point (2232)	22.5	29	ENE 13 gusting to 15	6
Port Lincoln AP (2234)	19.3	42	N 4 gusting to 7	1
<b>BoM fireground forecast - 0100</b>	27	20	NE 25 gusting to 35	20 High
Coles Point (0132)	23.7	24	NNE 28 gusting to 33	20
Port Lincoln AP (0134)	18.7	42	N 7 gusting to 11	2
Fireground reading by Mr Branson at 0152	21	30	SW 8	
<b>BoM fireground forecast - 0400</b>	23	25	NNE 30 to 45	22 Very High
Coles Point (0433)	19.7	39	NNE 26 gusting to 31	12
Port Lincoln AP (0434)	19.6	56	SSE 4 gusting to 11	1
Fireground reading by Mr Branson at 0530	23	34	NE 22	
<b>BoM fireground forecast - 0700</b>	30	15	NNW 35 gusting to 50	45 Very High
Coles Point (0732)	20.4	41	NE 30 gusting to 33	14
Port Lincoln AP (0734)	23.7	34	NNE 9 gusting to 13	4

11.14. In addition to the weather reading that was provided from the fireground by Mr Branson at 1:52am, a number of CFS volunteers provided the Inquest with information about the weather conditions they experienced when working on the fire on the Monday night. Most people observed the wind to be mild and quite cool and not one witness suggested that there were strong north easterly winds at the fireground from 1am as was forecast.

11.15. Mr Doudle, the Captain of the Coultas appliance and Sector Commander of Scrubby Sector told me that the weather remained very mild overnight and the wind was cool

and calm<sup>667</sup>. Mr Kenny, the Kapinnie CFS captain and Lady Franklyn sector commander said that it was 'dead calm most of the night'<sup>668</sup>.

11.16. Mr Doudle observed the wind picking up to the north at around 4:00am and radioed to the Operations Officer Mr Branson that he estimated that the wind was about 15km/hr from the north at 4:06am. Mr Doudle did not use any type of instrument to measure this, but estimated it by slowing his appliance to the same speed as the dust whilst driving along Duck Lake Road<sup>669</sup>.

11.17. Mr Branson then reported that there were north-easterly winds of 22km/hr at the fireground at 5:30am.

11.18. Bureau of Meteorology forecast issued at 4:05am

The Bureau of Meteorology issued another 12 hour weather forecast at 4:05am on Tuesday morning after being requested to provide a further forecast at 3:40am. This time the forecaster was not given the current fireground conditions to utilise when preparing his report. It is not suggested that this detracted from the legitimacy of, and the attention that was needed to be paid for this report.

11.19. The report included estimates for both 4am and 7am which had been included in the previous 12 hour forecast. The estimates for 4am had not changed at all, while the 7am predictions had the temperature lower, the relative humidity higher and the wind more from the north. This change in conditions resulted in a slightly lower grassland fire danger index being predicted for that time than in the previous forecast.

11.20. Weather conditions on the Tuesday

The details of the forecast and the actual conditions experienced for that 12 hour period of the Tuesday are set out over the page.

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<sup>667</sup> Transcript, page 12967

<sup>668</sup> Transcript, page 3872

<sup>669</sup> Exhibit C203a – MD36 and Transcript, page 1298

Location (time)	Maximum Temp (°C)	Relative Humidity (%)	Wind conditions (wind speed in km/h)	Grassland FDI
<b>BoM fireground forecast - 0400</b>	23	25	NNE 30 gusting to 40	22 Very High
Coles Point (0433)	19.7	39	NNE 26 gusting to 31	12
Port Lincoln AP (0434)	19.6	56	SSE 4 gusting to 11	1
Fireground reading by Mr Branson at 0530	23	34	NE 22	
<b>BoM fireground forecast - 0700</b>	25	20	N 35 gusting to 45	34 Very High
Coles Point (0732)	20.4	41	NE 30 gusting to 33	14
Port Lincoln AP (0734)	23.7	34	NE 9 gusting to 13	4
Fireground reading by Mr Lock at 0825	30.6	18	NNE 22.6 gusting to 32.4	
<b>BoM fireground forecast - 1000</b>	35	5	NNW 45 gusting to 55	122 Extreme
Coles Point (1001)	36.7	9	NNW 41 gusting to 50	87
Port Lincoln AP (1004)	38.2	6	NNW 46 gusting to 63	135
<b>BoM fireground forecast – 1300</b>	35	15	W 45 gusting to 60	85 Extreme
Coles Point (1331)	25.6	50	W 20 gusting to 31	8
Port Lincoln (1326)	34.9	14	W 48 gusting to 83	101
<b>BoM fireground forecast – 1600</b>	31	35	SW 45 gusting to 60	49 Very High
Coles Point (1632)	24.9	44	SSW 39 gusting to 48	26
Port Lincoln (1634)	28.9	18	WSW 39 gusting to 57	49

- 11.21. Evidence from firefighters and farmers present at the fireground on Tuesday morning suggests that the wind was very calm until about 8:30am or 9am when it gradually started to pick up and strengthen from the north or north-west. At 10:24am when at least one breakout had already occurred, Mr Shepperd in Lower Eyre car 2 and the Wangary appliance were both reporting winds of 50km/hr from the north-west.
- 11.22. The forecast westerly wind change was experienced at Coles Point at around 11am and at the Port Lincoln Airport at 12:15pm. Prior to the change the BoM recorded wind speeds of up to 61km/hr from the north and northwest gusting up to 87 km/hr. Following the change, the winds initially were recorded at up to 55 km/hr with guest of 85km/hr. These wind strengths continued for some time before gradually lessening during the afternoon as the wind shifted more to a south-westerly direction.

- 11.23. The temperature at Coles Point and Port Lincoln Airport at 10am was 36.7°C and 38.2°C respectively and the relative humidity was low at both locations. It is worth noting that during the Tuesday the Coles Point AWS recorded extreme fire conditions from 8:41am until 10:33am and at Port Lincoln Airport AWS, extreme fire conditions were recorded from 8:47am until 4:24pm<sup>670</sup>.
- 11.24. The most extreme weather conditions recorded by the BoM on the Tuesday came at around midday, when the grassland fire danger index recorded at Port Lincoln airport was in the vicinity of 350. This was as the wind was changing from the north to the west in that general area. The fire was well away by that time. Comfort seems to have been derived in certain quarters that this prodigious GFDI typified the weather conditions at all material times. The notion is entertained that this very unusual GFDI signified that weather conditions, and therefore firefighting conditions, were such that firefighting was simply not possible at any given time on the Tuesday. It is a contention that is largely fallacious. There is no suggestion that the GFDI was 350 between 9:30am and 10am when the first breakout occurred. Conditions at that time were not dissimilar to those predicted in the 4:05am forecast, a point made by the Bureau of Meteorology and one that remained unchallenged.
- 11.25. This is not to say that firefighting conditions at the time of the breakouts from the swamp were anything other than very difficult. It is simply appropriate to dispel the notion that these massive GFDI figures in excess of 350 were typical of the whole of the Tuesday.

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<sup>670</sup> Exhibit C221d



**12. Legislation and other documentation governing the activities of the Country Fire Service in respect of incidents**

12.1. The following sources of material are relevant to the duties of the Country Fire Service and its paid and voluntary staff:

- The Country Fires Act 1989<sup>671</sup>
- The South Australian Country Fire Service Chief Officer's Standing Orders and Standard Operating Procedures<sup>672</sup>
- The South Australian Country Fire Service Operations Management Guidelines<sup>673</sup>
- The Australasian Inter-Service Incident Management System manual<sup>674</sup>
- The CFS Region Six Regional Operations Management Plan 2004/2005<sup>675</sup>
- The SA Country Fire Service Lower Eyre Peninsula Group Operational Management Plan 2004<sup>676</sup>

12.2. There were other relevant operational documents tendered to the Inquest including the following:

- The Air Operations Manual - November 2004<sup>677</sup>
- The South Australian Country Fire Service Incident Management Forms<sup>678</sup>

**12.3. The Country Fires Act 1989**

The Country Fires Act 1989 established the Country Fire Service (CFS) as it now exists<sup>679</sup>. Previous legislation referred to a prior incarnation of that organisation. The responsibilities of the CFS are described in Section 8:

**'Responsibilities of the C.F.S.**

8. Subject to this Act, the C.F.S. is responsible for—

- (a) the prevention, control and suppression of fires in the country;

<sup>671</sup> This legislation is now repealed and has been replaced by the Fire and Emergency Services Act 2005

<sup>672</sup> The document with which this Inquest was concerned and which operated in January 2005 was the November 2004 edition (Exhibit C204)

<sup>673</sup> The document with which this Inquest was concerned and which operated in January 2005 was the November 2004 edition (Exhibit C206)

<sup>674</sup> Third edition version 1 – 30 June 2004 (Exhibit C224h)

<sup>675</sup> The document with which this Inquest was concerned and which operated in January 2005 was the December 2004 edition (Exhibit C205)

<sup>676</sup> The document with which this Inquest was concerned and which operated in January 2005 was the November 2004 edition (Exhibit C224e)

<sup>677</sup> Exhibit C247a

<sup>678</sup> Exhibit C224d

<sup>679</sup> The Country Fire Service in fact existed prior to this enactment.

- (b) the protection of life, property and environmental assets in fire and other emergencies occurring in the country.'

12.4. Section 15 of the Country Fires Act establishes the office of the Chief Officer of the CFS. Section 15(2) describes the fundamental responsibility of the Chief Officer:

- '(2) The Chief Officer has the ultimate responsibility for C.F.S. operations and may therefore assume command of any C.F.S. operations for the prevention, control or suppression of fire or the protection of life or property.'

12.5. Section 16 of the Country Fires Act sets out the command structure for the CFS. For each CFS Region in South Australia there is a 'Regional Officer'. There are 6 Regions in South Australia. The Region with which this Inquest was concerned was Region 6. Each Region is divided into Groups and Section 16 of the Act stipulates that for each Group there is a 'Group Officer'. Like Regions, Groups within a Region are delineated on geographical grounds. The Wangary fire started within the Lower Eyre Peninsula Group area and was at all times managed under the auspices of that Group. The Inquest was concerned mainly with the activities of the Lower Eyre Peninsula Group, but other Groups such as the Tumby Bay and Cleve Groups were also ultimately involved. Groups are divided into Brigades, again on a geographical basis. Under Section 16 of the Act, each Brigade has a 'Brigade Captain'.

12.6. Regional Officers are appointed by the Board of the CFS.

12.7. Group Officers are elected by representatives of the various Brigades that make up the Group.

12.8. Brigade Captains are elected by members of their Brigade.

12.9. The ranks within the CFS command structure are as follows:

<b>Permanent Paid Staff</b>	<b>Volunteers</b>
Chief Officer	Group Officer
Deputy Chief Officer	Deputy Group Officer
Assistant Chief Officer	Brigade Captain
Commander/Regional Commander	Brigade Lieutenant
Regional Officer	Senior Firefighter
	Firefighter

- 12.10. Part 6 of the Country Fires Act sets out the powers of the CFS and its Officers in situations of fire and other emergencies that occur in the country or that occur inside a metropolitan fire service district but at which a metropolitan fire brigade is not in attendance.
- 12.11. Section 53(2) of the act places all fire brigades and all persons present at the scene of a fire to which the Act applies under the control of the Incident Controller, or where an Incident Controller has not been appointed, the most senior member of the CFS in attendance. The expression 'Incident Controller' for a fire or other emergency is defined as the person for the time being appointed to be the Incident Controller for that fire or other emergency in accordance with procedures approved by the Board of the CFS.
- 12.12. Under Section 54, CFS Officers are empowered to take action that appears to be necessary or desirable for the purposes of firefighting or the protection of life or property in any other emergency notwithstanding that the action might result in damage to or the destruction of property or cause pecuniary loss to any person. In particular, a CFS Officer may among other things:
- '(b) remove flammable material or any other dangerous substance, or cause flammable material or any other dangerous substance to be removed from any land or building;
  - (d) cause any supply of fuel or other flammable liquid, any gas or electricity, or any other dangerous substance to be shut off or removed;
  - (e) cause firebreaks to be ploughed or cleared on any land;
  - (f) subject to the directions (if any) of a member of the police force, prohibit, direct or regulate the movement of persons, vehicles or animals;
  - (g) take and use water or any other fire extinguishing material from any land;
  - (h) with the consent of the owner or person in charge of any vehicle or machine, use that vehicle or machine for the purpose of fire-fighting;
  - (j) make use of the gratuitous services of any person ...'

A CFS Officer is also empowered for the purpose of controlling an existing fire to light another fire or cause another fire to be lit. Backburning operations come to mind here.

12.13. The Chief Officer's Standing Orders and Standard Operating Procedures

The Chief Officer's Standing Order (COSO) 1 stipulates that all incidents are to be managed in accordance with AIIMS (Australian Inter-service Incident Management

System). COSO 1 also stipulates that the Incident Controller shall have overall management of an incident and overall responsibility for the management of resources allocated to that incident. It specifically states that there should only be one Incident Controller.

12.14. COSO 1 reflects the AIIMS incident management structure and sets out the basic four core functions of such a structure, namely:

- Control
- Planning
- Operations
- Logistics

12.15. One of the 'key responsibilities' that must be undertaken for all incidents under COSO 1 is 'assess situations and determine priorities' and 'develop an Incident Action Plan (IAP)'.

12.16. COSO 2 deals with the requirements of Situation Reports (SitReps). The requirements for SitReps are also referred to in Standard Operating Procedure (SOP) 3.1. However, COSO 2 specifically refers to the requirements of providing information as to the approximate size of an incident (obviously including a fire) and the prognosis/prediction for the outcome of the incident. A SitRep is also meant to address the possible consequences and impacts an incident may have and what assets are at risk.

12.17. A SitRep is required within 5 minutes of arrival at an incident and every subsequent 30 minutes. A SitRep should also be supplied within 10 minutes of any significant change at an incident.

12.18. COSO 3 applies to all operational briefings at Brigade, Group, Regional and State levels. The aim of an operational briefing is to 'provide standard content and order for operational briefings and the transfer of appropriate information'. The COSO stipulates that operational briefings will be given at all changeovers of personnel and that briefings will be given utilising the SMEACS format. SMEACS is an acronym for Situation, Mission, Execution, Administration and Logistics, Command and Communication and Safety.

- 12.19. A SMEACS briefing is meant to address such matters as the status of any incident, topography, weather, assets at risk and other exposures, current resources, the strategies and tactics to be implemented, the command structure in existence, inter-agency communications and the safety and welfare for all personnel, bearing in mind predicted weather changes, known and anticipated hazards, and public safety issues.
- 12.20. SOP 1.1 sets out the CFS Chain of Command that I have already described. It also stipulates that where an Officer of higher rank than the Incident Controller intends to make incident management decisions, they are to assume the role of Incident Controller and when that assumption takes place, the incoming Incident Controller must notify the outgoing Incident Controller and all personnel at the incident that the change of role has occurred<sup>680</sup>.
- 12.21. SOP 3.1 is designed, among other things, to ensure that Group Officers/Group Deputy Officers ensure that Regional Duty Officers are advised in an Initial Incident Report as soon as practical of, among other things, all incidents/responses on fire ban days of predicted FDI 50 and above, all air support response requests and of any fire that has burnt more than 30 hectares in area. A FDI (Fire Danger Index) of 50 reflects extreme fire danger and calls for a fire ban in the area to which it applies.
- 12.22. SOP 3.1 also sets out some of the duties of the Regional Duty Officer and of the Regional Coordination Centre.
- 12.23. SOP 5.1 describes the phase warning system that was in existence in January 2005 as follows:
- 'There are 4 phases of warning for the public.
- The following outlines the information contained in each warning:
- Phase 1 – general notification
    - Will notify the public that there is a bushfire burning in a specified area and moving in a particular direction. It will advise residents to take precautions to protect life and property.
  - Phase 2 – reasonable warning
    - This warning will be preceded by a distinct warning signal broadcast on designated media. It will provide further advice on the movements of the bushfire and area that are threatened. Residents in those areas will be warned to

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<sup>680</sup> SOP 8.2 also contains this stipulation

consider evacuation to a designated area if they consider their house is not safe to stay in.

- Phase 3 – fire imminent
  - Phase 3 will also be preceded by a distinct warning signal broadcast on designated media. It will indicate the locality threatened and advise all persons in that area to seek shelter in their houses and to keep off the roads.
- Phase 4 – stand down
  - This phase will broadcast the ‘all clear’ for residents to return to their properties as the wildfire is now under control.
- Phase warnings shall be issued within the following criteria, where:
  - A major fire is burning out of control
  - The CFS predicts that they will not contain the fire in the foreseeable future (3 hours)
  - Where there are inadequate resources and/or the CFS is primarily undertaking defensive strategies to protect assets and is making minimal impact with offensive strategies
  - There is a township or community which is going to be directly impacted on by the fire
  - The fire is burning under extreme bushfire weather conditions and is highly likely to threaten any unprepared life or property.
- To assist Regions to determine if Phase Warnings are required in a given bushfire situation they should use the CFS Evacuation or Inplace Sheltering Assessment form, see SOP 5.2.'

This SOP stipulates that ABC Radio was the official bushfire phase warning station. It will be observed that these warnings are reactive to a given situation. They do not warn of the intrinsic dangers of a fire that is not moving.

- 12.24. SOP 5.2 deals with evacuations during a bushfire and stipulates that CFS personnel are not to advise residents to evacuate premises if smoke or flames are known to be close. The same SOP also contains a requirement that people who have chosen to evacuate their premises should be guided via a safe route to a designated safe refuge area away from the fire or its likely path.
- 12.25. SOP 8.2 sets out the Group Officer ‘operational responsibilities’. Among those responsibilities in an incident are the assumption of the role of Incident Controller for incidents involving group resources beyond a single brigade response. It also allows where circumstances dictate, or for training and experience purposes, an Officer other than a Group Officer may assume the role of Incident Controller.

12.26. SOP 8.3 outlines the operational responsibilities of a Regional Duty Officer (RDO) in relation to a particular incident. The first stipulation is phrased as follows:

'Upon notification of an incident the RDO will undertake the functions listed below for all incidents, which in the officer's consideration have the potential to escalate beyond the capability of the Brigade or Group.'

In such circumstances, among the RDOs duties are a responsibility to establish and maintain communication with the Group Officer or Incident Controller at the incident's location and to ensure an Incident Management Team has been established through the implementation of the 'Incident Control System'. Another stipulation is that the RDO should 'attend the incidents as defined in SOP 2.1 - levels of response'. This seems a rather vague stipulation.

12.27. Under SOP 8.3 the Regional Duty Officer is said to be:

'In conjunction with the Incident Controller, be responsible for the following when responding to an incident:

- Overseeing of CFS input into the incident
- Ensuring the Incident Control System is implemented
- Ensuring welfare arrangements of personnel are initiated.'

Another of the Regional Duty Officer's responsibilities is to ensure Regional communications and logistics functions are being undertaken and as an example of this to activate the Regional Coordination Centre (RCC) for 3<sup>rd</sup> alarms or for complex incidents. Among the more significant duties is the following:

'In consultation with the Incident Controller and other relevant sources, predict potential for escalation of the incident, and determine strategies and resource requirements needed to cater for the incidents' escalation and or control.'

12.28. SOP 8.4 describes the operational responsibilities of the Deputy State Coordinator. Those responsibilities include the duty to support the Regional Duty Officer, and ensuring the Incident Controllers have taken control and have established Incident Management Teams. As well, the Deputy State Coordinator has a responsibility to support the Regional Duty Officer to ensure the Incident Controllers and combatant agencies are preparing strategies to overcome or suppress incidents' potential. In addition there is a responsibility upon the Deputy State Coordinator to ensure that Regional Coordination Centres have established themselves 'operationally' where necessary, and are preparing strategies to overcome or suppress incidents' potential.

12.29. In addition the Deputy State Coordinator is to support the Regional Duty Officer to ensure the establishment of communication links and procedures between any 'operational' Regional Coordination Centre and the Incident Controllers to ensure that adequate flow of information occurs.

12.30. SOP 11.1 dealt with aerial fire bombing in a 'Primary Response Zone'. The Lower Eyre Peninsula was not contained within a primary response zone at the time of the fire. There were two primary response zones in existence in January 2005, namely the Mount Lofty Ranges and the Lower South East. Under this SOP if a fire occurred in the Mount Lofty Ranges primary response zone where a grass or forest fire danger index was 20 and above or where in the Lower South East primary response zone the forest fire danger index was 35 and above, fire bombers were to be automatically despatched to the fireground without the need for the Incident Controller to request that service.

12.31. This situation is to be contrasted with the location in question on the Lower Eyre Peninsula where there was no such stipulation in effect. For secondary response zones, which the Lower Eyre Peninsula was contained within at the time, aerial fire bombers were to be requested by the Incident Controller to the Regional Duty Officer. SOP 11.1 specifically stated in respect of such a situation 'a request for an aircraft does not guarantee a response'. In such a situation the Regional Duty Officer would request the State to release a bomber. The State would take into account a number of matters before releasing such a resource. I deal with the question of aerial fire bombing elsewhere in this Finding.

12.32. South Australian Country Fire Service Operations Management Guidelines

Chapter 10, entitled Operational Chain of Command and Information Flow, contains the following general sentiment:

'It is essential that operational information is transferred effectively and efficiently between various levels within the CFS Chain of Command and ultimately to the State Emergency Operations Centre (SEOC), the Minister and other relevant stakeholders.'

12.33. Chapter 14, entitled The Role of the CFS State Coordination Centre (SCC), states as its mission:

'Supporting safe CFS operations by excellent preparedness, planning and information flow in order to protect the community.'



12.34. The role of the SCC is set out as follows:

- The role of the SCC is primarily concerned with Coordination at a State level. Specific roles include:
- Coordinate and prioritise the allocation of all CFS resources but especially State controlled resources.
- Collect process and communicate important information to CFS personnel so that they can prepare for and respond effectively and efficiently.
- Liaise and collaborate with other emergency services and agencies who are or may become involved in an incident.
- Support firefighters, incident management teams and Regions.
- Transmit information to the community to empower them to make decisions about their own safety.
- Ensuring that response to fires and other emergencies is safe, effective, and efficient and is integrated with other agencies.
- Coordinating special activities such as accident investigation.'

12.35. Under the heading 'The main effort of the SCC', the following is stipulated:

'The main effort of the SCC will be to coordinate, support and collaborate in six key areas:

- Coordination of resources.
- Provision of important information to those who need to know.
- Coordination, provision and facilitation of logistics requests.
- Provision and coordination of firefighting aircraft.
- Provision of information to the media and to the community.
- Liaison and collaboration with other agencies and emergency services.'

12.36. Chapter 16, entitled The Regional Coordination Centre (RCC), describes the role of the RCC. Specific roles are stated to include:

- Support firefighters, Incident Management Teams (IMTs), Brigades and Groups within the Region.
- Transmit information to the community to empower them to make decisions about their own safety.'

12.37. Chapter 17 contains definitions relating to the status of incidents.

'When providing situation reports, the following definitions of the status of incidents shall be used wherever possible.

**Going**

Any fire expanding in a certain direction or directions. Any incident that is expanding or continuing to require an active or escalated response.

**Contained**

A fire is contained when its spread has been halted, but it may still be burning freely within the perimeter or fire control lines. Other incidents are contained when the spread or growth of the incident has been halted.

**Controlled**

The time at which the complete perimeter of a fire is secured and no breakaway is expected. For other incidents, the time at which the incident is secured and there is no possibility of extension or growth of the incident.

**Completed**

This is for non-fire and other incidents. It is the time at which the incident is secured and there is no further need for CFS involvement. Other services (eg: ETSA, Police) may still be involved in response or recovery operations.

**Safe**

The stage of fire suppression, prescribed burning or incident response when it is considered that no further suppression or control action or patrols are necessary.'

12.38. Chapter 18 describes the various levels of incident. As to the classification of incidents the chapter commences:

'It is difficult to precisely define incident characteristics. Common sense and flexibility need to be taken into account when determining an incident level.'

The classification of levels of incident is said in this chapter to be used as a 'guide' when managing incidents.

12.39. The chapter sets out three levels of incident known as Level 1 Incident, Level 2 Incident and Level 3 Incident. No entity suggested during the course of the Inquest that what transpired in January 2005 was at any stage properly to be characterised as a Level 1 Incident.

12.40. Level 2 incidents are described as follows:

'Level 2 incidents are more complex either in size, resources or risk than Level 1 incidents. They are characterised by the need for:

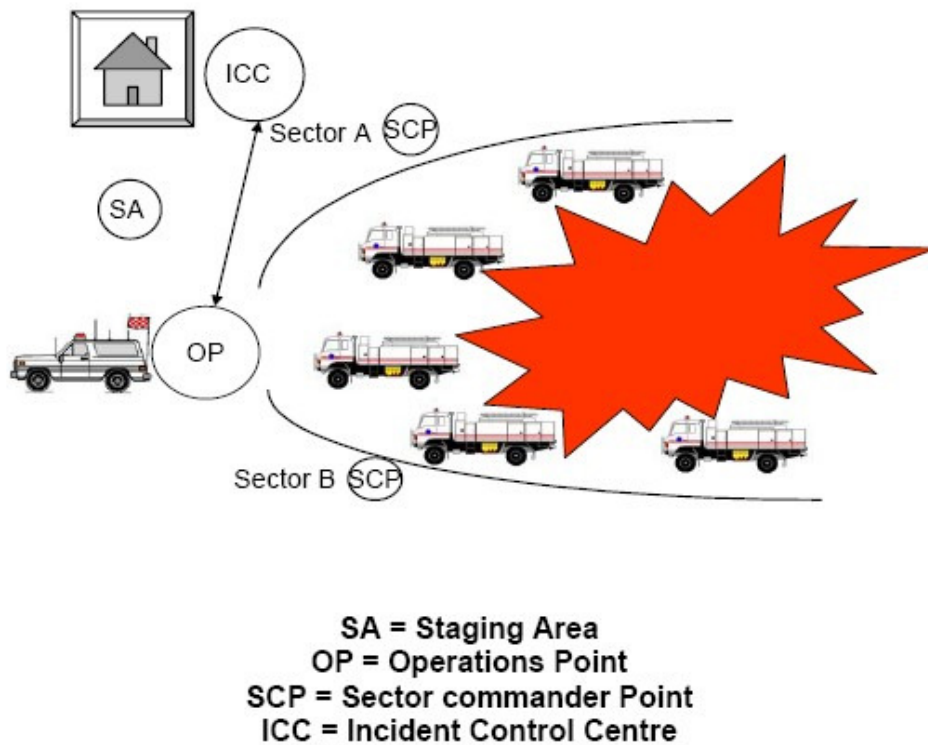
- Deployment of resources beyond initial response, or
- Sectorisation of the incident, or
- The establishment of functional sections due to the levels of complexity, or
- A combination of the above

Other agencies will usually be involved. Liaison and management issues are more complex. There may be a local threat and impact to the community at a local or perhaps at a Regional level. Some incident management functions will usually be delegated. The

incident may be in transition into a major incident (Level 3 incident). Incident Management functions may be managed by 4 – 10 persons.

An example is a substantial HAZMAT incident as a result of a traffic accident that is being managed by the local Group.'

## Level 2 Incident

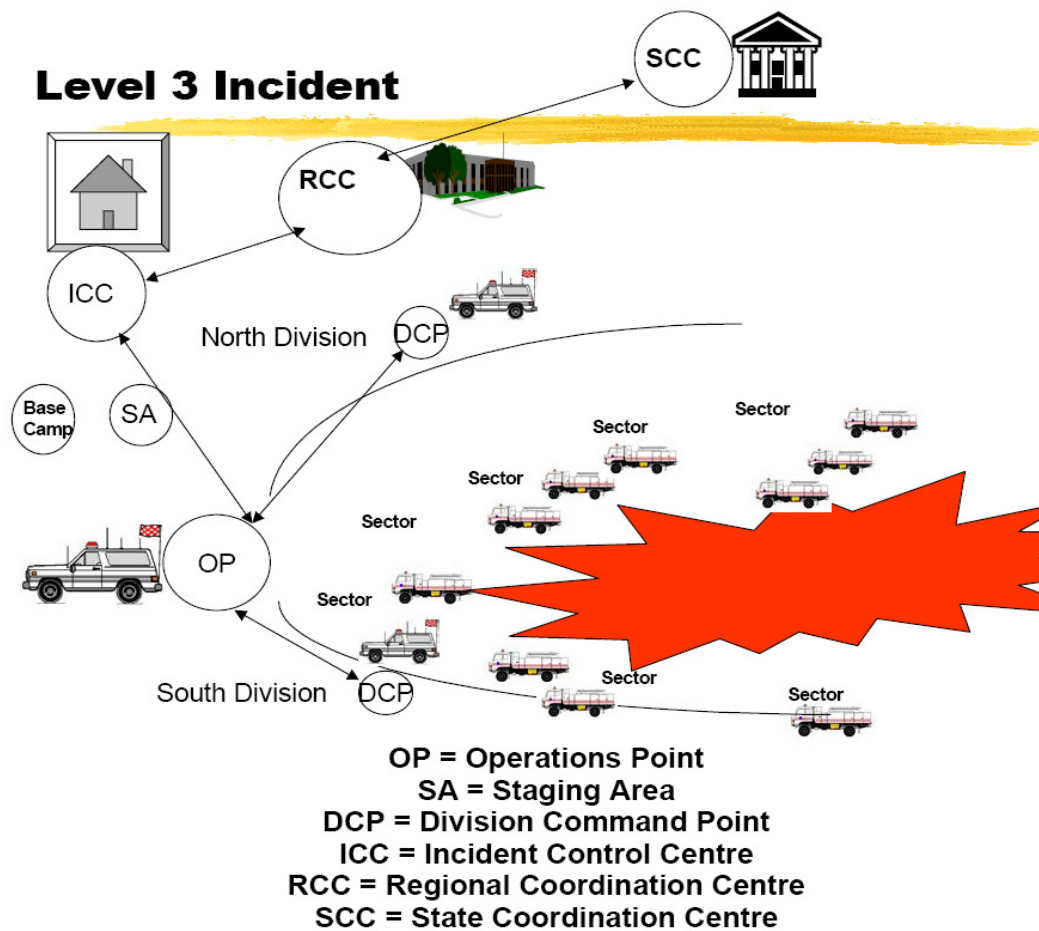


12.41. Level 3 incidents are described as follows:

'Level 3 incidents are characterised by degrees of complexity that may require the establishment of Divisions for effective management of the situation. These incidents will, usually, involve delegation of all functions. There may be multiple shifts. Numerous other agencies may have significant involvement. There will generally be a significant threat or impact to the community at a local, Regional or State level. Incident Management functions requires a large team and involves other agencies and emergency services.

An example is a significant bushfire that requires a concerted response by the Regional resources to combat and manage the incident.

When an incident is escalating, but will clearly become a Level 2 or a Level 3 incident, then it should be classified as a Level 2 or a Level 3 incident at the earliest time.'



12.42. There was much debate during the Inquest about if and when the incident became a Level 3 incident, particularly overnight and in the early hours of the Tuesday.

12.43. Page 38 of the OMG detailed on the following page sets out the SACFS Incident Management Arrangements and Facilities. It is designed to reflect the required resources, as well as the necessary training and accreditation of persons involved in the various levels of incident.

SA Country Fire Service - Incident Management Arrangements and Facilities					
Level	Definition of Incident Level	IMT Resources	Training/Accreditation	Control Facilities	Audit Process
<b>Level 1 Incidents</b>	A Level 1 incident is able to be resolved through local or initial response resources. It is a simple and small incident. There is minimal threat and impact to the general community. Other local emergency services may be involved. Control of the incident is limited to the immediate area, the operations function can usually be carried out by the IC.	<b>Incident Controller</b> at Operations Point (OP) - Communications with Brigade Station and/or Group Control Centre (GCC)	<b>Introduction to AIIMS (BFF1) and Australasian Inter-service Incident Management System Module</b>	<b>Appliance is the OP</b> or perhaps a Command Vehicle Communications with Brigade Station and/or GCC	<b>Annual Brigade Audit</b> Chief Officers inspections SFEC Prescriptions
<b>Level 2 Incidents</b>	Level 2 incidents are more complex either in size, resources or risk than Level 1 incidents. Characterised by the need for: <ul style="list-style-type: none"> <li>• Deployment of resources beyond initial response, or</li> <li>• Sectorisation of the incident, or</li> <li>• Establishment of functional sections due to the levels of complexity, or</li> <li>• A combination of the above</li> </ul> Other agencies will usually be involved. May be a threat to the community at a local or perhaps Regional level. Some AIIMS functions will usually be delegated.	<b>Short Incident Management Team</b> all 4 key positions filled Incident Controller at OP or GCC, Operations Officer and Sector Commanders are in Command of all firefighting resources	<b>Australasian Inter-service Incident Management System Module and Specialist Training in Specific roles</b> Accredited for Level 2 Incident Management Refreshed bi-annually	<b>Level 2 ICC</b> Brigade Station and/or GCC OP may be Command Vehicle or Brigade Station Communications with RCC	<b>Annual Audit</b> by Regional Staff in accordance with GCC Audit Tool
<b>Level 3 Incidents</b>	Level 3 incidents are characterised by degrees of complexity that may require the establishment of Divisions. Usually, involve delegation of all functions. May be multiple shifts. Numerous other agencies may have significant involvement. Generally a significant threat or impact to the community at a local, Regional or State level. Requires a large AIIMS team.	<b>Long Incident Management Team</b> all positions filled and shift rotation established Incident Controller at ICC Forward Commander at OP in Command of resources	<b>Australasian Inter-service Incident Management System Module and Specialist Training in Specific AIIMS Roles</b> Accredited for Level 2 & 3 Incident Management Refreshed, Used and/or Exercised Annually	<b>Designated Level 3 ICC.</b> OP may be Brigade Station or other suitable venue Communications with RCC	<b>Annual Audit</b> by Regional Staff & Senior Operations Officer (State) in accordance with Level 3 ICC/RCC Audit Tool

12.44. Chapter 21 of the OMG relates to incident management. The chapter reinforces the use of AIIMS. It also confirms that the Incident Controller has overall management of an incident and undertakes overall responsibility for the management of resources allocated to that incident. The chapter also confirms the Incident Controller's responsibility to ensure incident management, that is the planning, logistics and operations functions, are fulfilled.

12.45. While there are other more detailed descriptions of the roles of the Officers fulfilling the AIIMS related functions, chapter 21 under the heading of 'planning' describes the responsibilities of the planning function as including:

- Taking responsibility for preparation and delivery of plans and strategies
- Maintaining a resource management system
- Assembling, maintaining and providing incident information

12.46. Chapters 23, 24, 25 and 26 deal with the roles of the Officers fulfilling the AIIMS functions. There is other documentation relating to these functions and I will deal with those roles separately.

12.47. Chapter 31 relates to operational risk assessment. There is other key documentation relating to this issue. I will discuss operational risk assessment separately.

12.48. Chapter 35 of the OMG deals with operational briefings (SMEACS). Again, other documentation describes requirements in relation to operational briefings. However, it is worthwhile noting what are said to be the underlying sentiments of proper operational briefings. The guidelines at page 63 state the following:

'Planning is done not only to satisfy the information needs of the chain of command. Many planners and incident managers lose sight of the fact that the primary purpose of the plan is, in fact, to provide a common document from which many people can work with a common goal and in an orderly and coordinated manner.

If the person combating the fire and incident on the ground has not been properly briefed, how do you know that they are doing the right job in the way you want it done? How do you know that they are working safely, effectively and efficiently?'

12.49. The SMEACS briefing process for operational briefings includes references to the status of the incident, the terrain involved, assets at risk, strategies, tactics and tasks to be implemented, logistics, resources, predicted weather changes, known and anticipated hazards and so on.

12.50. The CFS Region 6 Regional Operations Management Plan 2004-2005

This document was promulgated in December 2004. The front cover of the document states that its author was Mr Simon Vogel who is the Region 6 Regional Officer and Prevention Officer stationed at Port Lincoln. The document was approved by Mr Neil Ellis, the then Region 6 Commander, also stationed in Port Lincoln.

12.51. Chapter 1 provides a description of Regional assets and its geographical locations.

12.52. Region 6, with which this Inquest is concerned, covers 20% of the State and includes the Eyre Peninsula, West Coast and Far West to the Western Australian border and areas 80 kilometres to the north of the transcontinental railway line.

12.53. At the time the document was promulgated, Region 6 consisted of 8 CFS Groups (including the Lower Eyre Peninsula, Tumby Bay and Cleve Groups), 61 CFS Brigades, 74 CFS appliances and support vehicles, 12 CFS command vehicles, approximately 1900 registered CFS members, approximately 1600 CFS firefighters, approximately 180 CFS auxiliary members and approximately 90 CFS cadet members. The Region encompasses 9 local government council areas. Region 6 Headquarters is situated in Jabomie House in the centre of Port Lincoln.

12.54. Chapter 1.4 is entitled Regional Control Strategies. This section and the following section concerns the responsibilities of CFS personnel at a Regional level in respect of general CFS activity and more particularly in the course of an incident.

12.55. Among the duties of the CFS at a Regional level are included the following<sup>681</sup>:

- Prioritise and coordinate limited Regional resources based on incident priority.
- Ensure adequate resources are deployed to incidents, using ICS principles (e.g. strike teams, Incident Management, forward control points).
- Forecast and request State and inter-Regional resources.
- Ensure ICS teams are established for incidents where appropriate.
- Ensure the responding Incident Management personnel have the skills, knowledge and competencies necessary to effectively and safely carry out their duties.<sup>682</sup>
- Provide timely advice on incident information to the State Coordination Centre.
- Provide timely issuing of Phased Warnings.

12.56. Chapter 1.5 of the document is entitled Operations Response and Resource Management. The Regional duties include the following under this heading:

- Ensure that there are adequate resources to combat the incident. (1.5.1)
- Ensure adequate strategic information is being received from the incident. (1.5.2)
- Authorise the use of Heavy Plant and Equipment. (1.5.2)
- Authorise the use of Bombing Aircraft. (1.5.2)
- Establish plan for the utilisation of Private Units. (1.5.2)

12.57. Chapter 1.6 entitled Regional Liaison Procedures and Attendance at Incidents sets out the following duties at Regional level:

- Attend when incident complexity requires a higher level of control or coordination. (1.6.1)
- Consider attendance for support and mentoring of other Officers. (1.6.1)
- Liaise with Incident Management Team/Coordinator. (1.6.2)

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<sup>681</sup> Chapter 1.4

<sup>682</sup> The use of the word responding very much suggests that this particular control strategy relates to a incident as well as generally

- Assume command if higher level of Control/Command/Co-ordination required e.g. Level 3 response or Campaign Fires. (1.6.2)<sup>683</sup>
- Provide support to Incident Management Team where required. (1.6.2)
- Attend incidents and provide support by mentoring Group or Brigade Officers. (1.6.2)

12.58. Chapter 1.7 entitled Control outlines further responsibilities at a Regional level including the following:

- Review *Incident Management Team* (IMT) and appointment of Incident controller and other functions. (1.7.1)
- Provide support in the establishment of incident objectives and strategies. (1.7.1)
- Ensure functions within the Incident Management Team are established and functioning in an efficient manner. (1.7.2)
- Consider appointing an Incident controller and other functional positions to ensure effectiveness of Incident Management Team and incident outcomes. (1.7.2)
- Consider responding Regional Incident Management Teams to alleviate the workload and/or responsibilities of Group Officers / Group Incident Management Teams, depending on incident complexity or public risk. (1.7.2)
- Consider ICS strategy per incident options analysis. (1.7.2)
- Provide ongoing training to all Incident Management Team accredited personnel. (1.7.2)

12.59. Chapter 1.8 of the document entitled Command outlines the following duties at Regional level:

- Take command when incident complexity determines. (1.8.1)
- Assume the role of Incident controller when required or directed by a senior CFS Officer. (1.8.2)
- Provide command support to Incident controllers through mentoring, validations of objectives and prompting. (1.8.2)

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<sup>683</sup> The Deputy Chief Officer of the CFS, Mr Lawson, expressed the view during the Inquest that this should refer to a Level 3 incident as opposed to a Level 3 response



12.60. Chapter 1.9 of the document entitled Coordination includes the following duty:

- Maintain effective liaison with other Emergency Service Agencies to ensure proper coordination of support resources and the protection of public and assets. (1.9.2)

12.61. Chapter 1.13 entitled Regional Incident Management Team inter alia includes a number of criteria for the establishment of a Regional Incident Management Team. I set out these duties in full:

'13.1.3 Criteria for establishing a Regional Incident Management Team

- On a predicted total fire ban day (FDI 50+). (Initially Regional staff)
- When requested by a Group Officer or Incident controller.
- The Regional Duty Officer/Commander may initiate response of a Regional IMT when it is apparent that there is a lack of command, control, coordination and planning; or
- When the incident is of significant impact on the assets or the environment or has the potential to cause a catastrophic event.
- When a fire has potential to become a campaign fire (greater than 36 hours) or an escalation of the incident is deemed the most likely outcome.'

It was also suggested during the course of the Inquest that a further criterion for the establishment of a Regional Incident Management Team would be the fact that in an incident the resources of a particular Group who are within the Region were fully committed. The creation of a Regional Incident Management Team does not necessarily mean that it will take over the control of an incident.

12.62. The Region Six Regional Operations Management Plan also sets out the responsibilities of the various functionaries under AIIMS as it would relate to a Regional Incident Management Team. I will deal with those responsibilities separately under a general analysis of the responsibilities of the various functionaries under AIIMS as it relates to the management of an incident both at Regional and Group level.

12.63. Likewise, the document deals with risk management at a Regional level. I will deal with that issue in conjunction with the issue as it applies to Group level.

12.64. Chapter 3.6 entitled 'Public Information' sets out a number of responsibilities and actions. These include:

- Prepare or contribute to the preparation of media releases.
- Provide timely incident information to the public through regular media reports.

12.65. The SA Country Fire Service Lower Eyre Peninsula Group Operational Management Plan

This document on its cover states that it was prepared by Mr Robert Chambers who was the Group Officer at the time of the document's promulgation in November 2004. Mr Chambers had been elected Group Officer in August 2004. He had taken over that role from Mr Robert Maddern who had been the Lower Eyre Peninsula Group Officer for about 25 years. At the same election, Mr Maddern became Deputy Group Officer 1, Mr Jeffrey Lock Deputy Group Officer 2 and Mr Russell Branson Deputy Group Officer 3. The document was in force as at the time of the Wangary fire in January 2005. Page 4 of the document contains a section entitled 'Framework'. The 'Group Control Objectives' are set out as follows:

- '1. Ensure the safety of firefighters and emergency service workers is paramount. All personnel should be continuously using the process of dynamic risk assessment.
  - What are the risks?
  - Who or what is at risk?
  - Are the risks acceptable?
  - What can be done to reduce or remove the risks?
2. Ensure the safety of public
3. Ensure timely combating of incidents
4. Ensure adequate response commitment within the Group'

12.66. The 'Group Control Strategies' include the following:

- '..4. Forecast and request additional resources from the Region
- ..6. Combat incidents utilising team work and skills obtained through training
7. Ensure the responding incident management personnel have the skills, knowledge and competencies necessary to effectively and safely carry out their duties
- ..14 Provide timely advice to the Region on CFS activities.'

12.67. At page 29 of the document a paragraph in bold type is set out explaining the necessary action in the event of extreme weather conditions:

**'If the incident involves five (5) or more appliances, other agencies, or the Fire Danger Index on the day of the incident is above 50, the Group Officer or his designated Deputy will become Incident Controller. If the Group Officer is unavailable then the highest ranking Deputy Group Officer available will be Incident Controller.'**

12.68. Page 30 of the document deals with 'Incident Control':

INCIDENT CONTROL

Incident Management Procedures

Incident Management positions shall be implemented, with considerations for escalation as required.

IMT personnel

Name	Possible IMT positions	Contact number(s)
R CHAMBERS GO	IC.OPS.PLANING.SEC/COM	
R MADDERN DGO 1	IC.OPS.PLANING	
J LOCK DGO2	STAGING.OPS ..PLANING	
R BRANSON DGO3	IC.OPS.PLANING. SEC/COM	
J CHAMBERS ADMIN	RADIO. PLANING.LOG/finance	
G HURRELL	OPS. PLANING.LOG.SEC/COM	
A WHITE CAPT LINC	OPS. PLANING.LOG. SEC/COM	
G WOODROFFE	LOG	
G SHEPPARD	STAGING.PLANING.LOG.	
I GLOVER	PLANING (sic)	
G FUSS		
D BAKER		

Strike Team Leaders

Name	Brigade	Contact number(s)
R CHAMBERS	LEP GROUP	
J LOCK	LEP GROUP	
R BRANSON	LEP GROUP	
K EAGLE	WHITE FLAT	
M LAKIN	GREENPATCH	
J OPHF	CUMMINS	

Role statements of Incident Management team

- Utilise ICS positions checklist and CFS Operations Management Guidelines

ICS Forms

- Utilise the annually produced CFS 'cd' containing electronic and printable ICS forms, including logistics and welfare functions'

It will be noted that Ms Angela Whillas is not included in the list of persons who might be included in an Incident Management Team<sup>684</sup>, although she had participated in an AIIMS training course in October 2004. It will also be observed that Mr Joseph Tilley of the Department of Environment and Heritage is also not included on the document. Mr Tilley is a fulltime employee of the Department of Environment and Heritage and is in fact possibly one of the most qualified and experienced firefighters and incident management personnel in the Region. Mr Tilley gave evidence to the Inquest and told me that he would not have been surprised if his services had been called upon overnight on 10 and 11 January 2005. Mr Tilley, as we will see in another context, told me that he would have taken the view in respect of the overnight incident that in effect there was a higher degree of risk involved as far as the escalation of the incident was concerned, particularly bearing in mind the overnight weather forecast and the weather forecast received in the early hours of the morning<sup>685</sup>.

12.69. The document set out above, being page 30 of the Group Operational Management Plan refers to ICS forms. A set of the incident management forms as they existed in January 2005 was tendered to the Inquest<sup>686</sup>. Exhibit C227 sets out the history of these forms and states that they came into operation in 2003<sup>687</sup>.

12.70. South Australian CFS Incident Management Forms

This booklet contains a number of blank forms. The forms are designed for the various levels of incidents namely, Level 1, 2 and 3 incidents. In addition, at page 4 of the document, it is suggested that for Level 3 incidents the following documents should be considered for use:

'All Incident Action Plan forms  
All Planning forms  
Communications forms (only those relevant)  
Logistics forms (only those relevant)' <sup>688</sup>

12.71. As I understand the evidence, these forms were not available on the Lower Eyre Peninsula at the time of the Wangary incident although they had been promulgated.

<sup>684</sup> Exhibit C224c, page 45 states that Angela Whillas is qualified to carry out the role of an Operations Officer on subsequent shifts


<sup>685</sup> Transcript, page 14329

<sup>686</sup> Exhibit C224d

<sup>687</sup> At the time of the Wangary Fire, Regions were using the 2003 versions of the forms as well as exhausting the supply of existing stocks of the pre 1996 and 2000 forms

<sup>688</sup> Exhibit C224d

Many of these documents relate to various aspects and requirements of an Incident Action Plan.

 <b>INCIDENT ACTION PLAN</b> Cover Sheet	
Incident Name:	Operational Period Date:
	Time from:      hrs Time to:      hrs


CONTENT <u>IAP Forms</u>	No of Pages	<u>DISTRIBUTION</u>							
		IC	Ops	Plan	Log	Div Com	Sec Com	Staging / Base Camp	Other
Incident Action Plan Cover Sheet									
Situation Objectives									
Execution									
Administration Logistics									
Command & Communications									
Safety									
<b>Attachments</b>									
Fire Map									
Organisational Structure									
Resources - Personnel									
Incident Management Team Structure									
Options Analysis									
Incident Prediction									
<b>Other Attachments</b>									
Weather forecasts									
Situation Reports									
Changeover Plan									
Catering Plan									
<b>Displayed At</b>									
Staging									
Accommodation									
<b>Number of pages</b>									

Prepared By:	_____	Approved By:	_____
	Name                      Signature		Name                      Signature
Position:	_____	Position:	_____
SA ICS 2.00		Version 3      08-09-04	

### Incident Action Plan Cover Sheet

The Incident Action Plan Cover Sheet provides a summary of documents and plans that comprise an Incident Action Plan and the distribution of that plan.

 Government of South Australia	<h1 style="margin: 0;">SITUATION OBJECTIVES</h1> <h2 style="margin: 0;">Incident Action Plan</h2>		
<b>Incident Name:</b>	<b>Operational Period</b>		Time from:      hrs
	<b>Date:</b>		Time to:      hrs


<b>SITUATION</b> Incident Overview Where is it, what is happening, where is it going, what are you doing.	CURRENT			
	Location of Weather Reading:			
	Temp:	RH	Wind Speed:	Direction:
	GFDI:	FFDI:	Notes:	
	PREDICTED			
	Location of Weather Reading:			
Temp:	RH	Wind Speed:	Direction:	
GFDI:	FFDI:			
<b>MISSION Objectives</b>	RECOMMENDED			
REFERENCE: Appreciation – Courses Open for Incident Options Analysis and Incident Prediction <i>(Show on Map)</i>	OPTIONS			

Prepared By:      Name      Signature	Approved By:      Name      Signature
Position:	Position:
SA ICS 2.01 <span style="float: right;">Version 3      16-08-04</span>	

### Situation Objectives

The Situation Objectives form is a critical part of the Incident Action Plan. It is used to record the current situation and outline the Mission (objectives for the incident).

 Government of South Australia		<h1>EXECUTION</h1> <p>Incident Action Plan</p>	
Incident Name:		Operational Period	Time from:                  hrs
		Date:	Time to:                    hrs
<b>STRATEGIES</b> Specific work for any relative Team, Sector, Division or Unit			
<b>SAFETY CONSIDERATIONS</b>			
<b>CO-ORDINATING INSTRUCTIONS</b> <b>PROMPTS:</b> Timings, Routes, Assembly Areas, Staging Areas, Boundaries, Escape Route, Landing Areas, Communications, Changeover Plan <b>REFERENCE:</b> Maps, Plans, Other forms			
Prepared By: _____ Name                                      Signature		Approved By: _____ Name                                      Signature	
Position: _____		Position: _____	
SA ICS 2.02		Version 3                      07-09-04	

## Execution

The Execution form comprises part of the Incident Action Plan. It is used to outline strategies for achieving the Incident Objectives (Situation Objectives form). The strategies should be broken down for individual divisions and/or sectors and should outline safety considerations.



**Government  
of South Australia**

## INCIDENT PREDICTION

## Incident Action Plan BUSHFIRES ONLY

TIME	Current Time: Hrs	Hrs		Hrs		Hrs		Hrs	
Factors Weather Drought factor Temp °C Rel Humidity (%) Wind Speed kmh/Direction									
FDI                      FFDI/GFDI									
<b>Fuel Loads</b> Fuel type Tonnes / ha									
Fire behaviour on <b>flat ground</b> Forward R.O.S (kmh) Flame Height (m) Spotting distance (m) <b>Total distance spread (km/ha) for flat ground</b>									
Fire behaviour on slope Slope(°) Forward R.O.S (kmh) Flame Height (m) Back R.O.S (kmh) Back flame Ht.(m) Spotting distance (m) <b>Total distance spread, km (includes slope effect)</b>									

Attach a map of the prediction or a diagram to explain what is expected, based on latest situation report.

Comments

**Significant Information** (*Assets Locations, Values, Natural barriers, Other*)


**Uncertainties and probabilities** (*Things that may vary prediction*).

Prepared By: _____ Name _____ Signature _____		Approved By: _____ Name _____ Signature _____	
Position: _____		Position: _____	
SA ICS 211		Version 3: 08-09-04	

## Incident Prediction

The Incident Prediction form is a planning tool used to identify current and potential bushfire behavior.



 <b>Government of South Australia</b>	<h1 style="margin: 0;">OPTIONS ANALYSIS</h1> <h2 style="margin: 0;">Incident Action Plan</h2>		
<b>General Objective</b> ( <i>Achieve it, Measure it, In a specified time</i> )			
Previous options discarded because			
Weight critical issues (most important first) for each option. If one outcome is unacceptable, the option is not viable			
Briefly describe each option, show on attached map or diagram	<b>Option 1 – Strategies</b>	<b>Option 2 – Strategies</b>	<b>Option 3 – Strategies</b>
<b>Issues</b>  <small>Issues may include: safety, cost, risk, environment, weather, date &amp; time to control, terrain access, social, legal, size, resources, practicality (numbers/types/capacity)</small>			
<b>Impact of emergency response effort</b>			
<b>Probability of Success</b>			
<b>Description of critical issues</b> Provide details of issues listed above if necessary - or attach documentation			
<b>Comments on options and recommendation:</b>			
<b>Decision:</b> Option is approved by IC (name)		Signed: _____	
Comments:			
Prepared By: _____ <small>Name Signature</small>		Approved By: _____ <small>Name Signature</small>	
Position: _____		Position: _____	
SA ICS 2.10		Version 3: 08-09-04	

## Options Analysis

The Options Analysis form is used to identify strategic options that could be used to achieve the objective(s). Each option is weighed using various considerations before deciding on a particular course of action.

12.72. The documentation that I have referred to would require the members of an Incident Management Team to fill in very detailed information about the strategies in relation to a bushfire. That documentation, although promulgated, was not available to the Incident Management Teams in this particular incident on the Monday or Tuesday morning. The need to complete this documentation would have encouraged the Incident Controller and Planning Officer were addressing the many and varied issues, such as alternative strategies, set out on that documentation. Their compilation would require some detailed analysis by the Incident Management Team of a bushfire situation as it existed at any given time. I did not see any of these documents used in the Wangary incident. However, I was shown by way of an example how they were used in the Burra bushfire of December 2005. It is clear from the documentation produced during the Burra incident that these documents would have been extremely useful at Wangary if for no other reason than to require those whose duty and responsibility it was to fill the documents out to actually think about what was taking place and to consider what should be done in order to combat the fire and minimise the risk to the general public.

12.73. AIIMS - Australasian Inter-service Incident Management System

There were a number of publications concerning the utilisation of AIIMS as an incident management strategy. There is no doubt that AIIMS is an effective system for the management of incidents, be they bushfires or otherwise. No-one suggested anything to the contrary during the course of the Inquest. One thing that AIIMS does not do, however, is provide guidance on how to control a bushfire. It would be idle to think that participation in an AIIMS course would provide any real tuition as to how to control a bushfire.

12.74. The utility of AIIMS is described in a document that was tendered to the Inquest entitled The Australasian Inter-Service Incident Management System – A Management System for any Emergency, Third Edition, Version 1, 30 June 2004. This document did not specifically relate to bushfires nor to the activities of the South Australian CFS in particular, although it acknowledges that the system has been principally used by fire and land management agencies<sup>689</sup>.

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<sup>689</sup> Exhibit C224h, page 1

12.75. The application of the system is described in the document as follows:

'Throughout Australia a number of statutory authorities and government departments are responsible for the management and control of emergency incidents such as those arising from the natural environment, technological/industrial events or civil/political unrest. Organisations that have a significant role to play include the emergency management organisations, and state and local government.

AIIMS is designed to work within the legislative, policy and operational arrangements applying within any particular organisation or jurisdiction.

AIIMS provides a common management framework to assist with the effective and efficient control of incidents. The framework applies across a whole range of incidents from small to large and provides the basis for an expanded response as an incident grows in size or complexity.

The control system of AIIMS involves a structure of delegation to ensure that all vital management and information functions are adequately performed. The control system is made up of four functional areas: Control, Planning, Operations and Logistics.

The system brings together personnel, procedures, facilities, equipment, and communications to facilitate the efficient management of an incident. The system is based on a common organisational structure which has the responsibility for managing the allocation of resources so that stated incident objectives and outcomes are accomplished effectively.

AIIMS provides an incident management framework that starts at first response and grows with an incident. From first notification, incident management procedures are implemented and incident control issues of resourcing and operational planning are considered.'<sup>690</sup>

12.76. AIIMS is based upon what is referred to in the general AIIMS document as 'functional management'. Functional management is described at pages 4 and 5 of the document. It describes the four specific incident management functions. Although the functions in this document are described in general terms, a number of other documents describe the duties and responsibilities within those functions and those of the relevant functionaries in the context of firefighting. I set out here the description of functional management as it appears in the general document:

'In the context of AIIMS, functional management means the utilisation of specific functions to manage an incident. AIIMS utilises the following four functions:

Control	The management of all activities necessary for the resolution of an incident.
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Planning	The collection, analysis and dissemination of information and the development of plans for the resolution of an incident.
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<sup>690</sup> Exhibit C224h, pages 2 and 3

- Operations    The tasking and application of resources to achieve resolution of an incident.
- Logistics    The acquisition and provision of human and physical resources, facilities, services and materials to support achievement of incident objectives.

For every incident, an Incident Controller is appointed who is responsible and accountable for all of the above functions. Depending on the size and complexity of an incident, the Incident Controller may elect to delegate one or more of the functions of planning, operations and logistics.

Functional management dictates that there can only be one Incident Controller managing an incident at any one time.<sup>691</sup>

12.77. The document envisages that in certain circumstances an Incident Controller may well retain the functions of operations, planning and logistics as well as his or her control function. The appropriateness of the retention or delegation of AIIMS functions depends largely upon the seriousness of the incident. The general document describes the three levels of incident that the CFS work to and were working to at the time of the Wangary incident. The document suggests that for a Level 2 incident the Incident Controller might decide to retain the roles of planning and logistics and to delegate operations. For a Level 3 incident it is suggested that the delegation of all functions is the norm.

12.78. At page 22 of the document it is suggested that incidents are to be characterised as Level 1, 2 or 3 'according to their size, complexity, resources or risk'. A Level 3 incident is said to be characterised by degrees of complexity that may require the establishment of divisions for effective management of the situation. This notion is replicated within the CFS specific documentation to which I have already referred. However, it is obvious from the way the general AIIMS document treats the whole issue, that one must characterise an incident in the round and that the size of the incident and the response are but two matters - the risk involved in the incident and the exposure of human life and assets is also clearly a matter to be taken into account.

12.79. As far as personnel within an AIIMS structure for any particular incident is concerned, the document sets out the following:

**'Knowing the Team'**

It is not only desirable that each member of the AIIMS structure be competent for their appointed position, it is also vital that the individual is able to work effectively with other members.

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<sup>691</sup> Exhibit C224h, pages 4 and 5

Although it may not always be possible, it is advantageous that members have had the opportunity to train and/or exercise together as a team in order to gain experience by working together.

One way to achieve this is through the establishment of pre-determined teams available to be deployed to major incidents. Deployment of these experienced teams may also provide mentoring and coaching opportunities for less experienced personnel participating in the incident.'<sup>692</sup>

12.80. The CFS promulgated its own AIIMS related document<sup>693</sup>.

12.81. The duties and responsibilities of the AIIMS functionaries insofar as they might relate to the management of a bushfire incident were set out in the SACFS Operations Management Guidelines to which I have already referred<sup>694</sup>.

12.82. Chapter 23 of the document describes the role of the Incident Controller. The overarching responsibility naturally, as the title would suggest, is one of control of the incident. Another of the overarching responsibilities is said to be:

'Approve plans and strategies to control the incident (Incident Action Plan)'<sup>695</sup>

12.83. Specific tasks related to the responsibilities of the Incident Controller include the following:

- 'Obtain briefing from previous Incident Controller
- Establish a control facility
- ...
- Establish and maintain a management structure
  - Establish a team appropriate to the size and complexity of the incident (know their competence) ...
  - Identification of personnel (e.g. tabards)<sup>696</sup>
- ...
- Establish procedures to permit control to be exercised ...
  - Ensure information flow  $\uparrow\downarrow\rightarrow$ ; community ...
  - Establish a planning meeting ...
- Assess the situation, identify risks and determine priorities
  - Situation assessment
  - Identify priorities
  - Seek intelligence/information

<sup>692</sup> Exhibit C224h, page 21

<sup>693</sup> Exhibit C219b

<sup>694</sup> Exhibit C206

<sup>695</sup> Exhibit C206, page 47

<sup>696</sup> A tabard is the vest like garment worn by members of an Incident Management Team upon which is written the function of the particular officer, eg. Incident Controller, operations officer, etc

- Current work effort
- Ensure issues are addressed
- Briefings
- Consider normalisation; demobilisation; recovery
- ...
- Develop the Incident Action Plan
  - Establish incident objective
  - Conduct planning meeting
  - Review strategies and options
  - Establish shift timings
  - Develop sub-plans
  - Validate plan
  - Authorise plan'<sup>697</sup>

12.84. Chapter 24 of the OMG refers to the role of the Planning Officer. It is said that: 'planning is a key function of AIIMS'<sup>698</sup>. The role is said to provide support for control of the incident through:

- Collection, evaluation and dissemination of information on the current and forecast situation
- Preparation and dissemination of the plans and strategies that are to be used in controlling the incident
- Collection and maintenance of information about the resources that are allocated to the incident
- Provision of management support services.'<sup>699</sup>

12.85. The Planning Officer's roles and responsibilities are said to include:

- Collect information on the current and projected incident situation
- Provide weather and other necessary specialist information and incident behaviour predictions
- Identify key risk exposures relating to the incident
- Disseminate information relevant to controlling the incident and potential safety issues
- Establish a process for transmitting critical and safety information
- Develop alternative incident objectives and strategies and identify the risks and likely outcomes associated with each ...'<sup>700</sup>

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<sup>697</sup> Exhibit C206, pages 47 to 49

<sup>698</sup> Exhibit C206, page 50

<sup>699</sup> Exhibit C206, page 50

<sup>700</sup> Exhibit C206, page 50

12.86. Chapter 26 of the OMG sets out the Operations Officer's duties and responsibilities in respect of an incident. In general the Operations Officer is responsible for implementing strategies in accordance with the Incident Action Plan to resolve the incident.

12.87. Specifically, the Operations Officer's roles and responsibilities include:

- Establish operations structure of a size and structure that is appropriate to the incident and allocate resources to enable safe work practices to be implemented by personnel on the incident ground
  - Sectorise / Divisionalise the incident
  - Establish Incident Control Point and Staging Area
  - Appoint Sector Commanders and Division Commanders
  - Establish and maintain a Staging Area
- Validate current operational activities
  - Understand the current and predicted situation
  - Review current resources and plan and identify the need for change
  - Undertake an operational risk assessment
  - Ensure the safety and welfare of personnel
- Implement Incident Action Plan
- Brief and assign Operations personnel in accordance with Incident Action Plan'<sup>701</sup>

12.88. The Operations Officer is also required to contribute to the development of Incident Action Plans. Under that general responsibility is included the following:

- Consult with Sector and Division Commanders
- Consult with Planning Officer
- Develop Operations portion of IAP
- Attend planning meetings
- Analyse options and consequences
- Develop operations statement and sub-plans'<sup>702</sup>

12.89. Chapter 25 of the OMG governs the activities of the Logistics Officer. In general the Logistics Officer's role and responsibilities are to manage resources both human and otherwise in respect of an incident. The Logistics Officer, as well, participates in the development and implementation of an Incident Action Plan.

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<sup>701</sup> Exhibit C206, page 52

<sup>702</sup> Exhibit C206, page 53

12.90. It will be seen that in a complex incident the duties and responsibilities of any of the four AIIMS functionaries are onerous ones, particularly when it is borne in mind that many incidents of complexity and seriousness in the context of firefighting involve incident control that is exercised by volunteers whose experience and level of training may not be uniform as between each other.

12.91. The functions of the four AIIMS functionaries within a Regional Incident Management Team appear to be no less onerous.

12.92. The CFS Region Six Regional Operations Management Plan states that the Regional Coordinator is responsible for the overall coordination command and effectiveness of CFS resources in the Region during incident management, through delegation of responsibility associated with the CFS chain of command.

12.93. In addition, the Regional Coordinator is to:

'Maintain advice to the CFS State Coordinator, or Deputy, of Regional status. Liaise with divisional disaster functional services to ensure appropriate and timely levels of intelligence and resource commitments.

Ensure appropriate level of response has been activated in accordance with the Regional Operations Management Plan.

Approve requests for additional Regional resources and requests for release of resources.

Assess / Approve Incident Action Plan, Option Analysis and Incident Prediction.

Authorise release of information to media.

Authorise the issue of phased warnings.

Assess requirement to evacuate persons vs in place protection.'<sup>703</sup>

12.94. A Regional Operations Officer's responsibilities include:

'Ensure all functional activities are coordinated and resourced and performing optimally.

Provide assistance to Regional Coordinator in areas of incident combat and resource management.

Assess the risks and exposures relating to the incident and advise the Regional Coordinator.'<sup>704</sup>

12.95. The responsibilities of the Regional Planning Officer include:

'Determine likely impact extent of bushfire over next 3, 6 and 12 hours.

Respond to predicted weather reports and updates, for use during incidents.

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<sup>703</sup> Exhibit C205, page 21

<sup>704</sup> Exhibit C205, page 22



Assist in preparation of incident prediction/fire behaviour, and option analysis form.

Advise the Regional Coordinator of any significant changes in the incident status.'<sup>705</sup>

12.96. Risk analysis and assessment

Risk analysis and assessment is a concept that is repeated in the documentation to which I have referred. Risk analysis is clearly an essential element of incident control and is recognised as such in the general AIIMS booklet<sup>706</sup> as well as in the CFS's own documentation that was in force at the time of the Wangary incident.

12.97. The documentation to which I have referred would clearly identify that risk analysis and assessment is not confined necessarily to direct incident management but is a matter that has to be considered at least at Regional level.

12.98. The other feature of risk analysis and assessment is a clear requirement for both accurate and timely information about the status of the incident, bearing in mind that incidents such as bushfires are dynamic and the circumstances that relate to them are in a state of change. Accordingly, any proper risk analysis involves ongoing consideration by those whose responsibility it is to conduct such risk analysis.

12.99. Risk analysis also does not necessarily involve operational risk assessment. By operational risk assessment, one envisages an assessment of the risks involved in undertaking a particular operation designed to combat an incident. That might well include the risks to which firefighters are exposed in conducting a particular firefighting operation. This operational risk assessment is described in Chapter 31 of the OMG<sup>707</sup>.

12.100. However, Chapter 32 of the OMG contains a number of considerations relating to risk assessment 'in all CFS activities'<sup>708</sup>. In all such activities the principles of risk management have to be applied. The chapter refers to processes described in the Australian and New Zealand Standard for Risk Assessment (AS/NZ 4360:1999). These processes are to be adopted 'wherever practical'. Although much of the chapter is devoted to operational risk assessment, that is to say the assessment made in order to minimise the risk to personnel, it does refer to such matters, in what is described as the 'Operational Risk Register', as the weather, the vegetation,

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<sup>705</sup> Exhibit C205, page 23

<sup>706</sup> Exhibit C224h

<sup>707</sup> Exhibit C206

<sup>708</sup> Exhibit C206, page 58

specifically difficult accessibility, etc. The chapter also refers to what is described as ‘corporate considerations’ that appears to include an assessment of risk to the ‘public/community’<sup>709</sup>. At pages 59-60 of the document a table is set out in relation to the exercise of determining the likelihood of a risk and an assessment of the consequences of such a risk.

### **Determine the Likelihood of a Risk**

Estimate the likelihood of an event or risk actually occurring.

<b>Descriptor</b>	<b>Description</b>
Almost Certain	Is expected to occur in most circumstances; and/or high level of recorded incidents and/or strong anecdotal evidence; and/or strong likelihood the event will recur; and/or great opportunity, reason or means to occur; may occur once every year or more
Likely	Will probably occur in most circumstances; and/or regular recorded incidents and strong anecdotal evidence; and/or considerable opportunity, reason or means to occur; may occur once every five years
Possible	Might occur at some stage; and/or few, infrequent, random recorded incidents or little anecdotal evidence; and/or very few incidents in associated or comparable organizations, facilities or communities; and/or some opportunity, reason or means to occur; may occur once every twenty years
Unlikely	Is not expected to occur; and/or no recorded incidents or anecdotal evidence; and/or no recent incidents in associated organisations, facilities or communities; and/or little opportunity, reason or means to occur; may occur once every one hundred years

### **Assess the Consequences of a Risk**

Estimate of the potential consequence of an event or risk.

<b>Descriptor</b>	<b>Description</b>
Rare	May occur only in exceptional circumstances; may occur once every five hundred or more years
Insignificant	No fatalities or injuries. Small number or no people are displaced and only for short duration. Little or no personal support required (support not monetary or material). Inconsequential or no damage. Little or no disruption to community. No measurable impact on environment. Little or no financial loss.
Minor	Small number of injuries but no fatalities. First aid treatment required. Some displacement of people (less than 24 hours). Some personal support required. Some damage. Some disruption (less than 24 hours). Small impact on environment with no lasting effects. Some financial loss.

<sup>709</sup> Exhibit C206, page 59

Moderate	Medial treatment required but no fatalities. Some hospitalisation. Localised displacement of people who return within 24 hours. Personal support satisfied through local arrangements. Localised damage that is rectified by routine arrangements. Normal community functioning with some inconvenience. Some impact on environment with no long-term effect or small impact on environment with long-term-effect. Significant financial loss.
Major	Extensive injuries, significant hospitalisation, large number displaced (more than 24 hours duration). Fatalities. External resources required for personal support. Significant damage that requires external resources. Community only partially functioning, some services unavailable. Some impact on environment with long-term effects, Significant financial loss – some financial assistance required.
Catastrophic	Large number of severe injuries. Extended and large numbers requiring hospitalisation. General and widespread displacement for extended duration. Significant fatalities. Extensive personal support. Extensive damage. Community unable to function without significant support. Significant impact on environment and/or permanent damage.'

12.101. To my mind any proper risk assessment must involve a consideration of the consequences to the general public of doing nothing, or leaving a status quo as it is. It also obviously involves a consideration of what activity might minimise or exacerbate the risk.

**13. Decisions made by the CFS Incident Management Teams, Regional staff and State Headquarters staff - general comments**

- 13.1. This section is not intended to be a minute by minute or decision by decision critique of the performance of each and every member of the CFS who was involved in the management of this incident. In my opinion such a microanalysis would not be helpful. However, there are certain areas of concern in respect of the decision making processes that were employed during the course of the management of this fire that in my view had some impact on the outcomes that occurred. I refer in particular to the issue of risk assessment and to the issue of the proper gathering of intelligence and information about the fire and its potential to cause destruction. There was also an issue as to the adequacy of training and suitability of members of the Incident Management Teams. Questions of adequacy or otherwise of the size of the Incident Management Teams was also an issue that was ventilated during the course of the Inquest. They were all matters that were highly relevant to the outcomes with which this Inquest was concerned. They clearly impacted upon what was a measure of inaction in relation to the implementation of containment measures for the overnight fireground on Monday, 10 January 2005.
- 13.2. Also ventilated in the Inquest were a number of matters that involved alleged clashes of personality and a perceived resentment against one individual member of the Incident Management Team in respect of certain unproven allegations against that person. I have found issues such as those to be largely irrelevant and in any event not particularly helpful in attempting to gain insight into what transpired on the afternoon and evening of Monday, 10 January 2005 and in the hours of the following day. There were other issues ventilated during the course of the Inquest which were also to my mind not helpful. I refer here for example to issues such as the decision to place the first formal Incident Control Centre at the Wanilla Hall when others may have preferred the Wangary Sports Complex. Minds very much differed about the appropriateness of the ICC being placed at the Wanilla Hall on the Monday night. The arguments surrounding that issue were mainly concerned with the quality of facilities at either venue and their respective locations in relation to the overnight fireground. Consideration of issues such as that was not particularly productive. The same applies to the scrutiny of individuals' motivations and purposes underlying their participation in certain meetings in the weeks following these tragic events.

Accordingly, those whose interest in these proceedings was in large measure focussed on the intrigue generated in the aftermath of these events will be disappointed. I make no apology for that.

- 13.3. As I say, I am only concerned in scrutinising incidents, matters and events that to my mind had some bearing on the outcomes with which this Inquest is concerned.
- 13.4. In dealing with the performance of volunteer Incident Management Teams, and that of the individual members of those teams, it has to be borne steadily in mind that one can always find fault in a setting of such complexity. The temptation to criticise the minutiae of every decision that was taken by a group of individuals or by the individuals themselves is sometimes difficult to resist. Whilst one always strives for excellence, excellence is not to be equated with absolute perfection. This is especially so in my view when one considers that many of the individuals concerned, and who were the subject of very strident criticism, were volunteers who bestowed their time and effort on this very complex problem with no thought for their own self promotion. It has to be also considered that if there had been a favourable outcome in this fire, or to use the words of Dr Bob Smith, a '*routine outcome*', it is unlikely that the members of the Incident Management Teams would have been accorded accolades in any sense proportionate to the opprobrium that they have now had to endure.
- 13.5. The other feature of the inquiry about the performance of the CFS in this incident that is to be understood, is that the criticism that was generated in its aftermath, and the passion and fervour with which it was pursued, originated from the CFS's very own volunteer rank and file.
- 13.6. However, it has to be recognised that the various CFS personnel who were involved in this incident, be they volunteers or paid staff of the CFS, were carrying out the important statutory duties that the Country Fires Act 1989 (as it then was) imposed upon those entities and individuals who under Section 7 of the Act constituted the CFS. Their statutory duties the Act were two fold; firstly the prevention, control and suppression of fires in the country and secondly the protection of life, property and environmental assets in fire and in other emergencies occurring in the country. In the course of this Inquest people spoke frequently of the 'volunteer ethic'. One can readily understand this term as defining a worthy and laudable concept and it also has to be recognised that the vast majority of CFS members are voluntary workers.

However, that is not to say that the CFS as an entity is a volunteer entity. It is far from that as the duties and responsibilities set out in Section 8 of the Act testify. While recognising that without voluntary workers the CFS would cease to function, and would have little capacity to carry out those statutory duties and responsibilities, it also has to be recognised that volunteerism is not the same thing as amateurism. Given the onerous statutory responsibilities that the CFS carries out, although carried out as it is by voluntary workers for the most part, it is difficult to support any conclusion other than that volunteer individuals who aspire to positions of seniority within the volunteer ranks, and who aspire to perform tasks of significant responsibility during the course of incidents, should be anything other than trained and competent and act as part of a team. Otherwise, it is difficult to see how the statutory duties and responsibilities imposed upon the CFS could ever properly be carried out.

- 13.7. Naturally, some volunteer workers who aspire to positions of responsibility, particularly insofar as they relate to actual incidents, are going to be better at the task than others. That is but one reason why the work and activities of volunteers who are in positions of responsibility in relation to incidents need to be scrutinised by paid staff within their region during the course of an ongoing incident. It is clearly not enough for the paid regional staff merely to act as conduits for information between volunteer Incident Management Teams and State Headquarters. The documentation to which I have already referred, insofar as it identifies and articulates the duties and responsibilities of regional staff at an incident, make it quite clear that regional paid staff have a very significant role to play in the course of an incident in terms of the scrutiny and validation of actions undertaken by volunteer Incident Management Teams.
- 13.8. It seems to me while there may be difficulties in terms of the accountability of volunteers, in as much as they might simply walk away if any sanction is to be visited on them, it does not mean that in the context of an inquiry such as this, their actions are immune from scrutiny and analysis. Deaths that are occasioned in bushfires are notoriously complex and multifaceted events. The circumstances in which they occur can be created by a myriad of means. One of the functions of the Coroner in an Inquest of this kind is to identify, if possible, the various circumstances, event, actions

and failings that go to make up the circumstances in which a death occurs. Very often, the identification of those matters gives rise to the necessity to express findings that some might find unpalatable. That is an inevitable consequence of a coronial inquiry into a matter of this complexity, and the Coroner is not obliged to make any apology for that. In addition, if sensible and positive change is to be made, it is in large measure to be based upon a proper identification of whatever systemic or personal inadequacies might exist. Thus, while it is regrettable that on occasions the actions and failings of certain individuals have to be spelt out, especially in a setting where those actions and failings have occurred in a context of voluntary work, it is in the interests of justice and in the public interest that such a process has to occur.

- 13.9. To my mind the single most powerful factor in the deaths of the nine deceased was the escape of fire from the swamp area on the properties of Mr Peter Cabot and Mr Christopher Hull. That fire was able to escape from locations in Areas A and C on Exhibit C176b, and was able to progress largely unchecked towards the sites where the nine deceased met their deaths, was contributed to by the failure to identify and recognise the considerable risk to the community that was posed by the presence of fire in the swamp and by the extreme weather that was forecast for the Tuesday morning, weather which ultimately came to pass as predicted. What action that was taken to identify that risk and to minimise it was characterised by facile solutions to a complex problem. Essentially, the potential for dangerous fire to emanate from the swamp into Areas A and C was simply not properly addressed. Other than the sugar gums, the potential danger of which was plain for all to see, the two most dangerous areas of the overnight fireground, that was said to have been contained, were the two areas of the swamp to the west of Area A and to the north-west of Area C. While the danger posed by the sugar gums was obvious, the danger posed by these two areas was not much less obvious. It is therefore perplexing that these were the two areas that were the subject of neglect, as exemplified by the fact that there was not even a Sector Commander for Area C until the Tuesday morning and even then the Sector Commander's appointment was made without that person's knowledge. As far as Area A is concerned, it was part of a sector that was never properly identified as such to the Sector Commander. This state of affairs goes a long way to explain why it was that no blacking out work was undertaken in the swamp adjacent to Area C until after 3:30am, and even then for the most part because of the intervention of one of the landowners, Christopher Hull. It also goes some way to explain why no blacking out

work was carried out in the swamp adjacent to Area A, either from the burnt or unburnt side of the fire perimeter at that location. It also goes some way to explain why no other containment work was carried out in respect of those locations.

13.10. The Incident Management Team on the Monday afternoon and evening

Messrs Robert Chambers and Russell Branson were alerted to the fire on the Monday afternoon. Mr Chambers was the Group Officer for the Lower Eyre Peninsula Group. He had been elected to that position at a meeting of Brigade Captains in August 2004. Prior to this he had been a member of the Lincoln Brigade. Mr Branson operated a hardware store in Cummins. He was the Deputy Group Officer 3 of the Lower Eyre Peninsula CFS Group. Mr Chambers had only returned from a holiday that same day. Mr Chambers had access to the CFS Command vehicle. The vehicle was a 4WD. The other Lower Eyre Peninsula Group 4WD vehicle was at Port Lincoln Airport. Mr Robert Maddern, the Lower Eyre Peninsula Deputy Group Officer 1, had left the vehicle at the airport that morning. He had travelled to Adelaide to attend a meeting at CFS State Headquarters. Mr Ellis, the Region 6 Regional Commander, was also in attendance at the same meeting. Mr Maddern was in CFS dress uniform that day. In due course he returned to Port Lincoln having flown back in the late afternoon. The vehicle that Mr Maddern had left at the airport was not accessed until Mr Maddern returned because he had the keys with him in Adelaide. In normal circumstances both of the Lower Eyre Peninsula Group 4WD vehicles would have been available for use in an incident of this kind.

13.11. Mr Maddern had voluntarily stood down as the Lower Eyre Peninsula Group Officer in August 2004. Mr Chambers had then been elected as Group Officer and Mr Maddern as Deputy Group Officer (DGO) 1, the most senior DGO. Mr Maddern was a farmer who had been the Group Officer for 25 years prior to his stepping down. It would be naïve to think that Mr Maddern's air of authority and his esteem as the most senior voluntary fire firefighter on the Lower Eyre Peninsula had evaporated overnight. Usually, but not always, the Group Officer would assume the role of Incident Controller at an incident of significance as this was to become as the Monday afternoon and evening wore on.

13.12. Mr Chambers and Mr Branson arrived at the fireground at about 4:15pm. Mr Chambers assumed the role of Incident Controller and Mr Branson the role of Operations Officer for the incident. In due course Mr Jeffrey Lock, the Deputy Group



Officer 2, arrived at the fireground. Mr Steve Nettle it would be remembered had originally been with the Wangary appliance which was one of the first appliances to attend the fire. He was essentially relieved of his duties with the appliance and became a member of the Incident Management Team.

- 13.13. Messrs Chambers, Branson, Lock and Nettle traversed the territory in the vicinity of the fireground in the CFS Command vehicle, the ostensible purpose being to gather information about the fire. It is said in respect of Mr Chambers who was driving the vehicle that his activities that afternoon appeared to lack purpose. In addition, during the course of the afternoon the CFS officers and members attending at Port Lincoln Base and Region 6 headquarters were finding it extremely difficult to obtain any relevant information about the fire, its status and its size, bearing in mind the requirement for regular SitReps from a fireground. As to whether the SitReps were inadequate and whether Mr Chambers was correctly perceived to have been inept in his handling of the situation so far is not a matter that I need to comment on, except to the extent that there was a large measure of frustration experienced in Port Lincoln about the adequacy of information from the fireground. This became so acute that it prompted the Regional Duty Officer, Mr Simon Vogel, to send Mr Maddern to the fireground essentially to troubleshoot. I will return to the circumstances of Mr Maddern's arrival at the fireground in due course.
- 13.14. Having driven around the area of the fireground for some time, the four gentlemen in the CFS Command vehicle went to Christopher Hull's hayshed which, given its proximity to the fireground, was utilised as a command post. There were no facilities at the hayshed that would in any way suffice for an Incident Control Centre. However, it was used as a base for the time being.
- 13.15. Up to this point there had been some discussion about the need to sectorise the fireground. The difficulty to begin with was that the fire was still moving under the influence of a wind. The fireground was increasing in size and was by no means contained. This changing set of circumstances, and the difficulty in ascertaining the exact locations of the fire boundaries, was offered as one reason why regular SitReps had not been forthcoming from the fireground. At the hayshed, it was decided that Messrs Branson and Lock should conduct a circumnavigation of the fireground in an endeavour to gather information and to establish the locations of the boundaries of the fireground as it then existed. To this end they left the hayshed in the CFS Command

vehicle sometime after 6pm. This left Mr Chambers at the hayshed with Mr Nettle. Mr Chambers did not have any vehicle at his disposal and his only means of communication was a handheld GRN radio, the batteries of which were said to be failing. This set of circumstances proved in due course to be the reason why Messrs Branson and Lock were prematurely called back from their reconnaissance of the fireground and why it is said that the reconnaissance was incomplete and flawed. Further, it is contended that the incomplete and flawed reconnaissance of the fireground was one reason at least as to why decisions made later by the Incident Management Team were also essentially flawed, having been based on inaccurate or incomplete information.

- 13.16. Messrs Branson and Lock commenced their circumnavigation of the fireground from the hayshed and proceeded in a clockwise fashion. I do not need to recount in precise detail what they did and saw. They were at one time present when discussions took place as to the appropriateness or otherwise of Mr Damian Puckridge organising a backburn in substantial vegetation to the north-west of Mr Les Hull's farmhouse. There were also encounters with CFS crews at other parts of the fireground, in the main to the north. Mr Lock, whose task it was ultimately to create an image of the fireground using maps, was to a certain degree able to gather the required information for that purpose.
- 13.17. At approximately 8:30pm Mr Chambers contacted the CFS Command vehicle and in the ensuing period repeatedly demanded that the vehicle be returned to the hayshed notwithstanding that the reconnaissance of the fireground had not been completed. The first of these communications occurred when Messrs Branson and Lock were with the vehicle on Mr Les Hull's property north of Warunda Road. At one point Messrs Branson and Lock took the CFS Command vehicle along the western extension of Warunda Road into the swamp and were confronted with burning vegetation that was creating flames to a height of about 30 feet. The result of this was that they could proceed no further and had to retreat. However, this observation provided clear evidence that the fire was deep within the swamp on both sides of Warunda Road, and in particular in that area of the swamp that was to the west of Area A on Exhibit C176b. Indeed, to my mind that fact was proved many times over in this Inquest and one only needs to go to the observations of the landowner Mr Cabot to understand that the fire had significantly penetrated the swamp to the west of

Area A. I do not understand Messrs Branson and Lock to have had any opportunity of significance to view the actual fire edge in that part of the swamp from either side of the swamp, except that when they were called back by Mr Chambers they were able to drive through Area A and observe that there was indeed fire in the swamp to the west of Area A which Mr Branson estimated to be about up to 500 metres into the swamp, in some points it could have been only 200 metres from the edge of the paddocks. Of course it has to be recognised that the fire edge in the swamp would not necessarily have been an arrow straight line. However, it is plain that there was fire in that location. The fire had not come through to the paddocks in Area A. Mr Chambers was to tell me in evidence that he had the belief on the Monday night that the fire had come out into the paddocks in Area A. There does not appear to have been any sensible basis for such belief and certainly no basis that was rooted in fact.

- 13.18. The route taken by Messrs Branson and Lock to return to the hayshed was as I have said through Area A, through the paddocks of Area B to Mr Cabot's house and then along Yorkies Gully Road and up the drive to the hayshed. The southern perimeter of the fireground as it existed in the swamp adjacent to Area C was not inspected during this reconnaissance.
- 13.19. It is not without significance that the areas that had not been the subject of close inspection by Messrs Branson and Lock, namely Areas A and C, were to prove on the Tuesday morning to be, along with the sugar gums, the Achilles heel of the fireground. Yet, it is contended, that the truncated reconnaissance by Messrs Branson and Lock was essentially irrelevant. It is said that it was clear that the fire had penetrated the swamp and that that was, in reality, about as much as the Incident Management Team needed to know. The matter cannot be viewed as simplistically as that. Essentially, one would need a reasonably detailed knowledge of what was in the swamp in order to properly consider what strategies might be employed to ensure that the fire either was contained within it, or if it did reach the southern side, be contained there. In addition, the strategy of blacking out would require such knowledge to enable one to determine whether it was going to be a feasible and effective exercise. For instance, was the swamp accessible to vehicles or firefighters on foot or both? From what side of the swamp would one approach the fire edge, the burnt side or the unburnt side? Ultimately, Mr Ferguson the CEO of the CFS was to express the opinion, shared by Dr Tolhurst, that one would better approach the fire edge in the

swamp, and indeed more safely approach it, from the burnt side if one were to attempt to black out in that location. In the event, there does not appear to have been any attempt to locate the fire edge within the swamp west of Area A or to black it out either with water or with implements.

- 13.20. Messrs Branson and Lock arrived back at the hayshed where Mr Chambers had remained for the entire duration of their circumnavigation of the fireground. At one point, Mr Chambers had been approached by Christopher Hull, Mr Wayne Hull and Mr Wilkins in relation to the prospect of backburning in some of Christopher Hull's paddocks. I was told that they were left with the impression that it would be seriously considered. Backburning did not take place.
- 13.21. When Messrs Branson and Lock returned to the hayshed an incident involving Mr Maddern and Mr Chambers was said to have occurred. Mr Maddern had been sent forward by Mr Vogel and had arrived, via the Wanilla Hall, at around 9:10pm. By then, a number of other persons were in attendance including members of SAPOL. I do not need to go into this incident in any great detail. Suffice it to say a number of persons present had a distinct feeling that Mr Maddern was by no means content with what was transpiring with this fire and that this was reflected in a negative attitude on his part towards Mr Chambers. Mr Maddern on the other hand denies that there was any demonstration of anger or arrogance on his part and told me that he greeted those present in the way that he would normally greet someone in the street. That claim seems to be on the evidence that I heard to be somewhat unlikely. Be that as it may, Mr Chambers for his part was ultimately to tell me that he had been made to feel marginalised. Later that night when the Incident Control Centre was established at Wanilla Hall, people viewed Mr Chambers' demeanour as being one where he simply was not doing anything. Mr Chambers was to leave the Wanilla Hall at a time well before the arrival of the relieving Incident Controller, Ms Angela Whillas, which is said to be, and indeed is, an extraordinary thing to happen during the course of an incident of this nature and complexity, given the need for briefings, planning meetings and general continuity of management.
- 13.22. At the hayshed Mr Maddern, who was in his CFS dress uniform stated that the Incident Control Centre would be Wanilla Hall. The hall was already being set up as the Incident Control Centre as they spoke and Mr Maddern had already been to the hall en route to the hayshed. There was, described to me at any rate, a degree of

insistence on Mr Maddern's part that they should immediately proceed to Wanilla, which as far as Mr Branson was concerned at least, was not appropriate given the truncated inspection of the fireground at that point. There was also the issue as to whether or not the Wangary Sports Complex may have been more suitable. The suitability of the venue was a matter of opinion and a matter of judgment at the time. In hindsight Wangary may have been a more suitable venue, especially given the fact that the Incident Control Centre was ultimately moved to the Wangary complex on the Tuesday morning, and proved to be something of a distraction, but this issue is not one that in my view needs to be dwelt on.

### 13.23. The announcement that the fire is contained

Mr Chambers, the Incident Controller declared that the fire was 'contained' at 8:54pm. This status is accorded to a fire in the following circumstances:

'A fire is contained when its spread has been halted, but it may still be burning freely within the perimeter or fire control lines. Other incidents are contained when the spread or growth of the incident has been halted.'

The status of 'contained' is to be contrasted to the status of 'controlled'. The definition of 'controlled' is as follows:

'The time at which the complete perimeter of a fire is secured and no breakaway is expected. For other incidents, the time at which the incident is secured and there is no possibility of extension or growth of the incident.'<sup>710</sup>

It was argued during the course of the Inquest that one should only consider a fire to be contained when it is surrounded by containment lines that essentially would confine the fire within the circumference of those breaks<sup>711</sup>. It will be noted that the definition of contained does not say anything about fire breaks. The definition seems to be reasonably straightforward especially when examined against the definition of controlled. The fact that the definition of controlled has as one of its elements no expectation of breakaways implies that a declaration of containment does not carry any implication in terms of the likelihood or expectation of breakaways. In fact it is silent on that issue. It seems to me that a fire may legitimately be said to be contained even though breakaways are possible or even anticipated. Contained to my mind simply applies to the current situation that exists at the time it is said to be contained. A fire may not necessarily remain contained. While these definitions are not to be

<sup>710</sup> The South Australian Country Fire Service Operations Management Guidelines (OMG), Exhibit C206, page 34

<sup>711</sup> Foster, Transcript, page 2176

construed in the way one would dissect a statutory instrument, it seems to me that to read into the definition of contained an implication that it will remain that way or that there will be no breakaways is erroneous. On the other hand, one would need to take obvious care even before one were to declare a bushfire as contained. For instance, one would have to be satisfied that the fire is no longer moving within its perimeter. Moreover, one would need to have in mind the fact that those not familiar with the precise definition might regard the use of the word contained as reflecting an upbeat attitude on the part of the user of the expression.

- 13.24. It is somewhat difficult to see how, without any proper reconnaissance at that stage of the fire edge within the swamp, the fire could be said to be contained in the sense that the fire was not moving. It was not seen within the swamp to be either moving or stationary. One might have guessed that because of the moderating weather conditions that the fire perimeter was not moving, but it would be a guess only and would not necessarily have any proper basis in fact.
- 13.25. The fire was announced as being contained at 8:54pm. At that time Mr Chambers was in the CFS command vehicle, Lower Eyre Car 1. The announcement that the fire had been contained was made by Mr Chambers in a radio transmission from the vehicle. Lincoln Base had enquired whether the fire was contained or not in the context of their attempts to find out what the grid references were for the fireground. The tone of the radio transmission is very casual insofar as the Officer at Lincoln Base said that he simply had a *'quick question'* as to whether the fire was contained or not, to which Mr Chambers said *'Yeah Lincoln Base from Lower Eyre Group Officer yes, the fire is contained now ah. Over'*<sup>712</sup>. In his statement Mr Chambers states that the information that he was obtaining from the fireground was that the fire was contained from around 8pm and that he had seen nothing to suggest since that this was not the case<sup>713</sup>. Mr Chambers advises that to say that the fire is contained does not mean that the fire was controlled. That much is true. Mr Chambers believed that the head of the fire had been stopped, a belief based on radio messages from appliances<sup>714</sup>. However, when he announced that the fire was contained, he also assumed that some work had been done along the edges of Areas A and C<sup>715</sup>. Mr Chambers agreed that if the fire had been running through the swamp not into Area A

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<sup>712</sup> Exhibit C222l, page 87

<sup>713</sup> Exhibit C229b

<sup>714</sup> Transcript, page 11448

<sup>715</sup> Transcript, page 11453

but had run diagonally through the swamp from the region of Area C up to Warunda Road and not in the paddocks, and that no fire appliances were in Area A and no fire appliances were doing any work along the edge of the fire inside the swamp, then the southern flank of the fire was not contained.

13.26. Dr Tolhurst suggested that a declaration of containment at 8:54pm would be unlikely to reflect the true fact of the matter if less than half an hour earlier at 8:30pm flames as high as 25 to 30 feet had been observed by Mr Lock and Mr Branson along the western extension of Warunda Road.

13.27. While one may argue interminably about what the definition of contained really conveys, and while also there is great scope for argument as to whether or not the progress of the fire had truly been halted so as to come within that definition, one really has to examine what the facts were as they existed at the time. The facts were that:

- There was a significant fire in the swamp;
- Flames as high as 25 to 30 feet had been observed in the swamp;
- At the time of the declaration of containment there had been no containment work occurring in the swamp or in Areas A and C adjacent to the swamp in those areas;
- At that time there was no plan in existence to take any containment action in the swamp;
- There was an adverse forecast for the following day from which a conclusion could be drawn that the fire might not remain within the swamp;
- That the forecast for the following day involved north-west winds up to 45 kilometres per hour before a change during the morning.

13.28. Meanwhile, at 6pm on the Monday evening Mr Simon Vogel, the Regional Duty Officer, had sent a SitRep (or message form) to State Headquarters stating that the fire was not contained and was burning to the east and was approximately 150 hectares in size being 3 kilometres long by half a kilometre wide.

13.29. At 7:40pm a further SitRep was faxed to State Headquarters suggesting that the northern flank was still burning but starting to burn in to fire breaks.

- 13.30. At 8:57pm, three minutes after Mr Chambers' transmission to the effect that the fire was contained, Mr Vogel sent a further SitRep to State Headquarters which stated in capitals, 'FIRE CONTAINED'. Mr Vogel had been informed that the fire was contained two minutes before he sent the facsimile to State Headquarters. He made a written note that two other staff members at Region 6 had witnessed the receiving of the information that the fire was contained. He did so because he thought it was a big announcement. He normally would not have made a note to that effect. Mr Vogel said that there was a feeling of relief when they had finally received word that the fire was contained<sup>716</sup>.
- 13.31. The effect of the fire being declared contained at 8:54pm is somewhat intangible. Mr Vogel said that if he had been told that the fire was not contained on the Monday night he would have wanted more than the two people who were to form the overnight management team, Ms Whillas and Mr Branson. That is one example of what the effect of the declaration might have been. Mr Ellis who remained in Adelaide on the Monday night, Mr Vogel's superior in Region 6, told me that if he had received a message on the Monday night that the fire was not contained he would have spoken to Mr Vogel, examined the plan overnight, questioned why the fire was not contained and examined the available resources<sup>717</sup>.
- 13.32. The better question would have been not whether the fire was contained, but simply a question as to what the actual facts were in relation to the fire and whether it was likely to get out or breakaway. If questions of that nature had been asked, whether people thought it was contained or not in the strict sense, would not have been particularly helpful.
- 13.33. While the thought that the fire had been contained was perhaps of some comfort to the members of the Incident Management Teams that existed that evening and into the following day, the fact of the declaration alone does not seem to have had any particular significance beyond that. There was other more significant misinformation, or lack of information, that ultimately proved to be problematic. I return to that as an issue in due course.

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<sup>716</sup> Transcript, page 12875

<sup>717</sup> Transcript, page 14040



### 13.34. The Wanilla Hall

The members of the Incident Management Team arrived at the Wanilla Hall at about 9:30pm. The hall was set up as an Incident Control Centre. Mr Robert Chambers, the Group Officer and most senior volunteer firefighter in the Lower Eyre Peninsula Group, was designated as the Incident Controller. The other readily identifiable AIIMS functionary was Mr Branson who the Operations Officer. Mr Maddern strongly resists the suggestion that he was a member of the Incident Management Team except to the extent that he was a 'scribe'. During the course of the Inquest, the suggestion was made that Mr Maddern was in many senses the defacto Incident Controller. This appears to have been the perception of a number of persons present at the Wanilla Hall that evening. For example, Mr Branson held the belief that Mr Maddern had assumed Mr Chambers' role as Incident Controller at least in a defacto sense. Mr Lock, whose own role was far from crystal clear, said *'everybody knew that Robert Maddern was the Incident Controller and all the decisions were being made by him'*<sup>718</sup>. By way of contrast Mr Lock's perception of Mr Chambers was that he was just standing there whereas Mr Maddern was *'giving orders, talking to people'*. The 'people' included different Brigade Captains, changeover crews and Ms Sonia Post who had been sent forward by Mr Vogel from Regional Headquarters to the Wanilla Hall<sup>719</sup>.

- 13.35. The roles of the various participants at Wanilla Hall and the identification of those roles would not have been helped by the fact that no-one wore tabards depicting their functions as either Incident Controller, Planning Officer, Operations Officer or Logistics Officer. For Mr Maddern's part, he was subjected to vigorous cross-examination during the Inquest in an endeavour to demonstrate that he was in fact the Incident Controller, or if not exactly that, 'the one who was calling the shots'.
- 13.36. Mr Maddern denied that he called the shots at this incident on the Monday night. He regarded his role as one where he had been sent forward, in a sense to troubleshoot, because of the lack of information coming from the fireground. This role had been conveyed to him by Mr Vogel, the Regional Duty Officer. Once at the Incident Control Centre, he became a scribe. Mr Maddern in effect denied that there could have been any legitimate perception among those present that he was the person in charge. In his statement Mr Maddern states that there were times when individuals

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<sup>718</sup> Transcript, page 8277

came up to him and sought information from him about the fire<sup>720</sup>. On those occasions, where possible, he directed them to Mr Chambers and to Mr Branson but when they were not available he answered their queries. In addition, Mr Maddern says that he did not know enough about the fireground to make decisions or to question decisions that had been made about the management of the fire. He concedes that on reflection if he had thought that something was wrong or that something of vital importance was not being done, and he cites backburning as an example, he would have offered his opinion.

- 13.37. During his evidence to the Inquest, Mr Maddern challenged those who sought to portray him as the decision maker on the Monday night by inviting them to describe what he was meant to have decided or to have personally undertaken. This invitation was usually met with some discomfort on the part of the cross-examiner.
- 13.38. The difficulty with Mr Maddern's involvement is that there seems to be little doubt that people looked up to him as a man who had vastly more experience as a Group Officer than anyone else present. He seems to have been a focal point for a lot of people including the police who were to attend Wanilla Hall seeking information about the fire. He was in his dress uniform. Mr Maddern to my mind has an air of authority about him. Matters may have been even more confused by his role at the hayshed. Mr Chambers' passive role at the hayshed and at Wanilla Hall could only have served to highlight Mr Maddern's ostensible authority. It seems to me that Mr Maddern is correct when he says that he did not make any important planning or operative decisions on the Monday night. It may well be that this is where the difficulty in all of this lies because as we will see very few planning and operational decisions were made by anyone else other than the creation and implementation of what turned out to be the over simplistic plan of blacking out. I do not criticise Mr Maddern for this. From my observations of all of those men, he was clearly the strongest personality there. Mr Chambers may have felt side-lined, or may have given that appearance.
- 13.39. While Mr Branson was clearly identified as the Operations Officer, until the early hours of the Tuesday morning in the course of the second Incident Management Team shift, he was for much of that period occupied in the radio room that had been set up.

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<sup>719</sup> Transcript, page 8107

<sup>720</sup> Exhibit C224b

13.40. Mr Lock, who was meant to be the Planning Officer, was occupied very usefully in creating a map of the fireground boundaries using the rough map that he had compiled during the truncated reconnaissance. The map that he created at Wanilla was a map of the fireground placed on a topographical map of the area. That map took in the environs of Duck Lake Road, Yorkies Gully Road and Settlers Road as well as depicting areas to the north, east and south including the Murrumbidgee Conservation Park and the Wanilla Forest. The map that Mr Lock created, in the event turned out to be a reasonably accurate depiction of the fireground as it was then believed to be. For instance, Mr Lock clearly had the south-eastern perimeter of the fireground as it existed to the south-west of Warunda Road going through the swamp adjacent to Areas A and C. Mr Lock wrote the word 'unattended' on the map adjacent to the depicted fire line in the swamp west of Area A. This was to signify that indeed at that time the area was unattended which was in contrast to the fact that north of Warunda Road there was quite a deal of CFS activity, including that associated with the Damian Puckridge backburn on George and Les Hull's property. The fireground sectors that were created were not depicted on this particular map which became part of Exhibit C223b.

13.41. The Swampy Sector southern boundary

At first, the Swampy Sector had its southern extremity at Warunda Road. It did not take in the unattended Area A or the swamp to the west of it. It is difficult to see how a fireground can have any gaps in its sectorisation. During the course of the truncated reconnaissance of the fireground, Mr Lock had told Mr Quentin Russ that he was to be the Sector Commander of the Swampy Sector and that his sector was to extend south to Warunda Road<sup>721</sup>. Mr Russ as it happened was the Group Officer for the Tumby Bay CFS Group within Region 6. Mr Russ had led a strike team of four Tumby Bay Group appliances to the fireground on the Monday afternoon. Mr Russ ultimately handed over responsibility as Sector Commander for the Swampy Sector to one of his Deputy Group Officers, Mr Ian Charlton later that evening. Later at Wanilla Hall, according to Mr Lock, he suggested to Messrs Chambers and Maddern and to Ms Sonia Post, a Regional Officer who had been sent to Wanilla from Port Lincoln, that the boundary for the Swampy Sector needed to be shifted to the south so that it included Area A. This suggestion was acceded to. The very obvious reason for

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<sup>721</sup> Transcript, page 8061

that no doubt was that without the extension of the Swampy Sector to take in Area A there was an unsectorised part of the fireground.

- 13.42. This important extension of the boundary of the Swampy Sector was never communicated to either Mr Russ or Mr Charlton. The consequence was that Area A and the swamp within Area A remained unattended overnight and into the following day. This is no reflection on Mr Russ or Mr Charlton. They simply were not told that they had any responsibility in relation to Area A or the swamp adjacent to it. Neither Mr Russ nor Mr Charlton professed to have a detailed familiarity with the area. No containment work was done in those locations, either from the eastern side of the swamp or the western side of the swamp adjacent to Area A.
- 13.43. Mr Lock was meant to be the Planning Officer under AIIMS. Mr Lock claims that he did not know of that fact. While his mapping exercise might be thought to be part of the Planning Officer's responsibilities, as it enables one to become familiar with the fireground and its various features, Mr Lock does not appear to have undertaken or executed any of the other responsibilities of a Planning Officer. He did not formulate any Incident Action Plan. Mr Chambers said that he did. Mr Lock was naturally asked during the course of his evidence whether he appreciated that the extension of the Swampy Sector boundary was not compatible with what he had earlier told Mr Russ about the extent of his sector. As to how Mr Russ would be made aware of the extension of the boundary, Mr Lock said as follows:

'My understanding was that they were going to come in for a crew changeover and they would be allocated their sectors for the night.'<sup>722</sup>

Mr Lock told me that he assumed that Mr Russ would obtain the necessary information about the new sector boundary from Mr Maddern at the time his crew came in for a crew changeover. Mr Lock believed it would be the role of the Incident Controller or the Operations Officer to convey that information to Mr Russ. Mr Lock then suggested that it would have been Mr Maddern's responsibility to do that. Mr Lock believed Mr Maddern to be the Incident Controller. It is to be borne in mind that there was a perception that Mr Maddern may well have had some responsibility in relation to the incident management, but Mr Maddern believed that he was a scribe.

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<sup>722</sup> Transcript, page 8318

- 13.44. The Yorkies Crossing Sector which took in the perimeter of the fireground from the Lady Franklyn Road, Duck Lake Road and Yorkies Gully Road junctions to the eastern extremity of Area C, and the swamp adjacent to Area C, was not allocated a Sector Commander nor CFS appliances. This position was in contrast to the other sectors. This state of affairs applied both on the Monday evening after sectorisation had taken place and throughout the night, even during the second Incident Management Team shift. As seen elsewhere, some appliances were sent to the swamp near the hundred line and within Area C to mop up the southern edge of the swamp on Mr Cabot's property just east of the hundred line. That work was undertaken in the early hours of the Tuesday morning. Although appliances had been sent to that part of the fireground, there was still no Sector Commander appointed for the Yorkies Crossing Sector. The appointment of a Sector Commander for Yorkies Crossing Sector only took place on the Tuesday morning during the third shift. Mr Steven Nettle of the Wangary Brigade was appointed Sector Commander without his knowledge.
- 13.45. Mr Vogel, the Regional Duty Officer stationed in Port Lincoln on the Monday night prepared an Incident Structural and Communications Chart timed at 8:50pm and faxed it to State Headquarters at 9pm. The document described Mr Chambers as the Incident Controller. The Planning Officer role was ascribed to Mr Robert Maddern. The Information Officer that is depicted as being under the umbrella of the Planning Officer, was a role ascribed to Ms Sonia Post who had travelled to Wanilla<sup>723</sup>. Mr Branson was depicted as the Operations Officer and Mr Grant Shepperd was depicted as the Logistics Officer. This document conflicts with the suggestion that Mr Maddern was a scribe, that Mr Lock was the Planning Officer and that Mr Shepperd was the Logistics Officer. Much of the information on this document of Mr Vogel's appears to be fictional. The ICS documentation that was used at Wanilla Hall, which was essentially created on 'butcher's paper', depicted the Incident Management Team for the first shift to 10pm as comprising Russell (that is Branson), RM (Robert Maddern), RC (Robert Chambers), JL (Jeff Lock) and SP (Sonia Post)<sup>724</sup>. It will be noted that the scribe, Mr Maddern, is included within the membership of the Incident Management Team according to that document. From 10:30pm the team is said on the butchers paper to have been Russell, RM and KP (who is Katrina Pobke). The

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<sup>723</sup> Exhibit C222k

<sup>724</sup> Exhibit C223g

next shift of the Incident Management Team is described from 12:01am as A. Whillas, Russell, Katrina (Pobke), Gary, Brad. Mr Chambers is not shown as part of the Incident Management Team from 10:30 onwards. He went home.

13.46. The lack of handover between the first and second Incident Controllers

Mr Chambers, the Incident Controller, told me that Mr Maddern at the hayshed had been somewhat aggressive<sup>725</sup>. He thought that Mr Maddern was possibly annoyed with him because there had not been sufficient SitReps. Whilst Mr Chambers stated that there had not been an altercation as such with Mr Maddern at the hayshed, Mr Maddern had been aggressive towards him and others. Mr Chambers at Wanilla felt like people were pushing him aside and that he was not being consulted as much as he would have expected<sup>726</sup>. He had been told by Ms Post that he would be finishing at 10pm but that he was to be the Incident Controller at 7am the following morning. He said that Ms Post told him that Ms Whillas was going to be the Incident Controller overnight. This happened before he finished. Ultimately, Mr Chambers said he was told to go home at 10pm by Ms Post<sup>727</sup>. By then things had been taken out of his hands<sup>728</sup>. He said that he thought that Mr Maddern and Ms Post were pushing him to one side at Wanilla and again he appears to have attributed that to the lack of SitReps earlier in the day. Mr Chambers left the Wanilla Hall. The exact time that he left the hall is not known for certain, but it is clear that it was a time significantly before the arrival of Ms Angela Whillas who was the Incident Controller for the overnight shift. As to who the Incident Controller was during the hiatus between Mr Chambers' departure and Ms Whillas' arrival, this is unclear. Certainly, Mr Maddern eschews the suggestion that he was Incident Controller at any time. Mr Maddern did know of Mr Chambers' departure because there was an arrangement made between them as to how they would travel to the fireground the following morning. It is not known exactly how long Mr Chambers was at the Wanilla Hall between his arrival there at 9:30pm and his departure. During that time he was meant to be the Incident Controller and had certain responsibilities in relation to the conducting of planning meetings and the formulation of an Incident Action Plan. Naturally the Planning Officer, whoever that was, would have a similar responsibility in relation to the creation of a plan. The only identified Planning Officer was Mr Lock who denies that

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<sup>725</sup> Transcript, page 11204

<sup>726</sup> Transcript, page 11275

<sup>727</sup> Transcript, page 11293

<sup>728</sup> Transcript, page 11292

he knew of his status as such. Mr Chambers would also have had a duty to brief the oncoming Incident Controller, Ms Whillas.

- 13.47. It will be noted that there were certain duties and responsibilities that had to be undertaken by a properly functioning Incident Management Team. Clearly amongst those necessary activities were the conducting of a planning meeting, the formulation of an Incident Action Plan, ongoing risk assessment and briefing of an incoming Incident Management Team.
- 13.48. It is difficult to identify a meeting that would be regarded as an effective planning meeting as envisaged by CFS requirements contained within the documentation to which I have already referred. Any planning meeting between the members of the Incident Management Team took place in the context of a group of participants who appeared to have little understanding of their roles. The Incident Controller, Mr Chambers, believed he had been undermined. Mr Maddern, who was perceived to have been the Incident Controller by some was not, but was a scribe who knew little of the fireground in any event. The Planning Officer, namely Mr Lock, had no idea he was the Planning Officer. The Operations Officer, Mr Branson spent his time for the most part working the radio in a separate area. Ms Post, the only paid CFS person present, was like Mr Maddern not conversant with the fine details of the operation and in any event had in effect been instructed not to become an active participant in the operation. As to Ms Post's involvement, she stated that she had been tasked to go forward to the Wanilla Hall, ready the hall for an Incident Management Team and to provide a SitRep to Mr Vogel at the earliest opportunity. She says in her statement that she was specifically told that she was not to be part of the Incident Management Team or work the nightshift<sup>729</sup>. Upon arrival of Mr Maddern and Mr Chambers at Wanilla Hall at 9:30pm, Ms Post states that she spoke to Mr Chambers who was the Incident Controller about the next day's weather forecast and to ensure that he was fully aware of the expected high fire danger. She said that she explained to him that an Incident Action Plan was required for the nightshift and for the following day. She said she told him that everything that could possibly be done that night to secure the fireground needed to be implemented and completed by the morning. The observation ought to be made that if he was meant to do all of that, that only gave him half an hour before 10pm when Mr Chambers said he was told by Ms Post that he

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<sup>729</sup> Exhibit C234, page 9

would be going home. Ms Post says she did not tell Mr Chambers to go home at 10pm.

- 13.49. Ms Post, although in the vicinity, does not purport to have been a participant in any planning. That would be consistent with her role as not being a member of the Incident Management Team. However, she said that she saw Mr Maddern, Mr Chambers, Mr Branson and Mr Lock speaking and she believed that they were developing an Incident Action Plan. Mr Lock had the map that I have spoken of. There was no written Incident Action Plan and no minute of any planning meeting.
- 13.50. As seen elsewhere, a plan was devised to black out to a 30 metre hose length. That was later revised to 60 metres. That plan, insofar as it might have been developed during any planning meeting, does not appear to have been in any sense validated by Ms Post or by her superior, Mr Vogel. As I understand their positions, they would have been in no position to have validated anything because of their ignorance of the finer detail of the fireground and its attributes.
- 13.51. The communal discussion that took place between members of the Incident Management Team at Wanilla Hall in which a plan to black out to a certain distance was formulated, consisted of Mr Lock using a map to explain and illustrate the information that he and Mr Branson had obtained during their aborted circumnavigation of the fireground. Mr Chambers, the Incident Controller, agreed that a proper planning meeting would involve the Incident Controller having proper information about the condition of the fireground as to perimeter, danger spots and potential for break out<sup>730</sup>. Mr Chambers clearly could not have had a proper picture of the fireground as the reconnaissance had been truncated. In addition, Mr Chambers was of the belief that the fire had come out into Area A into the stubble. Of course, if this was correct then the burnt stubble might in some way act as a fire break. There was simply no basis for Mr Chambers' belief that the fire had come out of the swamp into the paddocks in Area A. That simply had not occurred and no-one had ever perceived it to have occurred apart from Mr Chambers who was never there. I have my doubts as to whether Mr Chambers had any such belief on the Monday night. In any event, Mr Chambers admitted that he did not have '*an official planning meeting*'

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<sup>730</sup> Transcript, page 11659



on the Monday night before he left<sup>731</sup>. He did not have one as contemplated by AIIMS and CFS requirements.

- 13.52. Mr Chambers told me that his planning at Wanilla Hall consisted of looking at the map that was being put on to the computer. Mr Chambers said that the plan he put in place there *'was to then contain it within that area by starting to black out 30 metres from the edge of the fire in towards the centre of the fire'*<sup>732</sup>. He said that he discussed that plan with Mr Branson at Wanilla Hall and he agreed with it. The plan in Mr Chambers' assessment was to black out to at least 30 metres if not deeper and that this should occur right around the whole edge of the fireground, but mainly concentrated on the southern side because of the reports that he had received that there was going to be a northerly or north-westerly wind in the morning around 9am. The plan was not committed to writing. He said:

'This plan was not committed to writing. I didn't have the time or the resources just there to write it. I can't quite remember, but I've got an idea that Sonia Post actually wrote it down somewhere, whether it was in an occurrence book that she had herself, I can't remember, but I know it was written, I feel very sure that it was written down from what I can remember.'<sup>733</sup>

When pressed by Mr Boucaut, Counsel Assisting, as to how such a plan could be implemented in inaccessible swamp, Mr Chambers said the plan in that regard was that fire appliances could approach the edge of the swamp and then run hoses out and work from there. He also understood that there had been a grader break put down through the swamp and that they were working from the grader break. Grader work had taken place north of Warunda Road and indeed some breaks had been put in. South of Warunda Road no grader work had taken place and some evidence would suggest that it would have simply been impossible in that section of the swamp. That flawed understanding of accessibility was compounded by the fact that the fire in the swamp south of Warunda Road was more than 30 metres or even 60 metres into the swamp. To this Mr Chambers again reiterated his belief that there had been a grader break put through and that fire appliances could follow it<sup>734</sup>. When pressed about his knowledge of accessibility, particularly in relation to the area of the swamp south of Warunda Road and west of Area A, Mr Chambers reiterated his belief that the fire had come out of the swamp south of Warunda Road. Again this was a flawed

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<sup>731</sup> Transcript, page 11660

<sup>732</sup> Transcript, page 11285

<sup>733</sup> Transcript, page 11286

<sup>734</sup> Transcript, page 11287

understanding. In relation to Area A the following passage of evidence took place during Mr Chambers examination:

'A. No, I believed it was into the swamp and right out to the eastern edge of it, and that they could control it from the eastern edge.

CORONER

Q. Sorry, keep going.

A. That the fire had gone through here and was running up through the swamp here, and that the fire appliances then could then work that edge and blackout back into there.

Q. But hang on, if you believed that the fire had come out of the swamp into A, right, then the fire edge would have been in that group of paddocks marked A.

A. That's right, yes.

Q. So that would not then be inaccessible, would it.

A. That wouldn't be inaccessible.

Q. If it was then stubble you could black out to presumably an unlimited distance, couldn't you.

A. That's dead right. Most of it would be out by itself by then anyway.

Q. So what you are saying is that would then enable the crews to gain better access to the edge of the swamp to be able to black out in that.

A. Yes.

Q. Because whereas the stubble might have been out, there would still be burning material in the swamp.

A. Yes.

Q. And accessibility would not be a problem because presumably you could black out to 30 metres or more from the edge of the swamp.

A. That's correct.

Q. That's the scenario as you understood it.

A. That's the scenario as I understood it.<sup>735</sup>

Mr Chambers agreed that if the fire was halfway into the swamp and had not exited the swamp into the group of paddocks marked Area A, that his understanding was seriously flawed. He said '*you could say that, yes*'<sup>736</sup>. In the event, I was uncertain as to what Mr Chambers was telling me as to his understanding of the fire edge in the swamp.

<sup>735</sup> Transcript, pages 11289 to 11291

<sup>736</sup> Transcript, page 11292

13.53. Mr Chambers suggested that it would have been up to the Sector Commanders to determine how blacking out to 30 metres was to be achieved. He said '*that was up to the individual Sector Commanders to recommend that when they got there*'<sup>737</sup>. Mr Chambers said that he could not make the decision as to what method the Sector Commanders would employ because:

'I wasn't there to do it and I hadn't seen the whole fireground, so I don't know how they were actually going to black it out but I did say 30 m of hose sure ...'<sup>738</sup>

Indeed, Mr Chambers suggested that other alternatives such as backburning or the use of heavy machinery had not been discarded and again it was up to the Sector Commanders as to how they managed their sector in that regard as well<sup>739</sup>.

13.54. These thoughts and ideas do not seem to have been the subject of analysis or discussion during any planning meeting as such at Wanilla Hall.

13.55. As part of any discussion about the plan that would be adopted, namely to black out the fire edge to whatever distance, one may have expected there to have been discussion about its feasibility, especially so when the size and multi-faceted nature of the fireground is borne in mind. It smacks of a one size fits all type of plan. There does not appear to have been any such discussion. Nor does there appear to have been any discussion or consideration given to alternative measures, such as the use of heavy equipment or backburning or whether aerial support would be required in the morning, or discussion as to how any of those alternative strategies should be dismissed as either not being feasible, practical or dangerous.

13.56. The other flaw in relation to the strategy of blacking out of course was the fact that the plan was undermined to the extent that no Sector Commander had any understanding that they were to oversee such an operation in Areas A and C. That was of course because of the confusion about the boundary of the Swampy Sector and the fact that no Sector Commander was appointed for the Yorkies Crossing Sector.

13.57. As far as anyone can tell, no-one queried this plan at the time of its creation in the mind of Mr Chambers, although others at Wanilla Hall including Mr Maddern, understood that this was going to be the plan. Mr Vogel at Region 6 Headquarters did not query or validate the plan.

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<sup>737</sup> Transcript, page 11457

13.58. Mr Chambers said that he had rejected the strategy of backburning. The areas to the south and east of the swamp bordered by Yorkies Gully Road and Settlers Road was an option that was rejected by him because it was going to be too big an area<sup>740</sup>. Mr Chambers gave a statement to the police on 3 March 2005. In that statement he said:

'Whilst I was Incident Controller between 3.30 p.m. and 10.00 p.m. I did not prepare and I don't know if anyone else did prepare, a formal, written action plan. The action plan I formulated was in relation to the blacking out of the entire edge of the fire ground, particularly the southern edge and anything else they could achieve in the mean time. It was more of a verbal instruction and formed part of the briefing I gave to Angela Whillas whom was the oncoming Incident Controller. The plan B contingency was the road on the southern side and the road on the eastern side of the fire edge, were in fact fire breaks that they could conduct back burns from. I conveyed this to Angela Whillas and Rob Maddern.'<sup>741</sup>

Mr Chambers denied that his Plan B contingency was inconsistent with his having dismissed the question of backburning that night. He said that the original plan was to black out, but if that had not been totally possible, then that was a Plan B that could be considered<sup>742</sup>. Of course he could not have conveyed any such idea to Ms Whillas because she was not there until well after Mr Chambers left. In evidence he said that he conveyed this idea in fact to Ms Post and Mr Maddern. That passage in Mr Chambers' statement is also informative insofar as it states that as far as he knew no-one else had prepared a formal written Incident Action Plan, and that of course would include Ms Post.

13.59. No person who was present at Wanilla Hall corroborates Mr Chambers insofar as he claims to have articulated a contingency plan other than blacking out. In addition, Mr Chambers said he could not remember what Ms Post and Mr Maddern had said when he had mentioned his Plan B to them. Mr Chambers seems to be the only person who claims to have thought about backburning in Areas A and C.

13.60. Mr Chambers seems to have been so confident about the ultimate success of the plan that he stated the following in his witness statement of 3 March 2005:

'I did not consider it necessary to notify residents within the immediate vicinity of the fire and indeed between Port Lincoln and Wangary of the possibility that fire might endanger their properties on Tuesday 11 January 2005. I was of the opinion that with

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<sup>738</sup> Transcript, page 11457

<sup>739</sup> Transcript, page 11457

<sup>740</sup> Transcript, page 11316

<sup>741</sup> Exhibit C229, pages 8 and 9

<sup>742</sup> Transcript, page 11317

what had been done on Monday and with the plan for the Monday evening, even taking into account the forecasted weather conditions, that the fire was well contained and did not pose a threat.'<sup>743</sup>

It is difficult to see how such confidence could have been placed in the plan that Mr Chambers had devised, given its inherent flaws, and particularly bearing in mind that Mr Chambers did not exactly remain to see whether or not the plan could be carried out effectively. He said in his original statement of 3 March 2005 that when he went home at about 10pm as instructed, he was relieved by Ms Whillas. That was his belief when he gave that statement. Of course there is the hiatus between his departure and Ms Whillas' arrival that was identified during the course of the Inquest which proved Mr Chambers' beliefs in March 2005 to be manifestly incorrect.

- 13.61. Mr Chambers said a number of things about risk. Mr Chambers said that he did not have any documentation with him that night, apart from maps, that would have assisted him as to the steps to be taken in conducting a risk assessment of the fireground. As seen, the Operational Management Guidelines of November 2004 set out a number of matters that ought to be taken into consideration in determining the likelihood of a risk, namely to estimate the likelihood of an event or risk actually occurring, and to estimate the potential consequence of an event or risk<sup>744</sup>. Mr Chambers suggested that in order to conduct a risk assessment for the following day in relation to the southern flank of the fire, he would need information through SitReps, information through talking to Sector Commanders and the Operations Officer, Logistics Officer and Planning Officer, presumably meaning Messrs Lock and Branson in this instance. In this regard Mr Chambers agreed that he personally did not have all the relevant information to conduct a risk assessment by the time he left Wanilla Hall and did not believe that Messrs Branson and Lock had sufficient information either<sup>745</sup>. Mr Chambers suggested that there had been appliances throughout the whole area on the Monday and his belief was that they would have been following the fire edge and may have been in Areas A and C, and in relation to Area C that they may have been there to head the fire off as it was coming out of the swamp at that location. This had not happened and in any event, Mr Chambers' scenario as described was never really confirmed in his mind. As far as talking to Sector Commanders was concerned, Mr Chambers had not spoken to them because

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<sup>743</sup> Exhibit C229, page 9

<sup>744</sup> Exhibit C206

<sup>745</sup> Transcript, page 11680

they were still out on the fireground at the time he arrived at Wanilla Hall. Mr Chambers said he did not speak to either the Operations Officer, Logistics Officer or Planning Officer about conducting a risk assessment in respect of the southern flank.

- 13.62. Mr Chambers said that on the Monday night he had identified the key risk exposures as consisting of premises such as Mr Cabot's, Mr Giddings' and Mr Hull's properties but it did not occur to him that even if the Lower Eyre Peninsula was to be regarded as a tinder box, that the fire would not necessarily stop at those premises. He said '*no it didn't occur to me on the Monday night that it would go as far as it did*'<sup>746</sup>. As to what would possibly stop the fire at those premises under hot, strong northerly winds, Mr Chambers said:

'I probably didn't take - well, didn't know the forecast that was - forecast for the day; I was under the understanding that it was going to be a hot dry wind but not to the degree it was.'<sup>747</sup>

- 13.63. Mr Chambers agreed that if he did not have full information about the vegetation in the swamp to the west of Area A it would have been very difficult for him to do an accurate risk assessment. He also agreed that between 9pm and when he left the Wanilla Hall on the Monday evening he had acquired no further information that would have enabled him to do a better risk assessment in respect of the same area. He did not recall having overseen or having supervised anyone else to conduct a risk assessment or recall discussing risk assessment on the Monday night in respect of the swamp to the west of Area A, and in particular the potential danger that the fire in that swamp presented for the following day. As far as the possibility of spotting is concerned, Mr Chambers agreed that there was always a possibility of that occurring. On the Monday night however he said he did not know how well the fire was burning in the swamp and how long it might burn for and said:

'... no, it wouldn't have occurred to me about spotting coming out of it. If it had been still burning that fiercely the next day, and in that time frame it should have all burnt out.'<sup>748</sup>

- 13.64. Mr Chambers agreed that the whole countryside was at that time a tinder box, but nevertheless was not aware of anyone of having conducted a risk assessment in respect to the swamp west of Area A or Area C prior to him leaving on the Monday night.

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<sup>746</sup> Transcript, page 11667

13.65. The question of risk assessment as far as Mr Chambers is concerned seems to have been finally crystallised in the following passage of evidence:

- 'Q. I'm wondering what the risk assessments were for that period that you were at Wanilla Hall after the fire had stopped running.
- A. There was still a lot of work to do at Wanilla Hall as far as the mapping goes and informing people. I was called to the radio continuously.
- Q. Do we take it from that answer that there were no risk assessments done at Wanilla Hall after the fire stopped running, by yourself.
- A. That's correct.
- Q. So things like risk assessments in respect of the fire jumping out of the swamp the following day or where it might go if it gets away the following day or what assets might be at risk the following day don't really enter into it.
- A. That would be the job of the incoming incident control to do the risk assessment the following day.
- Q. Not yours.
- A. Not on that shift, no. My risk assessment for what was that particular night.
- Q. That's purely dealing with the running fire.
- A. The running fire and then -
- Q. Nothing else.
- A. And the risk assessment of, I guess, putting the black-out around the edge but that's not a real -
- Q. That's not a risk though, is it.
- A. That's not a risk.
- Q. It's pretty safe stuff.
- A. There is a risk if they have got to go into the swamp and that sort of thing, to get bogged and that, but there's no real life-threatening risks in it, no.
- Q. As far as a risk analysis of a worst-case scenario type, that's not your function for that night.
- A. Not for that shift I was on. It is for the night shift that - that function to do a risk analysis for the next day.'<sup>749</sup>

That analysis of the Incident Controller's duties as far as risk analysis is concerned is manifestly incorrect. Risk assessment is a dynamic concept and the task of the Incident Management Team before Ms Whillas ever arrived at Wanilla Hall was to conduct a risk assessment that involved a consideration of not only what could happen

<sup>747</sup> Transcript, page 11667

<sup>748</sup> Transcript, page 11608

<sup>749</sup> Transcript, pages 11873 and 11874

during the course of their own shift, but what could happen ultimately in terms of the exposure of the public to danger. In other words, the risk to the public and its exposure to danger had to be assessed and whatever measures were identified that might ameliorate that risk had to be identified and implemented then and there. There does not appear to have been any proper or thorough consideration given during the course of the first shift as to a worst case scenario. Such consideration, if any, does not seem to have been the subject of frank, uninhibited and intelligent discussion. In particular, there does not seem to have been any mention of the possibility of the fire getting away on the Tuesday morning or of the consequences of it doing so. To my mind if there had been any such interchange between the members of the Incident Management Team, and I include in that Mr Chambers before he went home, a conclusion would probably have been arrived at that there was a strong possibility of the fire breaking away even with blacking out and a strong possibility of the fire causing considerable damage over the landscape to the south-east of the overnight fireground. Had that occurred, then other steps may well have been taken to ameliorate that risk. The obvious ones would have been to ensure that the Sector Commanders were appointed to all sectors and that each portion of the perimeter of the fireground was part of a sector with a Sector Commander who understood the sector's boundary. If it had been concluded that there was nothing that could be done to ameliorate the risk, or if the risk still existed notwithstanding that steps to ameliorate it had been implemented, then clearly that was the time for the general public to have been made aware of that set of circumstances.

- 13.66. As far as Mr Maddern was concerned, he acknowledged in his very detailed statement that it is part of the job of the Incident Manager of a fire to assess the risk, which is a continual process<sup>750</sup>. Mr Maddern suggested in his statement that during his time at the fire, and this would of course include the Monday evening, he did not see anything that indicated to him that those who were making decisions were not doing appropriate risk assessments<sup>751</sup>. He suggests that the strategies that were put in place for the night shift were based on the risks assessed by those who were involved during the fire on the afternoon and evening, and the proposed events that would occur overnight. Likewise the action plan for the Tuesday was put into place taking into consideration the influences that were affecting the fire and what was forecast<sup>752</sup>. On

<sup>750</sup> Exhibit C224b, Paragraphs 253 and 261

<sup>751</sup> Exhibit C224b, Paragraph 266

<sup>752</sup> Exhibit C224b, Paragraph 264 and 265



the other hand, Mr Maddern does not appear to have, on his evidence at least, participated in any decision making and resisted the suggestion that he was at any stage part of an Incident Management Team, other than in his capacity as a scribe. Additionally, he does not describe what processes and discussions between the members of the Incident Management Team on the Monday evening could be regarded as a risk assessment. One would have thought for example, that a risk assessment would have taken into consideration the possible speed at which a fire under the conditions forecast would traverse the countryside, bearing in mind the heavy build-up of stubble across the landscape. The scenario that presented itself on the Monday night was not dissimilar to the TEWT that Mr Maddern described in his evidence that had taken place in 2003. This table exercise had suggested very strongly that a fire originating in the vicinity of Wanilla would travel to Port Lincoln surprisingly quickly. I detected no evidence of any consideration along those lines, except insofar as Mr Chambers thought that breakouts from Areas A and C might well be halted at Settlers Road and Yorkies Gully Road respectively. Mr Maddern's evidence in this regard would seem to conform with that of Mr Chambers who said that he did not hear anyone discussing the potential danger the fire in the swamp presented for the following day, nor did he talk to other members of the Incident Management Team regarding the conducting of a risk assessment in respect of the southern flank of the fire and was unaware of anyone on the Incident Management Team having done so<sup>753</sup>.

- 13.67. In Mr Branson's statement he suggests that if his reconnaissance had been completed, in all likelihood the night shift deployments would have been more. He expanded upon this observation in evidence. He said:

'Due to the time not being spent in A, B and C in the reconnaissance of the fireground in early evening of Monday with Mr Lock, we never had the opportunity to look at the area and do a full risk assessment. If we had been allowed to do that and come back with 'there' and then a briefing of 'there', I felt that then would have been more productive.'<sup>754</sup>

He suggested that resources would have been spread out over a larger area into Areas A and C and Sector Commanders would have been duly appointed to those areas.

- 13.68. Mr Tilley of the Department of Environment and Heritage, an experienced firefighter, suggested that a proper risk assessment on the Monday night would have consisted of

<sup>753</sup> Transcript, pages 11680 and 11681

<sup>754</sup> Transcript, page 10315

the following process, on the assumption that the fire had been declared contained. Bear in mind that Mr Tilley viewed this fireground after the event. He said this:

'I would look at a map of this, if I had been provided with it and if I haven't been able to get out on the fireground, which I would absolutely attempt to do so that I can gain a clear picture in my own mind, I would do a couple of things, based on that weather forecast, I would use a fire rate of spread meter, like the McCarthur meter, to try to work out what the potential rate of spread and potential spotting distances could be, if the fire behaviour picks up, and I know from memory that weather forecast may look like it's going to be fairly calm overnight but then pick up the following morning. You would want to talk to the crews that are out on the fireground, to get their summary of how different parts of the fire were either burning, if they were still burning freely, and what sort of threat they possessed, or whether in fact the people that were out there on the fireground were satisfied with the level of treatment that had occurred at that point in time. So it's only after some interaction with the people who had been involved, or from that briefing, that you'd have an understanding of what likely threats may be. So I'd try and work out whether there was any uncontrolled fire that might spread overnight and then would look at what the risks may be for the following shift that I needed to identify, that when that wind changed and came in, it's likely that the fire behaviour was going to send it to the south-east and what sort of actions we may then be able to put in place to manage those risks.'<sup>755</sup>

On the assumption that in some places the fire was in inaccessible swamp from Yorkies Gully Road through to Warunda Road, and that there was a difficult fire in the sugar gums area and a plan was in existence to black out to 30 metres, Mr Tilley said that he would be looking to make sure that all the risks were being managed before the weather conditions changed. He suggested there may have been some limitations about what could have been done at 1am or 2am in the morning, but suggested that if he had been Planning Officer, one might consider falling back on the use of heavy plant and equipment to create breaks and to examine how one might best place resources such as fire units and aircraft the following morning. Mr Tilley also addressed, as part of his analysis, the fact that other factors would be involved in effective planning, such as location of resources, times of shift changes and lag time between the arrival of crews and action being taken by them. There does not appear to have been any analysis along the lines of what Mr Tilley has suggested at any stage during the first Incident Management Team shift.

- 13.69. Dr Bob Smith in his inquiry also was unable to detect much evidence of a proper risk assessment in the light of the Tuesday forecast. He suggested in evidence that a properly experienced Incident Management Team should have been able to pick up

the potential threat for the Tuesday, what the potential fire behaviour could actually do and what the impacts of that would be<sup>756</sup>. He reiterated what he had said in his report that there seemed to be a one-dimensional approach that the fire would be routinely contained and put out and there would be no ongoing issues. Certainly there appears to have been a strong assumption on the part of the Incident Management Team on the Monday night that the strategy of blacking out would be the panacea for the fireground's difficulties without the feasibility of such a strategy being properly thought out.

13.70. As to the question of possible impact, quite apart from the theoretical knowledge that Mr Maddern said had been gained in conducting the TEWT, the experience of the Monday afternoon at Wangary showed that it would be difficult to stop the fire in paddocks. It had been difficult preventing the fire from getting into the swamp. With a forecast such as that for the Tuesday, conditions for fighting fire across a stubble covered landscape were not going to be any less difficult.

13.71. The superficiality of any risk assessment is further evidenced by the lack of consideration given to local knowledge. Although Mr Chambers has no recollection of this, I find that Christopher Hull spoke to him at the hayshed and suggested that two areas might be the subject of backburning, firstly along Yorkies Gully Road from Duck Lake Road up to the hayshed and secondly the south-eastern corner of his property north of Yorkies Gully Road, being the triangular area of land bordered by the swamp, Yorkies Gully Road and the hundred line. There were further approaches made in relation to backburning. Christopher Hull's uncle, Wayne Hull, gave evidence that he spoke to Mr Chambers about backburning. Both Hulls went away to a degree reassured. Whether or not Mr Chambers had indicated that backburning would take place, clearly Christopher Hull had identified the triangular area to which I have referred as a potential trouble spot. That area consisted of wheat stubble. Christopher Hull's concerns were also raised in the early hours of the Tuesday morning. As a result, the Lincoln appliance with Mr Napier in charge was brought into the swamp near the hundred line and was put to work blacking out in that location. It will be noted that Christopher Hull, being one of the affected landowners, made approaches to the CFS rather than the other way around. Mr Cabot had no contact with the CFS on the Monday night. It will be remembered that he conducted

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<sup>755</sup> Transcript, page 14324

a backburn along the southern boundary of the swamp in Area C. Mr Brian Foster had encountered this backburning exercise and had telephoned Lincoln Base to ensure that the CFS were made aware of the difficulty at that location. It is difficult to see how any proper risk assessment, either on the Monday night, throughout the early hours of the Tuesday morning and into the daylight hours of the Tuesday morning could have avoided contact with the owner or occupier of the property that was most at risk and on which one of the most difficult aspects of the fireground existed. Of course, communication is not a one-way street and it is to be observed that Mr Cabot made no approaches to the CFS either. One would have thought that a person in the position of Incident Controller or Planning Officer would have had a natural curiosity as to what, if anything, the owner or occupier of property such as Mr Cabot's would suggest as far as minimisation of risk is concerned. It seems fairly clear that if Mr Cabot had been consulted he would have advocated backburning in Areas A and C. He simply did not have the resources to conduct proper backburning, and was reluctant to set fire to canola stubble that partially bordered the swamp at both areas without proper resources. Mr Cabot, if consulted, may have persuaded the CFS that in the circumstances that prevailed, a limited amount of backburning in the stubble may have been achievable and worthwhile. The answer to that question of course will now never be known. Mr Cabot had a view about the accessibility of his swamp and the feasibility of the proposed blacking out operation. He said:

'Q. What would you say to this suggestion. If a number of fire appliances were given a general instruction to go to that area and black out to 30 m along the fire perimeter in that area depicted in PNC2, what would your comment be to such an instruction.

A. I would say it was a waste of time when they could have come in from paddocks 9 and 7 and burnt back into the scrub.

Q. If you were the captain of a CFS truck with that instruction and you went up to the edge of that swamp, and if A to D is a reflection of where the fire perimeter approximately was, how could you carry out such an instruction in that area.

A. On the line from A to D?

Q. Yes.

A. With difficulty.

Q. Would it be possible at all. A break out to 30 m, how would you get to the fire line.

A. I think I'd - what I said, answer the way I feel, with difficulty. It just wouldn't be practical as far as I'm concerned through there to get a 30 m break. When the wind came up the next morning it would blow over that 30 m anyway.'

- 13.72. Chief Inspector Malcolm Schluter was the Officer in Charge of the West Coast Service Area based at Port Lincoln. He was also Chairman of the West Coast Counter Disaster Committee pursuant to the provisions of the Emergency Management Act. That Committee was responsible for developing and maintaining the West Coast Division Disaster Plan which provides for the mobilisation and coordination of resources within the Division to deal with a disaster, potential disaster or major emergency incident. On the Monday Mr Schluter became aware of the weather prediction for the Tuesday which indicated that severe weather conditions would prevail with high temperatures and strong northerly winds. Mr Schluter sought out information on the Monday afternoon about the existing fire. He called at the Lincoln Base and spoke to Mr White, the Brigade Captain. He also received a briefing from Mr Simon Vogel at Region 6 Headquarters. Mr Vogel showed him a map that had the basic fireground marked on it and was briefed as to the number of fire appliances in attendance. He said in his statement that at that stage *'there appeared to me to be adequate management of the fire with a large number of fire units either on site or en route to the fire'*<sup>757</sup>. Mr Schluter was told about the imperfect line of communication from the fireground.
- 13.73. Between 9:30pm and 10pm that evening Mr Schluter attended at the Wanilla Hall and was there given a full briefing by Mr Maddern. Mr Schluter remained at the Wanilla Hall for about 3 hours until approximately 12:30am. In that period of time he had discussions with various other people including Mr Branson. There were other police officers in attendance. Mr Schluter also saw the map being prepared by Mr Lock. Mr Schluter also saw Ms Whillas who told him that she would be the overnight Incident Controller.
- 13.74. When Mr Schluter had first arrived at Wanilla Hall, the Incident Control Centre had not been established for very long but appeared to be fully operational<sup>758</sup>. Mr Schluter inferred that Mr Maddern was the Incident Controller from his demeanour and behaviour – he suggested that Mr Maddern was *'holding court'*<sup>759</sup>. Mr Maddern was giving other CFS members a briefing with a map and having animated discussions with them. Mr Branson was not in the group working with Mr Maddern

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<sup>757</sup> Exhibit C249, page 3

<sup>758</sup> Transcript, page 14240

<sup>759</sup> Transcript, page 14241

as he was in another room off the hall – it will be remembered that Mr Branson was in the radio room for a substantial period of time.

- 13.75. Mr Schluter has no recollection of seeing Mr Chambers at the Wanilla Hall on the Monday night.
- 13.76. Mr Schluter said that Mr Maddern gave him a comprehensive assessment as to what the CFS were doing. The fire perimeters were explained to him as were the details of the weather such as wind direction. Mr Maddern also gave Mr Schluter the details of the firefighting efforts and particularised a number of trouble spots along the southern edge of the fire that were causing great difficulty because of the swamp country there. At one point Mr Branson informed Mr Schluter that he had been assigned to the duties of 'Forward Commander'.
- 13.77. In Mr Schluter's statement, compiled on 17 June 2005, he said that as a result of speaking with the CFS Officers at Wanilla Hall he was satisfied that the fire had been contained<sup>760</sup>. He was told that there remained a particular trouble spot largely at the south-eastern edge of the swamp country north of Yorkies Gully Road, but was assured by Mr Maddern and Mr Branson that they were both largely satisfied that the fire had been contained, subject to that trouble spot and the other difficult location where there were sugar gums. Mr Schluter was satisfied that appropriate resources were being brought to bear on the difficulty. He said that Mr Maddern told him during the course of the briefing that he, Mr Maddern, was satisfied that the fire would be contained overnight and that containment lines would be sufficient in '*most of the area of the fire*'. Mr Maddern indicated that ground work by CFS crews would concentrate on the two troublesome areas using long hoses in the locations where appliances would have difficulty penetrating the swamp. This briefing would indicate that Mr Maddern had a reasonably comprehensive knowledge of the situation as it then existed.
- 13.78. In the evidence that he gave on 24 July 2006, Mr Schluter confirmed that the information that he had received at Wanilla Hall was that generally the fire had been contained except for the areas that he had already identified in his statement as being difficult because of the lack of access to swampy ground. That seemed to be common knowledge amongst everybody at Wanilla Hall. In spite of the problem areas, Mr

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<sup>760</sup> Exhibit C249

Schluter told me in evidence that he understood from the conversations that he had that the fire was '*well and truly contained*'. The persons present were not overly concerned about the difficult areas.

13.79. The following passage of evidence occurred during the course of Mr Schluter's evidence:

'CORONER

Q. It might be implicit in your statement but on the Monday night is it correct that there was nothing said to you about the likelihood or otherwise of the fire getting out of the containment lines or its perimeter the following day.

A. No.

Q. You're aware of the weather forecast of the following day.

A. Yes.

Q. And the vulnerability of the areas that you describe in your statement was so, bearing in mind the forecast for the following day; is that right.

A. Yes.

Q. As you understood the position to be.

A. Yes.

Q. There was nothing suggested by anyone there on the Monday night that there was a chance of the fire getting away the following day under a strong wind.

A. No.

Q. Was that something that you gave consideration to.

A. Absolutely, yes.

Q. And asked questions about.

A. Yes.

Q. Who did you ask questions about this issue.

A. Certainly Maddern and Branson.

Q. What did they say.

A. They were confident that the fire was well and truly contained and it would present no real danger the following morning.

Q. The two troublesome areas that you describe in your statement, you say at p.5 that 'Maddern indicated that CFS crews would be using long hoses in an endeavour to quell those particular areas where appliances would have difficulty penetrating the immediate area because of the swamp conditions'. Were you given to understand that special treatment would be given to problem areas; in other words, some other fire containment strategy would be employed in those particular locations.

A. Yes.

Q. That was the extra long hoses.

A. Yes.

Q. If there had been a suggestion that there was a possibility that the fire could get out along its south-eastern perimeter the following day, would you, as a police officer, have taken any particular course of action.

A. I don't really know what I could have done as a police officer but given the forecast for the next day it would have surely caused some particular action to be taken to try and nullify that.

Q. Obviously the police don't have any part in the actual fighting of the fire but if there was some doubt overnight about whether the fire would remain contained the following day, would there have been a necessity for the police to take steps to ensure that the public were made aware of that situation, and I mean by that public who had property and assets in the possible path of the fire that might get out the following day, bearing in mind the predicted weather conditions.

A. That would be a desirable thing to take place, I would suggest.

Q. There was no suggestion of that on the Monday night, such a possibility.

A. No.<sup>761</sup>

The salient feature of that passage is that Mr Maddern and Mr Branson had expressed confidence that the fire was well and truly contained and would present no real danger the following morning. I infer from Mr Schluter's answers that if there had been possibilities of breakaways expressed to him, that he would have taken certain steps necessary to secure the safety of the public. But there was no such suggestion.

13.80. Mr Maddern did not agree with Mr Schluter's recollection of their conversation. Mr Maddern said that he passed on some very basic information to Mr Schluter about the shape of the fire and did not recall discussing trouble spots at the fireground with him at all<sup>762</sup>.

13.81. I have no doubt that Mr Schluter received the impression that there was no real danger to the public. He was at the hall for several hours and if he had detected any concern that the fire would not remain contained, I am certain he would have acted upon it. It meant that SAPOL had a confident attitude towards the fire on the Monday night. The following morning at 8am Mr Schluter received further information at Port Lincoln Base that the fire remained under control and that CFS appliances were still on the scene and would remain there. He was informed, however, that there was a continuing problem with access to the swampy country near the south-eastern edge.



13.82. The second Incident Management Team shift

As seen, Mr Chambers left Wanilla Hall at a time well before the incoming Incident Controller arrived. Mr Maddern eventually left as did Messrs Lock and Shepperd. Mr Branson remained at the Wanilla Hall and assumed the role of Operations Officer for the second overnight shift. He agreed to do this notwithstanding the fact that he had been at the fireground since mid afternoon. He had to attend to his business on the Tuesday. Ms Whillas was installed as the Incident Controller. She arrived at approximately 11:45pm.

13.83. The circumstances in which Ms Whillas came to be appointed as Incident Controller were the subject of much controversy during the course of the Inquest. There was some debate as well as to whether in fact she was appointed Incident Controller at a very early stage or whether she was simply asked to standby as a possible Incident Controller. In my view it is not a matter that I need to resolve. What is important is that in my opinion, without wishing to denigrate Ms Whillas who was reportedly at that time a very capable Captain of the Greenpatch Brigade, Ms Whillas was not an appropriate choice for Incident Controller. Not only was she appointed the Incident Controller, but also assumed the role of Planning Officer. These dual capacities involved an extremely onerous responsibility, especially given the forecast that was in existence even at that stage.

13.84. The Lower Eyre Peninsula Group Operational Management Plan contained the stipulation that if an incident involves 5 or more appliances, or other agencies or the FDI on the day of the incident is above 50, the Group Officer or his designated Deputy will become Incident Controller<sup>763</sup>. If the Group Officer is unavailable then the highest ranking Deputy Group Officer available would be the Incident Controller. The table set out earlier that listed the Group's Incident Management Team personnel did not contain Ms Whillas' name. In any case, she was not a Deputy Group Officer of the Lower Eyre Peninsula Group or of any other Group. She had participated in an AIIMS course in 2004 but had never acted as an Incident Controller except in incidents involving a handful of appliances, less than 5.

13.85. When it is considered that Ms Whillas was to inherit not only the onerous responsibilities of an Incident Controller and Planning Officer, but also inherit a very

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<sup>761</sup> Transcript, pages 14273 to 14275

<sup>762</sup> Transcript, page 14782

dangerous fireground with its myriad complexities and, as well, effectively inherit an ill thought out strategy to deal with that situation, her appointment was in my opinion misguided. This is particularly so when it is to be remembered that Mr Tilley was an experienced firefighter and would have been available for appointment. Mr Charlton, a Deputy Group Officer of the Tumby Bay Group was a Sector Commander during the course of the night shift. Mr Russ, the Group Officer for Tumby Bay, had been present at the fireground until the change of shift, both of these men could also have been appointed.

- 13.86. Mr Branson told me that he had expressed the view that the overnight Incident Management Team was going to be thin. Opinions of other witnesses who are senior members of the CFS, without going into the detail of it, would very strongly suggest that Ms Whillas should not have been appointed as Incident Controller and Planning Officer. Mr Vogel had been made aware of the fact that Ms Whillas was at the very least being considered as Incident Controller for the overnight shift and took no steps to intervene.
- 13.87. It is very difficult to be critical of Ms Whillas. By the time she became involved in the matter, the Incident Action Plan to black out had already been devised. The fact that the Sector Commander for the Swampy Sector which now covered Area A did not know of the geographical boundaries of his sector was not of her making. Ms Whillas would also have been entitled to think that any plan that had apparently enjoyed the input of very senior members of the Lower Eyre Peninsula Group had some measure of validity. On the other hand, as Incident Controller and Planning Officer, she also had an ongoing responsibility to conduct a risk assessment. This was especially so after the 4:05am weather forecast in which it was indicated that there would be an FDI of 122 at 10am on the Tuesday morning with strong nor-north-westerly winds.
- 13.88. All of these elements warranted a fully staffed Incident Management Team and in particular a dedicated Planning Officer. It was a key responsibility of the overnight Incident Management Team to ensure that plans were put in place for the following day.

13.89. Quite apart from whether this incident was a Level 2 or Level 3 incident on the Monday night or in the early hours of the Tuesday morning, and I will deal with that issue later, it seems to me that this was a fireground of such complexity that all of the AIIMS functions should have been delegated and filled.

13.90. Ms Whillas' situation would not have been helped by the fact that her predecessor as Incident Controller, Mr Chambers, had gone home and was not available to brief her. Mr Lock who was meant to have been the Planning Officer, but did not know about that, did not provide any briefing to Ms Whillas. Mr Maddern when asked whether Ms Whillas was briefed on her arrival said:

'Again, I can't say definitely in that regard. I know when she first came, or when I first saw her she came and spoke to me and then I know she spoke to other people that were there in the incident control centre.'<sup>764</sup>

Mr Maddern said that he only gave her a bit of information because he did not see it as his role to brief her because he had not played any part on the Incident Management Team. He could not recall the specifics of the information that he gave her but said that he told her roughly what was happening to give her '*a bit of an idea*' and '*bit of a heads up of what was going on at the time*'.<sup>765</sup>

13.91. For Ms Whillas' part she said that when she arrived at about 11:45pm she had noticed that Mr Chambers, Mr Branson and Mr Maddern were still tied up doing crew changeovers. Ms Whillas was obviously mistaken in her observation of Mr Chambers as he had left some time before her arrival. She approached Mr Maddern about the Incident Action Plan and he advised her that the fire had been contained and that she should continue monitoring the fire edge and black out to 60 metres inside the edge. She never received any communication, advice or request to undertake any backburning operations on any sector. She specifically states in her first statement dated 16 February 2005 that '*the briefing I received was limited*'.<sup>766</sup> Ms Whillas' most recent statement confirms that this was the information that she had received from Mr Maddern and adds that although her briefing was limited, there was '*sufficient information available at Wanilla Hall for me to determine what I needed to know*'.<sup>767</sup> She does not elaborate on what she thought she needed to know. In her evidence, Ms Whillas said that Mr Branson had also given her some briefing in

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<sup>764</sup> Transcript, page 8838

<sup>765</sup> Transcript, page 8838

<sup>766</sup> Exhibit C225, page 3

relation to the breaks that had been established around the fireground. In truth, that could only have related to the northern aspect of the fireground because there were no breaks in relation to the swamp. As to the plan, Ms Whillas said that Mr Lock, Mr Branson and Mr Chambers had obviously established a plan that was going to operate through the night shift. The plan was to monitor the fire edges and secure containment lines by blacking out 30 to 60 metres. Mr Maddern told her that. That was the plan that she effectively inherited. As a result of further discussion with Mr Branson, the decision was made by her that the instruction to black out would be to 60 metres in fact, being two hose lengths. As to the circumstances in which that change of instruction took place she said:

- 'Q. So your position is that as a result of your briefing with Branson, the instruction from the top, that is from you, was the 60 metres.
- A. That's correct. From what I recall Russell and I had - it was more of a discussion than a briefing on what I wanted him to do in his role as an operations officer and as I already had indicated that I wanted the blacking out length to be increased to 60, then that was his instruction to then take on to the fireground and pass on to the others.'<sup>768</sup>

The rationale behind the increase from 30 to 60 metres was the fact that they had not been able to create a bare earth break around the whole perimeter, so she instructed that blacking out should occur to 60 metres. The inability to create a bare earth break around the whole perimeter is a largely untestable assertion because no attempt had been made to create a bare earth break on the south-eastern perimeter through the swamp or into the paddocks adjacent to the swamp. If the inability to secure the swamp with bare earth breaks had arisen because of the accessibility issues, one would have thought that this would raise questions about the ability to black out.

- 13.92. Whether the increase to 60 metres was Ms Whillas' idea or whether it had already been devised does not particularly matter. In her original statement of February 2005 she suggested that Mr Maddern had suggested the blacking out to 60 metres. In her second statement of 17 March 2005, Ms Whillas said:

'Blackout means to completely extinguish anything that is burning, including stumps and trees. Crews would layout two lengths of hose line and systematically saturate using

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<sup>767</sup> Exhibit C225b

<sup>768</sup> Transcript, page 9810

water and foam the burnt area for 60 metres inside the perimeter. With a blackout area of this width there is no requirement to have any other form of breaks.'<sup>769</sup>

That understanding of the nature of a blacking out exercise to 60 metres and its underlying purpose assumes of course that one is able to gain such access to the fire perimeter and that one is able to completely extinguish the burning material. This does not seem to have occurred here. An example of that as seen elsewhere in these findings was an incomplete ability for the Karkoo appliance to black out in the Cabot backburn area where Mr Modra still saw material within the swamp that was apparently not totally extinguished. Of course in the swamp adjacent to Area A there was no blacking out undertaken at any stage.

- 13.93. During the course of the overnight shift, there was no revision of the Incident Action Plan other than the amendment that 60 metres be blacked out rather than 30 metres. For example, no consideration was given to the use of heavy machinery or backburning and no further consideration appears to have been given to securing aircraft for the Tuesday morning. For the most part the assumption that appears to have been worked on was that blacking out would ensure containment.
- 13.94. Again during the course of the overnight shift there is no evidence of any proper risk assessment or consideration of a worst case scenario except that there was some evidence given by Ms Whillas about the expectations of breakaways. I return to this evidence later. However, Ms Whillas seems to have had an idiosyncratic view of the value of weather forecasts as they applied to the Lower Eyre Peninsula. In her first statement of 16 February 2005 she said that during the night she had not received any reports of flare-ups and the forecast overnight winds had not arrived. The weather conditions were significantly milder compared to the overnight forecast. When the even more worrying 4:05am forecast was made available on the Tuesday morning, Ms Whillas radioed the details to Mr Branson and asked him whether he wanted any additional work carried out in the light of the forecast. His advice was that he was happy with the way things were looking and as a result of that conversation Ms Whillas was:

'... of the understanding that the situation was well under control and if the weather conditions eventuated we would still have been able to maintain control.'<sup>770</sup>

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<sup>769</sup> Exhibit C225a, page 4

<sup>770</sup> Exhibit C225, page 4

But as far as her experiences with weather forecasts were concerned, she said this:

'My experiences in the Lower Eyre Peninsula is that the Weather Bureau tend to over forecast and are unable to provide accurate information until the weather actually reaches the west coast of the Peninsula. This leads experience fire fighters like myself to have little faith in the forecast weather conditions actually eventuating. Compounding feature of this event was that the overnight forecast conditions did not eventuate which lead me to suspect that the daytime forecast may not eventuate as well. Rarely does the Bureau get the weather forecast for the Lower Eyre Peninsula accurate.'<sup>771</sup>

No-one has in this Inquest suggested that the weather forecasts, be they from the previous day or that made available at 4:05am on the Tuesday, should not have been taken seriously, especially by an Incident Controller who is meant to be conducting risk assessment. As far as risk is concerned, to ignore a weather forecast such as the one that was made available on the Monday afternoon, reconfirmed as it was by the one at 4:05am on the Tuesday morning, would be to take a risk that was quite profound.

- 13.95. Ms Whillas told me that she did not undertake any risk assessment in respect of the plan that she had inherited because she would have expected the risk assessment to have been conducted when the plan was put in place<sup>772</sup>. However, Ms Whillas agreed that risk assessment is a matter that has to be undertaken from time to time. She said that her risk assessment had consisted of looking at where the appliances were tasked, considering the weather forecast as well as the weather that was reported from the fireground and incorporating that with the information that had been given to her in the briefing as well as what she was being told by Mr Branson. From all of this she deduced that nothing had changed that ought to alert her to a change of risk. She said that the crews had been tasked and deployed to their sectors and were all working on a way to achieve the objective. The weather had not significantly changed to what they had been expecting or what had been forecast. No-one had identified, apart from the sugar gum area, an areas that were a significant risk to the safety of crew. At first, Ms Whillas did not consider farmhouses south of Yorkies Gully Road to be at risk if the fire got out because again she expected that would have been part of the risk assessment that had already been conducted in the formulation of the plan that had been given to her.

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<sup>771</sup> Exhibit C225, page 4

<sup>772</sup> Transcript, page 9779

13.96. Nevertheless, Ms Whillas insisted that she herself had conducted risk assessments throughout the course of the night. Mr Branson, the overnight Operations Officer, had left Wanilla Hall and gone out to the fireground just before 2am. Mr Branson remained at the fireground for several hours until he returned to Wanilla Hall. At one point Mr Branson arranged for the Karkoo and Butler appliances to go to the Yorkies Crossing Sector into Area C. That occurred at about 3:30am. No appliances had been in Area C or along the southern edge of the swamp at that location prior to that. No appliances went into Area A or the swamp to the west of Area A during the course of this shift and no blacking out took place in the swamp from either side of the fire perimeter.

13.97. Mr Branson maintained that he also undertook operational risk assessments at all times<sup>773</sup>.

As far as Area A is concerned and the swamp adjacent to it, Mr Branson said that he would not have considered sending anybody within the swamp area itself. The area that would be used to make it safe would be around the perimeter of the swamp itself. He said he could not see activity during the night except for the '*odd spot*'<sup>774</sup> and that no immediate action needed to be taken. Mr Branson opined that during the night there would not have been enough activity from that part of the swamp to carry a fire from within it to the edge into the stubble. He did not deploy any resources to that area. Mr Branson said when he later deployed two appliances to Area C he asked the crews to check Area A on their way through<sup>775</sup>. He did not task any appliances at any stage during the early morning to attend and undertake any containment work in those paddocks. Mr Branson was asked during his oral evidence why this was the case:

'Q. Right. So who worked from the area that I am indicating up to Warunda Road. Who was in there monitoring or doing anything at any time.

A. There wouldn't have been anybody. We never had the resources, in addition to what we had in that area where Port Lincoln was working, to be able to put anything into that area.

Q. You could have asked for resources.

A. Resources what, on the fireground? Or additional resources?

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<sup>773</sup> Transcript, page 10143

<sup>774</sup> Transcript, page 10146

<sup>775</sup> Transcript, Page 10122

Q. Well, you know that breakaway came from the area generally that I am indicating to the north-west of the letter A south of Warunda Road into paddocks A, you know that.

A. Yes.

Q. And you knew the fire was in that swamp.

A. Yes.

Q. It's not an area that you can ignore.

A. I totally agree.

Q. But it seems that it was ignored.

A. Never had the resources to put in there.

Q. Did you complain to anyone that you didn't have the resources to put in there.

A. No I didn't.

Q. Why not.

A. I was only going to complain to the incident controller and although we had no other resources we had resources at Tumby Bay that were available to us and it would have been hours before we were going to get resources into there.<sup>776</sup>

13.98. Mr Branson said he did not go back and check on Area A again during his shift as he ran out of time and was ordered back to Wanilla to handover to the incoming Incident Management Team for the Tuesday day shift.

13.99. Ms Whillas received the 4:05am weather report shortly after it was compiled. Ms Pobke who was an employee of the Department of Environment and Heritage and who was mapping throughout the course of the night, suggested in her evidence that Ms Whillas appeared to be concerned about this weather forecast. Ms Whillas contacted Mr Branson about the weather forecast. Mr Branson claimed in evidence that he did not know of any detailed forecast until then and had been relying somewhat on the predictions of fishermen as far as weather was concerned. Ms Whillas in her original statement, suggested that after she contacted Mr Branson with this new weather forecast, she understood that the situation was well under control and that even if the weather conditions eventuated, they would still have been able to maintain control. It was in that context that Ms Whillas had suggested in her statement that Lower Eyre Peninsula weather forecasts were not accurate.

13.100. In her evidence, however, Ms Whillas told me that on receiving the 4:05am forecast, an expectation developed that breakaways would in fact occur<sup>777</sup>. Ms Whillas said



that they were really worried about the area from the south of Warunda Road down through the swamp extending back to the sugar gums. She said '*we anticipated a breakaway, yes*'<sup>778</sup>. She said that was something she and Mr Branson had discussed. This expectation was articulated and explained to the incoming Incident Management Team on the Tuesday morning, namely that there was about an 8 kilometre stretch that they had highlighted and identified as the highest risk area for a breakout. Ms Whillas said that she could not say whether it would definitely breakout but said '*we would have considered it to be highly likely, yes*'. The reason for this expectation was based on the weather, fuel loading, existing ignition points and the fact that they had not been able to secure the containment line as well as they would have liked<sup>779</sup>. Ms Whillas suggested that the forecast wind was a particularly important factor in this regard<sup>780</sup>. As to the effect that this expectation had or may have had on the Incident Action Plan that was still in existence, Ms Whillas at one point gave me to understand that she may have considered backburning but that the window of opportunity for that as an option had closed<sup>781</sup>. In her communication with Mr Branson that took place at 4:28am she asked him whether he was happy. He said that it was very quiet but identified two locations that should be watched very closely. As to discussion about the potential for breakaways, Ms Whillas did not tell Mr Branson that it was her view that a breakaway was highly likely '*in those terms*'<sup>782</sup> but agreed that there was potential for breakouts that was higher in the two identified locations. She said that a definite determination could not be made that it would breakout in any particular location. In this context Ms Whillas agreed that the odds of a breakout were good but raised the issue of conflicting weather forecasts to actual weather conditions which added to the uncertainty. When asked as to whether the predicted FDI of 122 at 10am would make it more likely than not that there would be a breakaway, Ms Whillas said '*I would have expected, yes*'<sup>783</sup>. She agreed, seemingly for the first time, that one would have to take the forecast as being accurate. She said that they did expect that there would be break in the containment lines at some point. She told me that her understanding was that Mr Branson felt the same. I found Ms Whillas' evidence on the issue of whether she expected breakaways difficult to understand at first, but

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<sup>776</sup> Transcript, pages 10148 and 10149

<sup>777</sup> Transcript, page 9837

<sup>778</sup> Transcript, page 9838

<sup>779</sup> Transcript, page 9839

<sup>780</sup> Transcript, page 9838

<sup>781</sup> Transcript, page 9840

<sup>782</sup> Transcript, page 9842

<sup>783</sup> Transcript, page 9843

having considered the matter carefully, and having read and re-read her evidence it is clear enough that Ms Whillas' definitive position on this issue is that she had an expectation of breakaways.

13.101. In her evidence Ms Whillas agreed with the proposition that she thought it was highly likely that the fire would get away from that 8 kilometre perimeter because the crews that had been tasked to that area had not been able to do the blacking out job as successfully as one would have liked. Ms Whillas told me that this concern of hers was passed on to the Incident Management Team on the Tuesday morning. She had an appreciation that if the wind increased in the morning if there was smouldering material adjacent to flammable material in the swamp, the fire could get away<sup>784</sup>. I will return to the briefing of the incoming Incident Management Team on the Tuesday morning in a moment. The suggestion that breakaways from the swamp area from Warunda Road down to Yorkies Crossing were either likely, highly likely or expected is consistent with the realities of the situation as they existed on the Tuesday morning, particularly in the light of the 4:05am weather forecast. It is difficult to know whether Ms Whillas told me the truth about those expectations, particularly in the light of the fact that no-one, including Mr Branson and the incoming Incident Management Team on the Tuesday morning, agrees that Ms Whillas said anything to them about that. As it was to transpire, Mr Maddern was to sign off on the fire as being 'controlled' which signified an understanding the complete perimeter of the fire was secured and that no breakaways were expected. Such an expectation of breakaways is also totally inconsistent with a rejection of the use of heavy machinery on the Tuesday morning and a failure to secure water bombing aircraft for the Tuesday morning. It would also be inconsistent with not having a sufficient allocation of appliances in those at risk areas in the expectation of breakaways, unless it was considered to be so dangerous that they should not be there. There is no evidence that anybody formed any such view either overnight or on the Tuesday morning.

13.102. Having considered Ms Whillas' evidence about an expectation of breakaways, I think it is more likely that she did not have any expectation in that regard. Everything that took place from the point in time when she says she first experienced that expectation is not consistent with her having thought along those lines. Such an expectation is also inconsistent with what she said in her first witness statement at page 4, namely

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<sup>784</sup> Transcript, page 10857

that as a result of her conversation with Mr Branson at approximately 4:30am, she understood the situation was well under control. Nowhere in that statement does she express any view that breakaways were to be expected, or indeed that she expected them. Her second witness statement of March 2005 does not contain anything about that subject. The statement that became Exhibit C225b, which was compiled during the course of the Inquest, before she gave evidence, says nothing about that either.

- 13.103. Ms Whillas in that final statement expresses surprise that no landowners were offering or operating their own machinery overnight. She said she would expect in the district of Wangary that most landowners had large wide-lined machinery for seeding. This machinery is capable of working at night and could create breaks. Ms Whillas said:

'I was very surprised that the local landowners did not attempt to create their own breaks, especially as some have made comments on knowing how bad the weather was to be the next day.'<sup>785</sup>

Ms Whillas said that she did not see any landowners at the Wanilla Hall and was not aware of any previous conversations relating to requests from landowners for work to be done. Nevertheless she was surprised that no landowners came to Wanilla Hall to enquire as to what had been done during the shift or to offer any assistance. Clearly, Ms Whillas had no contact with any landowners overnight. If it is correct that Ms Whillas was surprised about all of that, and at the same time expected breakouts from the swamp, it is rather odd that she would not have shared her concerns with landowners or at least invited Mr Branson to do so.

- 13.104. It seems to me that Ms Whillas' role as Incident Controller and Planning Officer was almost entirely passive. Ms Whillas' position in all of this as Incident Controller and Planning Officer was one where she really left any significant decision making to Mr Branson who had seen the fireground and was out on the fireground for several hours during Ms Whillas' shift. Ms Whillas said that at 4:30am she had contemplated widening or extending a grader break that she believed to be in existence near the sugar gums when in fact there had not been any such break. She thought of backburning as well<sup>786</sup>. She kept those strategies to herself because Mr Branson was a far more experienced firefighter than her. He had seen the terrain and fuel loading and was in the best position to guide her as to what strategy would be best conducted.

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<sup>785</sup> Exhibit C225b, page 43

<sup>786</sup> Transcript, page 9795

13.105. In the event, the only strategy that appears to have been adopted with respect to the south-eastern perimeter was the sending of appliances into Area C belatedly and continued work on the sugar gums.

13.106. Thus it was that as far as the strengthening of the containment of the south-eastern fire perimeter was concerned, little had been achieved overnight. I leave aside the question of the sugar gums because they had difficulties all of their own. However, as far as the swamp is concerned, nothing had been achieved in the swamp adjacent to Area A and incomplete blacking out had taken place in the swamp in Area C. Moreover, no arrangements were put in place for any activity to be conducted in that regard when the sun came up. First light was at 5:58am and dawn occurred at 6:27am<sup>787</sup>. For example, no contact had been made with Mr Cabot, the owner and occupier of the property on which for the most part the swamp was situated, and nothing had been achieved in the way of securing any farm equipment that might have been usefully employed to create ploughed breaks. In addition, nothing was done to obtain the attendance of further appliances at the fireground from other Groups. Indeed, as it transpired some appliances were actually sent away on the Tuesday morning. I am here talking about the appliances that had come from the Tumby Bay Group. It was at their request. Ms Whillas suggested that even with the identified problem areas and the risk that was being posed, she was confident with a number of resources and appliances that they had on the ground that they would still be able to manage<sup>788</sup>. It is difficult to see how such a confident conclusion could have been reached.

13.107. The Tuesday morning Incident Management Team

The third Incident Management Team shift commenced at about 7am.

13.108. The Incident Management Team for the Tuesday morning shift consisted of Mr Chambers as Incident Controller, Mr Maddern as Planning Officer, Mr Lock as Logistics Officer and Mr Shepperd as Operations Officer. That had been arranged on the Monday night.

13.109. There was also a change of shift in crews. The Wangary appliance did not have a crew other than Mr Nettle who, in any event remained at the Incident Control Centre.

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<sup>787</sup> Exhibit C233

<sup>788</sup> Transcript, page 10992

The Tumby Bay Group of appliances was allowed to go, although they returned later in the morning after the breakaways occurred.

- 13.110. The Incident Control Centre was moved from the Wanilla Hall to the Wangary Sports Complex. This move took place at about 8:45am. This move appears to have been a significant distraction. The Wangary appliance was used to move equipment.
- 13.111. What took place both at Wanilla and then Wangary as far as the activities of the Incident Management Team is concerned suggests very much that there was a belief that the fire was controlled to the point where the possibility of breakaways was the least of anyone's concern. The activities of the Incident Management Team to my mind had an air of finality about them. Members of the team for instance were not engaged in what one would normally associate with the duties of AIIMS functionaries. Mr Shepperd, the Operations Officer was for the most part concerned with checking in fresh firefighting crews and filling in what are known as T-Cards in relation to those crews. Mr Shepperd had no information upon which he could carry out the duties of an Operations Officer, and in particular had no information in relation to vulnerable areas. He was able to impart very little operational information to appliance captains.
- 13.112. Mr Lock, the Logistics Officer, was asked by Ms Post to gather details about water tankers for the purpose of calculating their expenses.
- 13.113. Certainly, there is no activity that is suggestive of a belief on anyone's part that breakouts, from the swamp at least, were expected, notwithstanding the weather forecast. Whatever Ms Whillas had believed, in this regard, it certainly did not translate into action.
- 13.114. There was a briefing during the handover from the overnight shift to the morning shift. Ms Whillas spoke to Messrs Chambers, Maddern and Shepperd. According to those gentlemen there was nothing said that gave them any cause for concern. People seemed to have been impressed by claims that crews had been working hard overnight. No doubt this was correct, but that does not mean to say that the fire was controlled or that problematic areas of the fireground had all been attended to. I accept that during the course of the night much hard and dirty work had been bestowed upon the sugar gums and also in the vicinity of the hundred line, as well as

in the vicinity of the Cabot backburn. Other activity had taken place in the northern part of the fireground.

13.115. Ms Whillas who had at 5:40am advised Lincoln Base of the two areas of concern in the light of the weather forecast, said that there was a handover briefing that took place on the Tuesday morning that consisted of a detailed discussion involving the efforts of crews overnight, the forecasted weather, the areas of concern and the plan for the next shift. The plan included the incoming crews patrolling and monitoring the fire edge with a concentrated effort on the southern side<sup>789</sup>. This description of the briefing is set out in Ms Whillas' most recent statement and it does not purport to contain any description of conversation that would indicate a likelihood of, or expectation of, breakaways in the swamp. In her evidence, Ms Whillas said at the briefing that Mr Branson indicated that the stretch of swamp from the north-western corner of Area A down to Duck Lake Road was the area of greatest concern for breaking of containment lines. Ms Whillas suggested that the weather forecast that she had received overnight would have been discussed and the potential and significant increase in risk with the severity of those forecasts would also have been mentioned. She was asked the following question by Mr Boucaut of Counsel Assisting:

- Q. In respect of the risk did you tell them that your view was that a breakaway was highly likely.
- A. We were all in agreeance with that theory, yes. That's not an uncommon theory with experienced firefighters, when you consider that we had a large fire area that was at times burning within the perimeter, within the containment lines, coupled with the forecasted bad weather.
- Q. So, in other words, it's almost an unwritten understanding.
- A. As experienced firefighters, yes.
- Q. Or an unspoken understanding I should say, that you're on the same wavelength.
- A. It was but it was certainly something that was included in the plan and that's why we tasked greater appliances on that southern aspect.<sup>790</sup>

Ms Whillas does not claim to have said at the briefing in terms that in her view a breakaway was highly likely. Rather, she says that she would have expressed it in terms of the greatest risk of a breakaway. She said that she did not believe that she needed to be so specific because of the level of experience of the people with whom

<sup>789</sup> Exhibit C225b, paragraph 118

<sup>790</sup> Transcript, pages 9857 and 9858

she was talking. She repeated that there was an understanding that they were '*all in agreeance of that theory or that expectation*'<sup>791</sup>. Ms Whillas agreed with the proposition that the degree of likelihood or expectation of a breakaway was something that should have been obvious to an experienced person.

- 13.116. As far as Mr Maddern was concerned, there could have been no such tacit understanding because he signed off on the fact that the fire was controlled. That Mr Maddern signed a document to that effect is clear. The document in question is in the nature of a SitRep in the name of Robert Maddern, Planning Officer. It is timed at 7:45am. The document states:

**'Situation Summary** (Describe current and predicted incident behaviour and emergency response):

'CONTROLLED (sic) CREWS PATROLLING & BLACKING OUT  
IMT SHIFTING TO WANGARY

**Incident Objective** (Planned events or performance against planned, difficulties, revisions required):

FIRE STAYS WITHIN CONTROL LINES'<sup>792</sup>

The strategies/tactics to be utilised according to the document for the Lady Franklyn Road, North-West, Scrubby Swamp and Yorkies Crossing Sectors is blacking out and patrolling.

- 13.117. The definition of 'controlled' contains as its elements the understanding that the complete perimeter of a fire is secured and no breakaway is expected.
- 13.118. When Mr Maddern originally gave evidence to the Inquest, he suggested that the use of the word 'controlled' was his mistake because there had been no discussion about the status of the fire. He agreed that whoever was interpreting the document with a CFS background would assume that there was almost no risk of a breakout. When asked as to whether that in fact had been his state of mind on the Tuesday morning Mr Maddern said that he did not believe it was his state of mind but that he had used the word incorrectly<sup>793</sup>. Mr Maddern also said that in answer to a question from myself that he believed that what he was trying to convey was that containment was still very much an issue at that stage and the possibility of breakaway might still nevertheless

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<sup>791</sup> Transcript, page 9858

<sup>792</sup> Exhibit C222n

<sup>793</sup> Transcript, page 9229

exist. At that stage Mr Maddern said that he did not believe that there was a difference between a containment line and a control line. Mr Maddern said that Ms Whillas had said that essentially there were control lines around the entire fire, albeit that there were a couple of areas that needed attention. However, Mr Maddern agreed that if no blacking out had taken place in the swamp to the west of Area A, and no other work had been undertaken in Area A itself, a significant proportion of the fire perimeter was not surrounded by a control line. If that were the case then the statement that the fire was controlled and that the incident objective was to ensure that the fire stayed within control lines would be based on a false premise.

13.119. Mr Maddern's evidence on that occasion very much suggested that he did not have the required state of mind to enable him to declare the fire controlled. However, when Ms Post gave evidence she told me that when Mr Maddern had signed off on the fire as being 'controlled' in Exhibit C222n, she had drawn his attention to the definition of controlled and had actually shown that definition to him. In other words, according to Ms Post, Mr Maddern's use of the word controlled was an informed one.

13.120. Mr Maddern was recalled to the witness box and when confronted with Ms Post's recollections, he told me that since giving his previous evidence, he had reconsidered what he had meant by the use of the word 'controlled' in Exhibit C222n. He now believed that he had used the word deliberately in accordance with the definition. When asked by Mr Boucaut why he had said on the previous occasion that the use of the word 'controlled' was a mistake, he said:

'Well, I believe that probably at that point of time the situation was more leaning towards the contained definition than the controlled and it really puzzled me why I would have put that down and that's why I went back and really pondered over the use of the word 'controlled' that I put in there and, as I said, when I read Ms Post's evidence it sort of rang bells with me that I can remember definitely that conversation, that she handed me the sheet with those definitions on and said 'Okay, which one is it?'.<sup>794</sup>

As to the information that enabled him to assert at 7:45am on the Tuesday that the fire was controlled, he said that he believed that the necessary information for the assertion came from Ms Whillas as part of her briefing and from Mr Branson from his briefing. He said that the information was that there was virtually no fire activity on the perimeter of the fire and that there were only two trouble spots that needed to be dealt with. Leaving aside the niceties of these definitions, one must examine what Mr

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<sup>794</sup> Transcript, pages 14795 and 14796



Maddern said he actually believed about the status of this fire. He seems to have gone from a position where he did not have the state of mind on the Tuesday morning that there was almost no risk of a breakout to a position where he deliberately used the word ‘controlled’, the implication that no breakouts were in fact expected.

- 13.121. On the Tuesday morning, Mr Maddern did not have first hand knowledge of what facts existed that would have enabled a declaration that the fire was ‘controlled’ to have been validly made. Essentially, he only had Ms Whillas’ and Mr Branson’s word for it. The fact of the matter was that the fire was not controlled. There was no material available on the Tuesday morning from which it could be concluded that there were no hot spots in the swamp. In addition, no containment work had been conducted in Area A and incomplete containment work had been conducted in Area C insofar as there was still fire activity there. In addition, the predicted strong winds from the north-east would inevitably mean that hot spots within the swamp would be fanned and that fire would come out of the swamp into the stubble paddocks.
- 13.122. The declaration of ‘controlled’ occurred at 7:45am. That was approximately 2 hours before the first breakaway in Area C.
- 13.123. The declaration of the fire being controlled, while perhaps not having immediate significance in terms of further action that was to be taken to strengthen containment work in Areas A and C, was nevertheless in keeping with the misplaced level of confidence about the fire and its potential on the Tuesday morning. That inordinate degree of confidence was further reflected in the fact that the District Council of Lower Eyre Peninsula plant operators, led by Mr Hall, were told that their services would not be required, notwithstanding the fact that they had made the effort to come into the Wanilla Hall early in the piece and notwithstanding the fact that their equipment had been left on the fireground and was available for virtual immediate use. The operators in question, including Mr Hall, gave evidence before me and they displayed a genuine level of astonishment that their services were not required on the Tuesday morning.
- 13.124. There is also the question of lack of appliances in Areas A and C on the Tuesday morning, not because of any perceived danger to appliances, but simply a reflection of the degree of calm and lack of urgency that had infiltrated the activities of the

Incident Management Team. There was still no real effort to ensure that Sector Commanders were aware of their responsibilities concerning Areas A and C.

- 13.125. Mr Shepperd who was the Operations Officer, told me that he believed that the attitude towards the plant operators was wholly inappropriate because of the work that they could have been doing, for example in Area A. Mr Shepperd was silent at the time of his disagreement with that attitude. He said he did not have time to deal with it that morning.
- 13.126. Mr Nettle was never informed that he was Sector Commander and in any case was not in attendance at the fireground at the time of the first breakaway in his sector. There were no appliances in Area A and limited appliances in Area C.
- 13.127. The breakaways that then occurred on the Tuesday morning commencing at about 9:50am in Area C, and then the breakaway in Area A, have to be examined against the background that I have just described. There was simply nothing in place to stop those breakaways from occurring at the time they occurred and everything from that point onwards was reactive to the situation rather than being preventative.

**14. The involvement of Region 6 on Monday, 10 January and Tuesday, 11 January 2005**

- 14.1. On Monday, 10 January 2005 Mr Neil Ellis, who was the Region 6 Regional Commander, was in Adelaide attending a meeting. He was not to return to the Lower Eyre Peninsula until well into the following day and even then was at first unable to reach Port Lincoln as his aircraft had to be diverted because of the fire.
- 14.2. Mr Simon Vogel was the Regional Duty Officer on Monday, 10 January 2005 and on Tuesday, 11 January 2005. Mr Vogel was a paid full-time employee of the CFS. He was the Regional Prevention Officer for that Region. Mr Vogel had originally joined the CFS in November 1982 as a volunteer and had served in operational roles of Lieutenant and Captain of a CFS Brigade. He had been a full-time paid staff member of the CFS since January 2001.
- 14.3. Mr Vogel had completed a range of CFS courses including a CFS Officer Development Program as a Level 3 Regional Officer. As well, he had participated in an AIIMS course and refresher courses.
- 14.4. Mr Vogel was not local to the Lower Eyre Peninsula and had not fought any fires in the Wangary area.
- 14.5. Ms Sonia Post was also a full-time paid employee of the CFS. She was also on duty on Monday, 10 January and Tuesday, 11 January 2005. Ms Post had been employed by the CFS as a Regional Officer, Level 2, since September 2001. She was in January 2005 the Regional Training Officer for Region 6. Ms Post had also been a volunteer member of the CFS since 1992 and in fact was a member of the Coffin Bay Brigade in January 2005. Ms Post had undertaken various CFS training courses including AIIMS, Sector Commander and Strike Team Leader. She had also undertaken various courses in relation to the training of others. Ms Post also fulfilled the duties of the Regional Duty Officer from time to time.
- 14.6. On Monday, 10 January and Tuesday, 11 January 2005 other CFS staff were working at Region 6 Headquarters. Region 6 Headquarters was in Jabomie House in Port Lincoln.

- 14.7. Also situated in Port Lincoln was the Lincoln CFS Base. This was situated in a different location from Region 6 Headquarters. Lincoln Base served as the base for the Port Lincoln CFS Brigade and as well had communication capabilities including the GRN radio.
- 14.8. Mr Vogel was essentially the most senior CFS Officer or member present on the Lower Eyre Peninsula on the Monday and the Tuesday, until Mr Ellis returned.
- 14.9. Region 6 Headquarters on the Monday was also the Regional Coordination Centre for Region 6. This does not necessarily imply the existence of an incident within the Region, but is devised in a sense as a precautionary measure against the possibility of such incidents, particularly on days of heightened bushfire risk. In addition, a Regional Incident Management Team was also in existence for much the same reason on the Monday. Mr Vogel was the Incident Controller in relation to that team. Ms Post was designated as the Planning Officer and Operations Officer. Again, this does not imply the existence of any fire incident within the Region, but is simply in existence because of the adverse weather conditions. As it happened there was in existence on Monday, 10 January 2005 fire bans for areas within Region 6, but not for the Lower Eyre Peninsula area.
- 14.10. Mr Vogel became aware of the Wangary fire after Mr Steven Nettle had telephoned advising of the same. Mr Vogel compiled an initial Incident Report at 3:21pm. Mr Vogel despatched 6 appliances.
- 14.11. As seen earlier, throughout the course of the afternoon Mr Vogel had been experiencing considerable difficulty in obtaining information from the fireground and made efforts in that regard to telephone Mr Branson who was the Operations Officer in respect of the incident. At about 4:30pm, Mr Vogel radioed Mr Branson and obtained information that the fire had come out of scrub that it had burnt into and was now spotting into canola paddocks. The critical issue was said to be the lack of water but that water tankers had been organised. The information that Mr Vogel was given was that the fire was not moving fast and that no communities were under threat. At that stage he was advised that the fire was 40 hectares in size and that by then 9 CFS appliances were fighting the fire.
- 14.12. The size of 40 hectares was the information that was imparted at a teleconference that was held in Adelaide that afternoon concerning the weather forecast. The information

that Mr Vogel received from Mr Branson was incorporated into a SitRep that was faxed to State Headquarters. The information that the fire was 40 hectares in size was essentially to remain the information that State Headquarters were to act upon for the rest of the Monday. Although the fireground ultimately reached a size of 1800 hectares that day, and although that information was forwarded to State Headquarters in due course, as it transpired no person was to act upon that important piece of information until the following morning.

- 14.13. Mr Vogel says in his witness statement that during the course of the Monday afternoon his attention was drawn to the available weather forecasts for the Tuesday and Mr Vogel spent some time issuing total fire ban warnings on the basis of those forecasts. Specifically, Mr Vogel observed that the predicted FDI for Coles Point was 63 which is extreme and attracts a total fire ban.
- 14.14. Mr Vogel continued to experience difficulty in receiving information from the fireground. Lincoln Base was also experiencing the same difficulty.
- 14.15. However, at 5:53pm Mr Vogel again telephoned the CFS Command vehicle at the fireground and received a verbal SitRep from Mr Chambers. Mr Chambers advised that the fire was not contained and that no communities were under threat. The fire was described as being 3 kilometres long and half a kilometre wide which gave an area of about 150 hectares. Mr Chambers advised that crews were concentrating on the northern flank in anticipation of a southerly wind shift. The wind was described as still hot. 23 appliances were said by then to be involved. This represented an increase of the presence of another 14 appliances on the fireground. Lack of water was still an issue. Mr Vogel compiled another SitRep timed at 6pm on 10 January and this also was duly faxed to State Headquarters. This SitRep indicated that in the 90 minutes since 4:30pm the size of the fireground had increased by over 100 hectares.
- 14.16. Mr Vogel in his statement states that at one point in a communication that he had with Mr Branson, the Operations Officer, the latter had said that they were busy and that he did not appreciate Mr Vogel's calls. Mr Vogel said that he was expecting to obtain grid references as to the approximate boundaries of the fire so that he could gain an understanding of its size. Mr Chambers had simply given him approximate dimensions at that point.

14.17. However, at about 6:40pm information was received by Ms Post that suggested that at that stage the fire had possibly reached a grid location that was interpreted on a map as being near the premises of George Hull to the south-east of Barretts Lake. It can be seen from Exhibit C176b that the premises of Mr George Hull is some distance north of Warunda Road. Mr Vogel refers to this information in his first witness statement that was taken on 2, 3 and 15 March 2005. Essentially the information consisted of a grid reference that could not possibly have been correct, but which made sense if the digits were reversed. It was the reversed digits that were plotted by Ms Post and the coordinates revealed the location I have just described. In Mr Vogel's statement he says this:

'About 1840 Sonia Post produced another map for the fireground which recorded a fire front position as reported to the Cummins Base on the fire phone. It is likely the coordinates were provided in the reverse order. This information indicated a fire considerably bigger than that reported to me by the Incident Controller.'<sup>795</sup>

It will be remembered that the last information that Mr Vogel had from the Incident Controller was that the fire was approximately 5 kilometres long and that one house might be in danger. That information had been imparted to him at about 6:35pm, about 5 minutes before Ms Post plotted the coordinates given to her. The house that was said to be in danger is conceivably Mr George Hull's house. In any event, Mr Vogel's witness statement very much suggests that he was aware at least of the possibility that the fire was considerably larger than what had been reported. In his evidence, Mr Vogel did not seem as certain as to whether or not he had been aware of that plotting exercise at the time it had occurred on 10 January 2005. However, there is little doubt in my mind that Mr Vogel did have an appreciation at the time of where this grid reference was meant to be and what it signified. How else would Mr Vogel have understood that the fire was considerably bigger than that which had been reported to him by the Incident Controller? The distance from the point of origin to that grid reference was longer than 5 kilometres. In my view, Mr Vogel was gaining an idea of the dimensions of this fireground as the fire progressed. That understanding may not have been entirely complete, but it is clear that he must have been gaining the impression that the fire was increasing in size as time progressed.

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<sup>795</sup> Exhibit C241, page 10

- 14.18. Mr Vogel became aware of the 12 hour forecast that was timed at 6:45pm. This did not in any sense temper his understanding of the severity of the forecast as he already understood it to be.
- 14.19. Mr Vogel spoke on the phone with the Regional Commander, Mr Neil Ellis, who was still in Adelaide. Mr Vogel had decided to send Ms Post forward to the incident in an attempt to rectify the information flow problem and to assist in setting up an incident management infrastructure. Mr Ellis suggested that Mr Vogel could send Mr Maddern forward. Mr Maddern was flying back from Adelaide that afternoon and would have the second CFS Command vehicle at his disposal.
- 14.20. Mr Maddern subsequently attended at the Region 6 office after he had arrived back from Adelaide. Mr Vogel asked Mr Maddern to attend at the fireground. Mr Vogel explained the difficulties to Mr Maddern in regards to information being received from the field and he mentioned to Mr Maddern the need to set up a proper incident management structure because of the need to manage the fire overnight and on the following day because of Tuesday's forecast. In the event, both Ms Post and Mr Maddern were sent forward. Mr Maddern made his way to Christopher Hull's hayshed where it was announced that the Incident Control Centre would be the Wanilla Hall. Ms Post had gone to the Wanilla Hall in order to set that up.
- 14.21. The decision to send Mr Maddern to the fireground, and the manner in which he was inserted into what was proving to be a difficult situation, has been heavily criticised. I do not need to go into this in any great detail. It seems to me that there was nothing inherently inappropriate about sending an experienced man of Mr Maddern's calibre to bring some order into what was perceived to be a relatively chaotic situation, with no information or insufficient information coming from the fireground. It is said that Mr Vogel should have anticipated that Mr Maddern's introduction into these events would cause difficulty. I do not accept that submission in its entirety. In my view Mr Maddern's experience and expertise should have been a valuable asset to this Incident Management Team. The difficulty was of course that Mr Maddern was now a junior CFS officer in rank to Mr Chambers. Whether in the event the matter was handled as delicately as it should have been is another issue. However, it seems to me that those present and involved in the incident management structure, including Mr Chambers, should have been mature enough to deal with the situation. In the event however, as seen, there was confusion generally about people's roles at Wanilla and the better

option probably would have been to have installed Mr Maddern as the Incident Controller or Planning Officer for the duration of his time at Wanilla.

- 14.22. Mr Maddern it seems before going out to the fireground, had approached Ms Whillas who was at the Lincoln Base to become the Incident Controller for the next shift. Ultimately Ms Whillas attended at Wanilla Hall and assumed that role, taking over from Mr Chambers who by then had left.
- 14.23. From the time that Mr Vogel deployed Mr Maddern and Ms Post, Mr Vogel did not have any further communication with any Incident Controller. Nor did Mr Vogel have any further communication with Mr Maddern. It appears that Mr Maddern acted unilaterally and without Mr Vogel's knowledge in initiating Ms Whillas' appointment as the overnight Incident Controller, although Mr Vogel said he knew from a source that he could not recall that Ms Whillas was going to act in that capacity.
- 14.24. As to Mr Vogel's perception of the role of Mr Maddern at Wanilla Hall, Mr Vogel told me in evidence that he did not want Mr Maddern to be part of the Incident Management Team, but had sent him out there to assume a '*prompting*' role<sup>796</sup> and to ensure that the Incident Management Team was functioning<sup>797</sup>. Mr Vogel told me that at one point he received information from Lincoln Base that Mr Maddern was the Planning Officer. That explained why he ascribed that role to Mr Maddern in the Structural Chart<sup>798</sup>. It is unclear how any belief was formed about Mr Maddern's role being that of the Planning Officer. What perceptions there were about Mr Maddern at Wanilla Hall included the belief that he was in fact the Incident Controller on the part of some. Mr Maddern of course denied that he was either the Incident Controller or the Planning Officer but was a scribe. Mr Vogel told me that he was annoyed to find out that Mr Maddern was acting as the Planning Officer as there had been a tacit understanding that he would not be part of an Incident Management Team. Mr Vogel thought that Mr Maddern would get bogged down with paperwork if he was a Planning Officer. Either way, Mr Vogel did not claim to have had any further communication with Mr Maddern that night about Mr Maddern's actual role or what was actually taking place at Wanilla Hall in terms of the proper functioning of the Incident Management Team.

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<sup>796</sup> Transcript, page 12879

<sup>797</sup> Transcript, page 13079

<sup>798</sup> Exhibit C222k



14.25. As to Ms Post's role in the eyes of Mr Vogel, he told me that he wanted Ms Post also to stay independent from the Incident Management Team. She was there solely for the Region and he did not want Ms Post to fall under the direction of the Incident Controller. Ms Post for her part told me that there was concern that AIIMS was not working properly out at the fireground. She was aware that Mr Maddern was to be sent forward and she acted upon Mr Vogel's instructions to go to Wanilla Hall to set up the facility and, in accordance with what Mr Vogel also told me, not to get involved with the Incident Management Team. She described her role at Wanilla on Monday night as:

'... support mentoring of the officers and providing support, as in facilities and setting up equipment, for the station area.'<sup>799</sup>

14.26. She rejected the suggestion of Mr Boucaut of counsel that one of the reasons she attended Wanilla Hall was because she had felt that there should have been a higher level of control at the incident.

14.27. Mr Vogel received further information via Lincoln Base that suggested that the North-East Sector of the fire was being contained at grid reference 541864. The forward control point which was Christopher Hull's hayshed was said to be situated at grid reference 490820. The north flank of the fire was said to be still burning but starting to burn into fire breaks at grid reference 515885. Further information was to the effect that the CFS command vehicle of which Mr Chambers had been in possession was doing a circuit of the fireground and that there was confidence of gaining detailed information shortly. That was clearly a reference to Mr Lock's and Mr Branson's circumnavigation.

14.28. Mr Vogel sent a further SitRep timed at 7:40pm to State Headquarters. The fax stamp suggests that it was sent at 7:44pm. The SitRep contains information that I have just described and as well, informed State Headquarters that information flow from the fireground was still a problem. That problem was being rectified with the additional CFS command vehicle being sent to the fire. That is a clear reference to Mr Maddern having been sent to the fireground with the second CFS command vehicle. It will be observed that the information that Mr Vogel received and passed on to State Headquarters made reference to the three sets of coordinates. This added to the known coordinates for the approximate point of origin. Those coordinates had been

referred to in Mr Vogel's SitRep to State Headquarters timed at 4:20pm. Those coordinates approximated to the location of the junction of Lady Franklyn Road and Duck Lake Road. When one plots those coordinates with the coordinates referred to in the 7:40pm SitRep, namely the coordinates for the North-East Sector being 541864, and the coordinates for the location where the north flank was burning into firebreaks, namely 515885, a triangular area can be depicted. That depiction became Exhibit C228b. The distance from the Lady Franklyn Road location to coordinates 541864 was a distance of 8.2 kilometres. From Lady Franklyn Road to coordinates 515885 was 7.5 kilometres. The distance between coordinates 515885 and 541864 is 3.2 kilometres. The coordinates that Mr Vogel then had in his possession, if they had been plotted at the time, would have suggested that the fireground was even larger than had been understood. I do not understand Mr Vogel to claim that he plotted those coordinates or to have gained an appreciation at that time of the dimensions of the fireground.

- 14.29. Mr Vogel states that at 8:55pm Lincoln Base advised him that the Group Officer/Incident Controller had stated that the fire was contained. This communication of course reflects the GRN transmission between Mr Chambers and Lincoln Base of 8:54pm. This SitRep to State Headquarters was timed at 8:57pm and was faxed at 8:59pm. On receiving this information it will be recalled that Mr Vogel had two of his staff witness the receipt of this information and wrote in capitals on another SitRep to be faxed to State Headquarters the words 'FIRE CONTAINED'. The other piece of information that Mr Vogel included in this SitRep was the claim that the perimeter was still being plotted to establish its size and to enable mapping. There is no evidence that Mr Vogel plotted the fire perimeter to establish its size.
- 14.30. Mr Vogel appears at one point in time to have been keen to obtain grid references to establish the location and size of the fire. Mr Vogel said that in both in his witness statement and in evidence<sup>800</sup>. However, when given coordinates that are referred to in the 7:40pm SitRep to State Headquarters which he had received from Lincoln Base, he does not seem to have bothered to use that information to ascertain the general location and approximate size of the fire. In the event, if the grid references that had been made available to Region 6 Headquarters were plotted, as they were during the

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<sup>799</sup> Transcript, page 12152

<sup>800</sup> Transcript, page 12827

course of this Inquest, Mr Vogel would have seen a fireground that approximated to the triangle depicted on Exhibit C228b below.



It will be remembered that this information was available at approximately 7:30pm. This depiction is not unlike the eventual overnight fireground. It will also be remembered that Messrs Lock and Branson had finished their truncated reconnaissance of the fireground by approximately 9pm. Mr Lock had prepared a rough map of the fireground and had commenced preparing a better map once at Wanilla Hall.

- 14.31. Against that background it was not until 10:33pm that Mr Vogel was informed for the first time that the size of the fire was 1800 hectares. Mr Vogel in his statement says:

'This was the first time I realised that we had a significant size fire for settled farming land.'<sup>801</sup>

The information that the fire size was 1800 hectares was received in a phone call that Mr Vogel received from Dianne Way who was still at Wanilla Hall. Dianne Way was an employee of the CFS who had also been sent to Wanilla.

<sup>801</sup> Exhibit C241, page 13

- 14.32. Mr Vogel told me in evidence that he was surprised to learn that the fireground was 1800 hectares because with the information they had, they had not envisaged the fire being so big<sup>802</sup>. Mr Vogel told me that the information about the size of the fire being 1800 hectares was the one big piece of information that they had needed. He told me that having received that information he was concerned and worried<sup>803</sup>. Ms Way returned to the Region 6 office with a computerised plotting of the fireground that was then downloaded and sent to State Headquarters.
- 14.33. Ms Post did not return to Region 6 Headquarters that night.
- 14.34. Mr Maddern did not return to Region 6 Headquarters that night.
- 14.35. At 11pm, Mr Vogel faxed a further SitRep to State Headquarters advising that the fire size was 1800 hectares and that a plot of the fire was being downloaded. The SitRep also advised State Headquarters that the operations were now concentrating on mopping up and that crews would be working through the night with 23 appliances.
- 14.36. Mr Vogel communicated with a Ms Kathy Burbidge at State Headquarters. Ms Burbidge was an Operations Centre Officer on duty that night. Mr Vogel sent a copy of the downloaded fireground plotting at 11:35pm. A telephone conversation with Ms Burbidge conducted at 11:12pm was recorded and transcribed. It is part of Exhibit C2221. Ms Burbidge was the Operations Centre Officer for the 8pm to 8am shift at CFS State Headquarters. The transcript of this telephone conversation (that she had with a person whose identity is not relevant) suggests that staff on duty at State Headquarters that evening, who in the main consisted of Operations Centre Officers, had been somewhat taken aback by the information that ultimately came to them that revealed that the fireground was 1800 hectares. Reference is also made to what had been a very poor flow of information from the fireground and in particular to Mr Branson's reluctance to be forthcoming with information to Region 6. Ms Burbidge was to create and transmit what was known as a Significant Incident page (SigInc) to a number of paid staff including the Deputy State Coordinator and Mr Euan Ferguson, the Chief Officer. I will return to the Significant Incident page in due course. Suffice to say that this was long overdue because the criteria for a Significant Incident page had been met some hours prior to this. Even though all of Mr Vogel's earlier

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<sup>802</sup> Transcript, page 12889

SitRep's had been sent and received at State Headquarters, they had for the most part been essentially ignored. No-one at State Headquarters drew them to the attention of anyone of seniority. In addition, no-one plotted the grid references. The SitRep that finally said the fire was 1800 hectares in size appears to have been treated as a revelation, but even then no-one at State Headquarters was to act upon that information until the following morning.

14.37. Mr Vogel created a further SitRep to State Headquarters at 12:20am. This was faxed at 12:25am. It advised State Headquarters that the night shift had commenced and that a crew changeover would occur at 0700 hours for the day shift. It also advised that 16 appliances were working during the night. This had represented a reduction in the number of appliances by 7 since the previous SitRep. The SitRep advised that Ms Whillas was the Incident Controller. It also advised that the next SitRep would be at 0800 hours.

14.38. Mr Vogel in his witness statement said this in relation to the information that the fire size was 1800 hectares:

I understood we were going to have severe fire weather the next day. I was satisfied that we had sufficient mopping up resources with 23 appliances planned for overnight operations. In addition, arrangements were in place for relief crews to be available in the morning. Having 23 appliances available overnight is a considerable commitment to mopping up operations. In addition, an IMT had been set-up to manage overnight operations which is unusual and an indicator of a commitment to ensure the fire ground was secure before the morning.<sup>804</sup>

Of course, that number of appliances was reduced by the time Mr Vogel completed his duties at 1am on the Tuesday morning.

14.39. Armed with the knowledge that the fire was 1800 hectares and that there were appliances on the fireground working during the night, Mr Vogel said that he performed a risk assessment. He examined the map of the fire perimeters and considered the pending weather conditions in the context of the resources that were at the fireground and the task that they were going to do. Mr Vogel identified that the southern perimeter of the fireground was in a swamp area. When asked why Mr

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<sup>803</sup> Transcript, page 12893

<sup>804</sup> Exhibit C241, page 13

Vogel would conduct a risk assessment and why he would undertake such an exercise he said:

'In a reasonable context, these people have an incident which they're running, and with the information they give us, that, in a general sense, what they're doing is appropriate.'

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- 14.40. Mr Vogel reported in a SitRep to State Headquarters that the operations at the fireground were concentrating on mopping up with crews working through the night. He also knew of a number of appliances that had varied. He also knew of the fact that the fire had been said to have been contained. He also knew of the weather.
- 14.41. Mr Vogel does not appear to have queried any of the information that was imparted to him during the course of the evening, which in fact was received for the most part second hand through Lincoln Base. He did not speak to any of the members of the Incident Management Team for the first shift, nor the members of the Incident Management Team for the second shift. He knew that Ms Whillas was the Incident Controller for the second shift and did not speak to her. That Mr Vogel inferred that mopping up with the use of appliances was the Incident Action Plan is to my mind clear. He did not query that as a legitimate strategy. Quite clearly he could have if he had wanted to. There was nothing preventing Mr Vogel from speaking to the Incident Controllers, although of course there was the hiatus between Mr Chambers and Ms Whillas that has already been referred to. Be that as it may, Mr Vogel could clearly have spoken to any number of people at the Wanilla Hall, including Ms Post, about the legitimacy of strategies and of course their feasibility. Mr Vogel clearly took it at face value that the use of 23 appliances, and then 16 appliances, to mop up would be a sufficient number of appliances and that mopping up indeed was the proper strategy of choice. Mr Vogel also took it at face value that the fire was contained. What thought Mr Vogel gave to the overnight strategy consisted in the main of considering the map and the weather conditions and the number of appliances. He also believed that the southern flank would have been the most vulnerable because of the predicted weather, but of course that was hardly a difficult deduction to make. Mr Boucaut asked Mr Vogel:

'Q. So did you understand how they intended to mop up in the sugar gums at this fire.

A. I can't recall. This is after the fact, but I believe they were progressing a certain distance in from the perimeter, you know, on that fire ground, blacking out what they could see.

Q. In sugar gums.

A. That I'm not sure of.

Q. In inaccessible swamp.

A. Again, I wasn't on the fire ground, I can't see that. That's the people - we are one removed from the fire ground. The people on the ground are the ones who assess that.

Q. Is all you were told in terms of a strategic plan was that people were going to mop up.

A. I believe that's the case.'<sup>806</sup>

Mr Vogel admitted that he did not query this strategy in any way at all or attempt to validate it in any way at all. He said:

'I took their word for it that they would be mopping up.'<sup>807</sup>

Mr Vogel appears to have had an attitude whereby the 'people on the ground' would make the necessary assessments as to the appropriateness and feasibility of the work that was to be undertaken overnight.

- 14.42. Ms Post had been at Wanilla Hall from 8pm to 11:50pm. Ms Post appeared to have positively avoided the receipt of any information that might have enabled her to form a view about the legitimacy of what the Incident Management Teams were contemplating or doing. Ms Post told me that Mr Vogel did not give her specific instructions to check on how Mr Chambers and the Incident Management Team were performing, but acknowledged that it was a normal part of their job to monitor and if she thought he was not doing well, she would certainly have let Mr Vogel know. As to how she would know if someone in the position of Incident Controller was not performing well, she told me that one could tell by looking at the person and talking to them and examining their temperament and mood. However, she told me that at 9:29pm after Mr Maddern and Mr Chambers had arrived at the hall, she spoke to Mr Chambers about the next day's weather forecast to ensure that he was fully aware of the expected high fire danger. She explained to him that an Incident Action Plan was required for both the night shift and the following day. According to her statement she told Mr Chambers that everything that could possibly be done that night to secure the fireground needed to be implemented and completed by the morning and

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<sup>806</sup> Transcript, page 12900

<sup>807</sup> Transcript, page 12900

emphasised the need to ensure that the fireground was safe by the morning<sup>808</sup>. I have already made the point that this instruction seems somewhat incompatible with her telling Mr Chambers he should go home half an hour later at 10pm. Ms Post testified that she did not tell Mr Chambers to go at 10pm, but conceded it was possible that Mr Chambers did leave at some stage. She does not have any recollection about telling Mr Chambers that he was going to be Incident Controller the following morning. Ms Post suggested that she was not aware that Mr Chambers had left at a time before Ms Whillas arrived to undertake responsibilities as Incident Controller for the overnight shift. Nor does Ms Post have any recollection of Mr Chambers saying anything to her that he had not finished planning yet and still had things to do. She does not remember Mr Chambers saying anything about the plan for the Monday night being to black out to 30 metres. Ms Post in fact had no knowledge of the overnight Incident Action Plan and indeed was not even aware of the sectorisation of the fireground until the Tuesday morning. Ms Post and Mr Chambers are in conflict. I prefer the evidence of Ms Post. Mr Chambers was in many senses an unreliable witness. In making that assessment I have made allowances for the fact that Mr Chambers appears to have been somewhat traumatised by these events. That much seemed to be obvious to me when he gave evidence over a number of days in Adelaide. The fact remains, however, that Mr Chambers' claims in his original statement of 3 March 2005 that he had briefed Ms Whillas during the handover on the Monday night and had told her about the plan to black out the whole of the fireground as well as the contingency plan of backburning was demonstrated to be totally incorrect. His claim in the same statement that he was '*relieved*' by Ms Whillas at about 10pm was incorrect both in terms of the fact of him being '*relieved*' as such and in terms of the identity of the person who had relieved him. The truth of the matter was that he had not been relieved and certainly Ms Whillas only became Incident Controller after a significant hiatus. Anything that Mr Chambers therefore says about Ms Post and her telling him to leave seems to me to be unreliable unless it was corroborated by her which it is not. I reject Mr Chambers' evidence that Ms Post told him to go home at 10pm. I do not know the reason why Mr Chambers went home at 10pm at a time before Ms Whillas arrived. I also do not know why a situation could have been tolerated whereby a senior Group Officer became relieved of the important responsibility of briefing the incoming Incident Controller.

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<sup>808</sup> Exhibit C234



- 14.43. Ms Post said she formed the opinion that the Incident Management Team were performing adequate command, control, coordination and planning tasks on the Monday night, otherwise she would have asked more questions. Ms Post did not have any meaningful conversation with Mr Chambers about the plan for the evening and indeed does not remember being told anything about the Incident Action Plan for the night. Ms Post said that she also never knew that Ms Whillas was the overnight Incident Controller until quite a time after the fire<sup>809</sup>. She did not know who was going to be on the overnight Incident Management Team<sup>810</sup>. She felt comfortable on the Monday night with how the Incident Management Team was operating and believed that they would be able to manage and cope with the situation<sup>811</sup>. Ms Post said that the Incident Management Team appeared to be operating as a team<sup>812</sup>. When she left Wanilla Hall she did not believe the fire was actually running, but did not have an appreciation of the whole fire perimeter<sup>813</sup>. Ms Post did not take any part in a round table discussion that she says Messrs Maddern, Chambers, Lock and Branson had at Wanilla Hall and indeed cannot recall having any specific dealings with Mr Maddern after they all arrived at the hall. She was at one point in time organising T-Cards and making sure they were properly filled in.
- 14.44. As far as the personnel in and the adequacy of the Incident Management Teams was concerned, Ms Post did not have any information about the identities of the team members overnight<sup>814</sup>. She had an expectation that Mr Chambers as the Incident Controller would have appointed the next Incident Controller for the night shift. Thus it was that as far as Ms Post was concerned, she was not in a position to have scrutinised the appropriateness of the appointment of Ms Whillas as the Incident Controller nor did she have any understanding as to whether or not Mr Maddern was going to stay overnight. Ms Post left Wanilla Hall at approximately 11:50pm. She did not return to Region 6 Headquarters that night. There does not appear to have been any meaningful dialogue between Ms Post and Mr Vogel as to the performance of the Incident Management Team and the suitability of its members, nor is there any evidence of any significant discussion between them about the Incident Action Plan, risk assessment or of the potential for the incident to escalate. This is not surprising as Ms Post told me that she did not have the appropriate information to determine the

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<sup>809</sup> Transcript, page 12183

<sup>810</sup> Transcript, page 12163

<sup>811</sup> Transcript, page 12612

<sup>812</sup> Transcript, page 12155

<sup>813</sup> Transcript, page 12120

likelihood of the incident escalating<sup>815</sup>. However, she said that she did make some assessment. She said that she had been endeavouring to determine the resources that were there so that they could make an assessment as to the likelihood of extra resources being required. Ms Post somewhat flippantly said:

'I made an assessment with myself whether I needed to make an assessment and my assessment of my assessment was that I needed to make an assessment.'<sup>816</sup>

Her assessment was that she needed to make an assessment of the likelihood of escalation and in the event conceded that she really did not have enough information to make an assessment. As to the collection of appropriate information, Ms Post suggested that that does not happen at the snap of ones fingers. They were in the process of collecting that information. She suggested that what she was ensuring was that the information would be gathered upon which a proper assessment as to the likelihood of escalation could be made. When pressed as to what her personal assessment of the situation was, she said that they act on the assumption that there is potential for escalation. That of course does not specifically address the likelihood of an escalation in a particular instance. To this Ms Post said:

'A. There is a need to make that assessment as to whether that was going to happen, whether the likelihood of a fire was going to escalate and, to do that, you need information and we were in the process of making sure that information could be gathered for someone to do that.

Q. There's less than a dozen words in my question.

A. Yes.

Q. Did you make an assessment at any time on the Monday as to the likelihood of this fire escalating.

OBJECTION: MR LISTER OBJECTS

MR LISTER: The witness has answered question

MR MORCOMBE: I have asked it half a dozen times and I still haven't got an answer.'<sup>817</sup>

By way of a very circuitous route Ms Post finished by conceding that she personally did not have the information to determine the likelihood of an escalation of the incident, but would have expected that the Incident Management Team themselves would be acquiring that information and making an assessment for themselves. In other words, Ms Post did not make any assessment herself as to the likelihood of the

<sup>814</sup> Transcript, page 12163

<sup>815</sup> Transcript, page 12621

<sup>816</sup> Transcript, page 12622

<sup>817</sup> Transcript, page 12623

escalation of the incident and the reason for that is very plainly the fact that she put herself in a position where the necessary information for that to happen did not come her way. Ms Post was not the Regional Duty Officer and did not have the responsibilities in relation to this incident that Mr Vogel had. It is surprising, however, that Mr Vogel did not utilise Ms Post at least to satisfy himself that all was well at Wanilla. On the contrary, he told her in essence not to get involved.

- 14.45. Mr Sykes, counsel for Mr Vogel, provided me with a very helpful timeline analysis of Mr Vogel's activities both on the Monday night and the Tuesday morning. I very carefully considered that document as well as Mr Sykes' submissions. I have also very carefully considered Mr Vogel's evidence and Ms Post's evidence. It is very difficult to determine what, if anything, was done in the way of the fulfilment of the Region's fundamental responsibilities in relation to this incident on the Monday night. In this regard, I have referred to the various stipulations and requirements contained within the CFS operational documentation insofar as it would apply to the activities of the Region. Mr Vogel was on duty and present at Region 6 Headquarters until 1am on the Tuesday. Mr Vogel had already spent a full day's work that normally would have concluded at 5pm. Ms Post remained on duty until she left the Wanilla Hall at 11:49pm. She had also put in a full day's work during the course of the day. The dedication to their tasks is to be commended. However, it seems to me that the more senior of those two officers, Mr Vogel, had an incomplete understanding of his role as it applied to this an ongoing incident. He was obviously available, as was Ms Post, to organise resources if need be and that is what Mr Vogel did up to a point. However, from the time that Mr Maddern and Ms Post were sent forward there is little evidence to suggest that Mr Vogel was concerned with anything other than acting as a conduit for information between the fireground and State Headquarters. There was in my opinion, notwithstanding the presence of Ms Post at Wanilla Hall, an unsatisfactory interface between the volunteer members of the CFS concerned with the management of this incident and the paid regional staff. One of the knock on effects of this was that State Headquarters were kept in the dark about the serious of this incident. From the time that Mr Maddern was sent forward, it was almost as if the volunteer teams responsible for the management of this incident were operating as a separate entity from the paid staff of the CFS.

14.46. The following requirements were relevant to the responsibilities of the Region and the Regional Duty Officer:

- Ensure adequate resources are deployed to incidents, using ICS principles (e.g. strike teams, Incident Management, forward control points);<sup>818</sup>
- Ensure the responding incident management personnel have the skills, knowledge and competencies necessary to effectively and safely carry out their duties;<sup>819</sup>
- Ensure adequate strategic information is being received from the incident;<sup>820</sup>
- Review Incident Management Team (IMT) and appointment of Incident Controller and other functions;<sup>821</sup>
- Provide support in the establishment of incident objectives and strategies;<sup>822</sup>
- Consider appointing an Incident Controller and other functional positions to ensure effectiveness of IMT and incident outcomes;<sup>823</sup>
- Consider responding Regional IMTs to alleviate the workload and/or responsibilities of Group Officer/Group Incident Management Teams depending on incident complexity or public risk;<sup>824</sup>
- Ensure functions within the IMT are established and functioning in an efficient manner;<sup>825</sup>
- Provide command support to Incident Controllers through mentoring, validations of objectives, and prompting;<sup>826</sup>
- Record and plot all Regional Level information associated with the development and Management of the incident;<sup>827</sup>
- The Regional Duty Officer/Commander may initiate response of a Regional IMT when it is apparent that there is a lack of command, control, coordination and planning;<sup>828</sup>
- To establish a Regional IMT when the incident is of significant impact on the assets or the environment or has the potential to cause a catastrophic event;<sup>829</sup>

<sup>818</sup> Exhibit C205 - Section 1.4 of CFS Region 6 Regional Operations Management Plan (OMG) 2004-2005

<sup>819</sup> Exhibit C205 - Section 1.4 of CFS Region 6 Regional OMG 2004-2005 - This clearly relates to an incident

<sup>820</sup> Exhibit C205 - Section 1.5.2 of CFS Region 6 Regional OMG 2004-2005

<sup>821</sup> Exhibit C205 - Section 1.7.1 of CFS Region 6 Regional OMG 2004-2005

<sup>822</sup> Exhibit C205 - Section 1.7.1 of CFS Region 6 Regional OMG 2004-2005

<sup>823</sup> Exhibit C205 - Section 1.7.2 of CFS Region 6 Regional OMG 2004-2005

<sup>824</sup> Exhibit C205 - Section 1.7.2 of CFS Region 6 Regional OMG 2004-2005

<sup>825</sup> Exhibit C205 - Section 1.7.2 of CFS Region 6 Regional OMG 2004-2005

<sup>826</sup> Exhibit C205 - Section 1.8.2 of CFS Region 6 Regional OMG 2004-2005

- The Regional Operations Officer's duty to assess the risks and exposures relating to the incident and advise the Regional Coordinator;<sup>830</sup>
- The duty of the Regional Planning Officer to determine likely impact extent of bushfire over next 3, 6 and 12 hours;<sup>831</sup>
- The duty of the Regional Planning Officer to assist in preparation of incident prediction/fire behaviour, and option analysis form;<sup>832</sup>
- The duty of the Regional Duty Officer to establish and maintain communications with the Group Officer or Incident Controller at the incident's location and ensure an Incident Management Team has been established through the implementation of the Incident Control System;<sup>833</sup>
- The duty of the Regional Duty Officer to record and plot all information associated with the management of the incident;<sup>834</sup>
- The duty of the Regional Duty Officer to, in consultation with the Incident Controller and other relevant sources, predict the potential for escalation of the incident, and determine strategies and resource requirements need to cater for the incident's escalation and/or control<sup>835</sup>.

14.47. A number of senior CFS Officers gave evidence of what the above requirements meant in terms of their practical application in the course of an incident. The following observations are relevant in this regard. Many of them were made by Mr Lawson, the Deputy Chief Officer of the CFS:

- The Regional Duty Officer would need to acquire 'some knowledge of the type and class or the type and level of the incident';<sup>836</sup>
- That the Regional Duty Officer needs to have details of the incident to be able to ensure that the resources are adequate;<sup>837</sup>

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<sup>827</sup> Exhibit C205 - Section 1.12.1 of CFS Region 6 Regional OMG 2004-2005

<sup>828</sup> Exhibit C205 - Section 13.1.3 of CFS Region 6 Regional OMG 2004-2005

<sup>829</sup> Exhibit C205 - Section 13.1.3 of CFS Region 6 Regional OMG 2004-2005

<sup>830</sup> Exhibit C205 - Page 22 of CFS Region 6 Regional OMG 2004-2005

<sup>831</sup> Exhibit C205 - Page 23 of CFS Region 6 Regional OMG 2004-2005

<sup>832</sup> Exhibit C205 - Page 23 of CFS Region 6 Regional OMG 2004-2005

<sup>833</sup> Exhibit C204 - Section 8.3 of CFS Standard Operating Procedures (SOP)

<sup>834</sup> Exhibit C204 - Section 8.3 of CFS SOP

<sup>835</sup> Exhibit C204 - Section 8.3 of CFS SOP

<sup>836</sup> Ferguson - Transcript, page 18759

<sup>837</sup> Lawson - Transcript, page 17163 and 17164

- Contact with the Incident Controller would be the main source of a Region's information;<sup>838</sup>
- Regional Headquarters needs a good grasp of the individuals on the Incident Management Team and their ability to carry out certain functions;<sup>839</sup>
- The role of Regional Headquarters is not only to support the Incident Management Team, but also to keep an eye on what the Incident Management Team are doing;<sup>840</sup>
- The Regional Duty Officer needs to be aware in a general way of the complexities of the fire in order to properly discharge that person's responsibilities;<sup>841</sup>
- The Regional Duty Officer should review and validate the objectives of the Incident Management Team by communicating with the Incident Controller;<sup>842</sup>
- Regional Headquarters is required to get information about the incident and make sure that the resources provided are matching the requirements of the incident;<sup>843</sup>
- That given the role of the CFS is to protect life and property from fire and other emergencies, reasonable steps have to be taken to identify risks to the public;<sup>844</sup>
- Regional Headquarters would be expected to plot coordinates sent from the Incident Management Team and to gain an understanding of the location and extent of the fire;<sup>845</sup>
- The contingency of the fire getting out would have to be planned for and that a dedicated Planning Officer overnight would have been indicated;<sup>846</sup>
- It was a responsibility of Regional Headquarters to review who was on the Incident Management Team and who was performing the roles of Incident Controller, Planning Officer, Operations Officer and Logistics Officer;<sup>847</sup>

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<sup>838</sup> Lawson - Transcript, page 17165

<sup>839</sup> Lawson - Transcript, pages 17166 and 17167

<sup>840</sup> Lawson - Transcript, page 17168

<sup>841</sup> Lawson - Transcript, page 17173

<sup>842</sup> Lawson - Transcript, pages 17168, 17184 and 17201

<sup>843</sup> Lawson - Transcript, pages 17166 to 17168

<sup>844</sup> Lawson - Transcript, page 17173

<sup>845</sup> Lawson and Ferguson - Transcript, pages 17135, 17136 and 17912

<sup>846</sup> Glover and Lawson - Transcript, pages 13765, 17152 and 17153

<sup>847</sup> Glover - Transcript, page 13760 - Mr Glover gave evidence that someone with Ms Whillas' experience would have been overwhelmed in the position of Incident Controller and Planning Officer (Transcript, pages 13680 and 13857)

- A Regional Duty Officer would need to be satisfied that a proper risk assessment has been carried out and that the Regional Duty Officer agrees with the outcome. This would not necessarily mean that the Regional Duty Officer would have to start the process from the beginning;<sup>848</sup>
- To take positive steps to be satisfied that a fire is contained and to maintain contact with the Incident Controller on that issue;<sup>849</sup>

14.48. When asked whether Mr Vogel had performed a risk assessment in respect of this fire, he said '*in a way, in my head I did, yes*'<sup>850</sup>. Mr Vogel explained that on the Monday night he had thought that with the weather conditions forecast for the Tuesday, if there had been a breakout, the fire would go south and if it was still burning on the change of the wind, it would then burn to the east. That of course is a very trite observation. The real question was, what was the risk or likelihood of that happening. Mr Vogel admitted that he did not have information that would have enabled him to properly perform a risk assessment in respect of the fire in the swamp<sup>851</sup>. It would follow that Mr Vogel was in no position to properly consider or validate any risk assessment that had been conducted by the Incident Management Team. In conducting his own risk assessment, Mr Vogel said that he concentrated more on the likely path of any fire that might break out rather than the consequences of that taking place. For example, Mr Vogel had no recollection of whether he had considered the consequences that might flow if the fire had gotten out and crossed Settlers Road.

14.49. As far as Mr Vogel's communications with the Incident Controller were concerned, there was no direct or even indirect communication with Mr Chambers after approximately 6pm on the Monday. In those circumstances, a question arises as to how Mr Vogel as the Regional Duty Officer would have fulfilled his operational responsibility under SOP 8.3, in consultation with the Incident Controller and other relevant sources, to predict potential for escalation of the incident, and determine strategies and resource requirements needed to cater for the incident's escalation and/or control. To this Mr Vogel said that the consultation that he engaged in, in this regard was for the most part with other relevant sources including Lincoln Base, who were providing SitReps. Mr Vogel suggested that there was a tacit understanding that the incident was escalating as so much was to be inferred from the request for strike

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<sup>848</sup> Glover - Transcript, page 13765

<sup>849</sup> Glover - Transcript, page 13690

<sup>850</sup> Transcript, page 13234

teams. The actual escalation of the incident was a matter that Mr Vogel would no doubt also have gleaned from the SitReps that indicated that the fireground was expanding, as were the number of appliances in attendance. Ultimately, there was a measure of surprise when Mr Vogel found out that the fireground was 1800 hectares, and this was notwithstanding the fact that the fire had been said to have been contained shortly before 9pm. The piece of information that the fire was contained was obviously taken at face value by Mr Vogel and Ms Post because there was no enquiry made that tested the assertion. More importantly, there does not appear to have been any enquiry made as to whether or not the fire would remain contained. Such an enquiry could have been made of the Incident Controller and was clearly relevant to the question as to whether or not there was potential for the escalation of the incident.

- 14.50. Mr Vogel also, it will be remembered, had no communication with Ms Whillas. He knew that Ms Whillas was going to be the overnight Incident Controller. Mr Vogel left Region 6 Headquarters at about 1am after he had forwarded the final SitRep and the map of the fireground to State Headquarters. There was an opportunity for him to have consulted with Ms Whillas. It would be unreasonable to suggest that Mr Vogel having put in virtually two day's work already should have been required to remain at Region 6 Headquarters to consult with Ms Whillas on a regular basis. However, it has to be acknowledged that there was nothing undertaken in the nature of supporting or mentoring Ms Whillas. One has to bear in mind here, her relative lack of experience as a member of an Incident Management Team, particularly as an Incident Controller in an incident of this complexity. Ms Whillas was qualified to be Incident Controller insofar as she had participated in an AIIMS course in October 2004. Nevertheless, she had not been included in the group list of Incident Management Team personnel and her experience with incidents involving only 3 or 4 appliances would in my opinion belie the suggestion that she was a suitable Incident Controller for an incident as large, as multi-faceted and as complex as this was. In any event, one could only make a judgement about whether an Incident Management Team was adequate, or whether an Incident Controller was suitable, especially in relation to a person of Ms Whillas' experience, if one had some appreciation of the complexity of the matter, and in particular of the risks associated with the incident and its propensity



to escalate. In reality, Mr Vogel did not have that knowledge. Ms Post in my view also did not have that knowledge.

- 14.51. Mr Vogel told me that he believed that Ms Whillas was capable of fulfilling the role that she was in overnight. He also told me that he thought that with a light workload overnight, Ms Whillas and Mr Branson were sufficient to constitute the overnight Incident Management Team. He did not know that there was a hiatus between the first Incident Controller leaving and the second arriving. Mr Vogel interpreted the requirement that the Region should ensure the responding Incident Management Team personnel had the skills, knowledge and competency necessary to effectively and safely carry out their duties was in reality a pre-incident function to ensure that people all have appropriate training. That is one available interpretation. On the other hand the use of the word ‘responding’ suggests that it refers to an actual incident. Mr Vogel believed that to be an Incident Controller at a fire, one had to have done the AIIMS course and that was it<sup>852</sup>. There was more to it than that in my view in an incident of this matter.
- 14.52. As to the requirement to provide command support to Incident Controllers through mentoring, validating of objectives and prompting, Mr Vogel said that Mr Maddern was sent to prompt Mr Chambers. Mr Vogel did not see it as part of his duties as Regional Duty Officer to validate the objectives of the Incident Controller on the Monday night. He perceived his responsibility in that regard to ‘*just be aware of and consider*’ the objectives of the Incident Controller<sup>853</sup>. Mr Vogel said that on the Monday night he was told that mopping up was going to take place and that he ‘*was sufficient with that*’. Mr Vogel did not validate whether that was the appropriate thing to happen because the Incident Controller had made that decision<sup>854</sup>. When the relevant written stipulation was shown to Mr Vogel, he agreed as the Region 6 Regional Duty Officer in fact he was the individual who had a responsibility in that regard. When asked whether he agreed that on the Monday night he did not validate the objectives of the Incident Controller, Mr Vogel said that in his own mind their objective was proper. Mopping up was sufficient because it is an accepted practice. He also said that the people on the ground are assessing the situation and they were the ones who were to determine whether the objective was the appropriate one. When

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<sup>852</sup> Transcript, page 13073

<sup>853</sup> Transcript, page 13278

<sup>854</sup> Transcript, page 13278

asked as to whether he in reality did not have relevant information to validate the objectives, or to assess whether the Incident Action Plan was appropriate, Mr Vogel said:

'If we use - well, based on what we were talking about yesterday with succulent plants and all of that, I would have to agree with that, yes.'<sup>855</sup>

14.53. Mr Vogel there was referring to a lack of knowledge of the type of vegetation to which he had already referred in his evidence. He knew nothing of that type of issue and nothing about the real circumstances pertaining to the fire.

14.54. On the Monday night at the time that Mr Vogel completed his duty at 1am, Mr Vogel had the following understanding:

- The fire had been contained;
- The fireground was 1800 hectares in size;
- The overnight plan was to mop up;
- The number of appliances at the fireground was 16 (in fact it was 15);
- Ms Whillas and Mr Branson were the Incident Management Team. Ms Whillas was the Incident Controller;
- The fire boundary was in swamp.

However, what Mr Vogel did not have an appreciation of was the actual risk to which the public was subjected. He did not know of the potential efficacy of a plan simply to mop up or whether it was in any sense feasible, he had no means of knowing for certain whether or not the number of appliances was sufficient to carry out that task, he did not know that there were no Sector Commanders for the two most crucial sectors;

In those circumstances, it is difficult to see how a Regional Duty Officer could fulfil the tasks of validating the Incident Management Team's objectives.

**15. The involvement of CFS State Headquarters and their interaction with Region 6**

- 15.1. The Deputy State Coordinator is a rostered position at CFS State Headquarters. There are four senior staff at CFS State Headquarters that able to be appointed to that position. The Deputy State Coordinator is responsible for managing the State Operations Centre and coordinating the CFS State response to ongoing incidents.
- 15.2. The CFS Deputy State Coordinator for the Monday was Mr Leigh Miller. He was stationed at State Headquarters in Adelaide. Mr Miller had been present at the weather teleconference on the Monday afternoon. It was at that conference that Mr Miller first became aware of the fire through Mr Vogel. Mr Vogel indicated at the teleconference that the fire was 40 hectares and that he was confident that they would get it under control overnight. Mr Ferguson was also at the same conference. I have already referred in another context to the discussion about the forecast weather conditions for the Tuesday. Suffice it to say Mr Miller recalled that Mr Prideaux of the BoM told him that temperatures were going to be in the low 40s, winds to 60 kilometres per hour with no rain likely. Mr Miller told me in evidence that he could recall Mr Prideaux saying something about never seeing anything like that before. The general gist of what he said was that it was going to be one of the worst days in several years. Mr Miller understood that fire bans were likely for every region in the State. To Mr Miller there was natural concern about the Wangary fire in the context of that forecast *‘because that means we’ve got an ignition source that has the potential to get out of control’*<sup>856</sup>. Mr Miller agreed that as Deputy State Coordinator one would want to monitor such a situation.
- 15.3. As to how he would monitor such a situation, if he was at State Headquarters he would go to the State Operations Centre and talk with the Operations Centre Officers and examine the information that was in their possession which might be computerised. If he is not in State Headquarters, say after hours, he would be relying on the Operations Centre Officers or the Regional Duty Officers to contact him to let him know what was taking place in respect of a given fire. As Deputy State Coordinator, his workstation was in very close proximity to that of the Operations Centre Officers.

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<sup>856</sup> Transcript, page 13423

- 15.4. The weather teleconference concluded at 4:45pm. Mr Miller as I understand it remained at State Headquarters until 7pm when he left for the day.
- 15.5. Mr Miller's level of knowledge of the Wangary fire was limited to what he had learnt at the teleconference, namely that there was a fire at Wangary of 40 hectares, with the implication that it was not under control at that stage. That was to remain Mr Miller's level of knowledge until the following morning. Mr Miller did not see any of the SitReps that Mr Vogel faxed to State Headquarters, including the SitRep of 11pm which advised that the fire size was 1800 hectares nor the further SitRep that Mr Vogel sent through to State Headquarters at 12:20am that advised of, amongst other things, a reduction in the number of appliances that would be working through the night at Wangary. Mr Miller saw nothing or heard nothing of that information.
- 15.6. The SitReps from Mr Vogel that would have been available for Mr Miller before he left for the day at 7pm included the SitRep of 6pm that referred to the fire as being not contained but which had become 150 hectares in size, having dimensions of 3 kilometres by half a kilometre. It also referred to lack of water being an issue. Mr Miller did not receive that information. It has to be said that an uncontained fireground of 3 kilometres in length, involving as it did difficulty with water, with a weather forecast of the kind referred to in the conference that Mr Miller had convened, ought to have raised in his mind a very deep concern for the citizens of the Lower Eyre Peninsula. But Mr Miller knew nothing of this at the time he finished work. One cannot help but think that in the current climate, and in the light of events on Kangaroo Island in the last two weeks, that it would now be utterly astonishing if such information were kept from the public eye, let alone from the eyes of the CFS Deputy State Coordinator.
- 15.7. The SitReps that Mr Vogel faxed through to State Headquarters were undoubtedly received within a few minutes of their creation by Mr Vogel. They were received in the vicinity of the workstations of the Operations Centre Officers. There were two Operations Centre Officers on duty up until 8pm and then another two commenced another shift at that time. The SitReps were received into the possession of the Operations Centre Officers and were placed on a clipboard in the vicinity of their workstation. They were available for inspection by the Deputy State Coordinator on duty. At that time, handwritten and faxed SitReps, other than word of mouth, were the only means by which State Headquarters could monitor what was taking place in

relation to an ongoing incident, save and except for what would be characterised as a Significant Incident. I will discuss that in a moment.

- 15.8. Mr Miller did not have his attention drawn to the SitReps that existed at the time he left for the day. Nor were any of the other SitReps received after he left for the day drawn to his attention. I heard evidence from a number of the Operations Centre Officers and from their supervisor. I also heard evidence from Mr Miller. The procedures in place that would ensure that a Deputy State Coordinator was made aware of developments in an ongoing incident of this nature were clearly inadequate.
- 15.9. Save and except for the information in the 11pm SitRep that advised a fire size of 1800 hectares, none of the information contained in the SitReps was in any sense analysed by the Operations Centre Officers. The receipt of the 11pm SitRep that advised of the 1800 hectare fireground was the eventual trigger for the Wangary fire being declared a Significant Incident. However, the information contained in the SitRep of 6pm, stating as it did that the fire size was then 150 hectares, should, in conjunction with the knowledge that the fire was in scrub, have already triggered the Significant Incident status. As with Mr Vogel, no effort was made at State Headquarters to plot any of the grid references that were set out in the SitReps in order to gain an understanding of the location and size of the fireground as the incident escalated during the course of the afternoon and evening.
- 15.10. When a Significant Incident is identified, an Operations Centre Officer causes a page to be sent to certain predetermined CFS Officers, including the Deputy State Coordinator and the Chief Officer, Mr Ferguson. On this occasion Mr Miller did not receive the page message, even though it was undoubtedly sent. Mr Ferguson, however, did receive the pager message but told me in evidence that he relied on Mr Miller to deal with any situation regarding the Wangary fire that needed to be dealt with. Thus it was that while Mr Ferguson on the Monday night knew of the ultimate fire size of 1800 hectares for the Wangary fire, Mr Miller spent the night in ignorance of that fact.
- 15.11. The following morning, the Tuesday, Mr Miller and Mr Ferguson were in touch with each other quite early in the piece. Mr Miller and Mr Ferguson had a teleconference with Mr Vogel at 8am.

- 15.12. Mr Vogel had arrived at Region 6 Headquarters at 7:30am. Ms Post had travelled directly to the Wanilla Hall arriving at about 7:30am. By then, the District Council of Lower Eyre Peninsula plant operators had been advised that their services would not be required. In addition, the Tumby Bay strike team had been released from the fireground and had returned or were in the process of returning to their area. That left 13 appliances for the day including the Wangary appliance that only had a crew of Mr Nettle, who had no understanding of his status as Sector Commander for the Yorkies Crossing Sector. Ms Post's take on her interaction with Mr Maddern concerning the status of the fire was that:

'He told me crews had been working hard all night and everything was safe. I felt very comfortable at the time that as much work as was possible had been undertaken during the night and that sufficient crews were available on the fireground to continue mopping up.'<sup>857</sup>

Ms Post also said in her statement that with the information she had received at Wanilla Hall that morning, she had felt comfortable that the fire was 'contained' and appropriate planning with sufficient resources were deployed to the fireground. In her evidence, Ms Post said that Mr Maddern had said that the fire was 'controlled' and she wanted him to double check. That is why she showed him the definitions of 'control' and 'contain' and he reaffirmed that the fire was controlled. To Ms Post that signified to her that the fire was not burning freely inside of the perimeter and that they were not expecting breakaways. Ms Post told me that she was very, very pleased to hear that, especially given the kind of day that they were expecting. Mr Maddern's statement to her that they had done a lot of work and had been working hard overnight made Ms Post '*reasonably confident that they had this fire well and truly in check*'<sup>858</sup>. It was during her conversation with Mr Maddern that the Incident Action Plan which referred to the controlled status of the fire and the strategy of keeping the fire within control lines was created. After being at Wanilla Hall that morning, Ms Post said that she thought that things were looking good for the coming day and that the Incident Management Team had a handle on the situation. As far as risk to the community was concerned, Ms Post told me that by the fire being controlled it meant that there was not any expectation that it was going to get any bigger or breakaway so that the risk is very much reduced. Other than clarifying Mr Maddern's use of the word 'controlled', Ms Post does not seem to have made any further enquiry as to whether

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<sup>857</sup> Exhibit C234, page 12

<sup>858</sup> Transcript, page 12217

the implication that the perimeter was secure and no breakaways were expected was correct or not. In addition, there was no exchange of information as to where work had been done.

- 15.13. For Mr Vogel's part, at 7:55am he telephoned Lincoln Base and requested them to arrange for the Incident Controller to ring him to give him a SitRep. Before Mr Vogel spoke to anyone at Wanilla, he received a phone call from the Deputy State Coordinator, Mr Miller, and Mr Ferguson at 8am. Mr Vogel's handwritten log simply refers to the fact of the conversation between himself, Mr Miller and Mr Ferguson and the sole notation as to the contents of that conversation is '*briefing given*'<sup>859</sup>. Mr Vogel does not claim to have received any information from the Incident Management Team by then. He was not to speak to Mr Maddern until 8:14am. I also do not understand Mr Vogel to have received any information of consequence from Ms Post by 8am. Mr Miller's note of this conversation at 8am records Mr Vogel imparting information to them that the fireground size was 1800 hectares, that 17 appliances had been mopping up overnight, that the fire was '*contained*', that 20 appliances were planned, that there were '*dozed breaks all around*' and that there was '*no need for aircraft*', and that the biggest risk in the region was the West Coast<sup>860</sup>. There was no fire on the West Coast at that time.
- 15.14. Mr Ferguson's note of this teleconference is similar to Mr Miller's. Mr Ferguson has made a note that suggests that Mr Vogel had said there had been mopping up overnight, that there were plenty of resources with 20 trucks and heavy machinery and that there was '*no need for aircraft over here*'. Mr Ferguson's notes of this teleconference do not refer to dozed breaks. However, at a meeting that took place later that morning at 8:45am Mr Ferguson has made a note '*dozed breaks all around*'. This is a belated notation to the comment that Mr Miller has ascribed to Mr Vogel in his notes, namely Mr Vogel's assertion that there were dozed breaks all around. Mr Ferguson told me that his understanding was that there were breaks around the fire perimeter.
- 15.15. Mr Vogel had not spoken to anybody about the fire since the previous day. He spoke to Mr Maddern on the Tuesday morning at 8:14am. In his note of his conversation with Mr Maddern, he ascribes Mr Maddern as having said that the situation was

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<sup>859</sup> Exhibit C241a, page 4

<sup>860</sup> Exhibit C245b

looking good, that there was little activity, a few smokers, 8 crews on the ground with a move to Wangary between 9am and 9:15am. The note records Mr Maddern saying that 13 appliances would be present overall and that they would be concentrating on the south-west sector at the point of origin. There is nothing recorded about aircraft or dozed breaks all around the fireground. It seems clear that Mr Vogel did not obtain that information from Mr Maddern.

- 15.16. At 9:40am Mr Vogel faxed some documentation to Mr Miller at State Headquarters. This documentation included a SitRep timed at 9:35am that stated that the fire was still contained and that they were starting to get smokers inside the perimeter with the deteriorating weather. It also includes the document that had been created at 7:45am when Mr Maddern made the assertion that the fire was controlled. Mr Miller does not recall seeing that documentation at the time.
- 15.17. As to how Mr Vogel was able to provide Mr Miller and Mr Ferguson with such a bullish report without having spoken to anyone on the Incident Management Team, he told me that he knew that crews had worked through the night mopping up because that had been part of the plan, that he believed that he had been told somewhere that they had been working on the southern area of the fireground and that there were breaks around that southern area. He had not intended to lead Mr Miller and Mr Ferguson to believe that there had been breaks around the entire perimeter. Mr Vogel referred to information that he had been in possession of at 7:53pm the previous evening where there had been reference to breaks made by earth moving equipment. However, he could not have had any reliable information that would have enabled him to say that there were bare earth breaks all around the perimeter. Mr Vogel said this at one point in his evidence:

'My understanding is that there was breaks around the fire. I can't establish there was 100% of that perimeter.'<sup>861</sup>

When asked as to whether he had an understanding that there were breaks around the fire from Warunda Road heading in a south-westerly direction to Yorkies Gully he said '*I can't establish that, no*', but said that he believed that '*there was going to be breaks around the fire*' including the location that I have just described. The basis for that belief he said was that they had machinery at the fireground and that they would work by putting breaks around the fire and that they would start working in that



general area of the southern part of the fireground<sup>862</sup>. Mr Vogel was anything but sure about when that work would have been undertaken but said that he understood that it could be achieved in night time hours. Mr Vogel clearly had no idea in my view about what work would have been undertaken or achievable overnight in terms of breaks and where they would have been placed. He may have drawn the assumption from the presence of heavy machinery that breaks might be cut simply by virtue of the fact that that is what graders are used for in the context of a bushfire. However, there was certainly no basis for any belief on his part that there were breaks that might prevent the breakout of fire on the southern side of the fireground. Similarly, there would have been no basis for him to have led anyone else to believe that. To be fair to Mr Vogel it may well be that he had not intended to convey to Mr Miller and Mr Ferguson that there were dozed breaks around the entire perimeter of the fire, but that was certainly the impression that was noted in Mr Miller's and then Mr Ferguson's handwritten notes.

- 15.18. Mr Vogel could not recall any conversation with Mr Miller and Mr Ferguson about aircraft. Specifically he said he could not recall saying that there was no need for aircraft. On the assumption that he said that, this would simply have reflected the fact that Mr Vogel had not been given any indication that anyone had wanted aircraft. It would not have reflected the actual state of affairs that aircraft were not needed. The statement that Mr Vogel made that there was no need for aircraft was noted contemporaneously by Mr Miller and Mr Ferguson. Plainly Mr Vogel told them that. That piece of information may well have been imparted by Mr Vogel as a result of a specific question that he was asked.
- 15.19. Mr Vogel's statement that there was no need for aircraft may at one level have been precipitous in the sense that he really did not know one way or the other at that stage whether aircraft would be needed. However, there had been no request for aircraft by anyone overnight and I suppose on balance one might have been entitled to assume that if there had been a need for aircraft identified, he would have been contacted by 8am. Reference has been made to Mr Pope having requested aircraft the previous day. Events had somewhat overtaken that request in the sense that at 7:45am Mr Maddern had signed off on the fire as being controlled. On that basis, there might not have been a perceived need for aircraft on the Lower Eyre Peninsula and Region 6

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<sup>861</sup> Transcript, page 12959

generally, especially given the fact that the Lower Eyre Peninsula was not part of a primary response zone and that aircraft might have been needed in more populous areas as they were that day. It is highly unlikely that aircraft would have been provided on a standby basis on the Lower Eyre Peninsula unless there was at least a recognition of the possibility that the Wangary fire might breakaway on the Tuesday morning. There was no such recognition on the Tuesday. In any event, at 8:14am Mr Maddern described a situation to Mr Vogel in which aircraft for water bombing would not have been indicated. The difficulty with the question of aircraft being needed, and Mr Vogel's dismissal of the idea, was that at a more fundamental level there was a flawed basis for saying that the fire was controlled and that no breakaways were expected. There was simply in my view no proper basis for that conclusion any more than there was a sound basis for the conclusion that the fire perimeter was secure. The fact of the matter was that as far as when Messrs Vogel, Miller and Ferguson spoke, no work had been done in Area A or the swamp adjacent to it, incomplete work had been done in Area C, and in the swamp adjacent to that and no resources were being deployed to either location except possibly an appliance or two in Area C, and no effective Sector Commander for that area in any event. This all meant that there was an unsound basis for saying that aircraft were not needed.

- 15.20. As with the circumstances of the previous evening, there is no evidence that at a regional level there was any validation of the strategies or plans that the Incident Management Team possessed in relation to the situation on the Tuesday morning.
- 15.21. Although by 8am both the Deputy State Coordinator and the Chief Officer of the CFS finally had an appreciation of at least the final fire size of 1800 hectares, this information does not appear to have in any case triggered any response on the part of State Headquarters other than to enquire of Mr Vogel what the current state of play was. Mr Vogel's report to them at 8am only served to add a measure of comfort to senior officers at State Headquarters, especially in the light of assertions that there were breaks around the fire and no need for aircraft. To a certain extent, in the circumstances that confronted State Headquarters that morning, with the very unfavourable weather conditions forecast for the whole of the State, not just the Eyre Peninsula and West Coast, and given the need for the State to marshal resources for the day ahead, it is perhaps not surprising that Messrs Miller and Ferguson took what

Mr Vogel had said at face value. They were in no real position to challenge what Mr Vogel had said. On the other hand, an 1800 hectare fireground in any circumstances, but particularly with that weather forecast, must have been a worrying issue.

15.22. If the situation was at any time retrievable, it was certainly irretrievable when State Headquarters on the Tuesday morning was advised in the terms that it was. The input of State Headquarters would have had a greater impact if it had been sought earlier, had the true position of the fireground been properly understood. Mr Miller said that on the Tuesday morning he was surprised to learn that the Wangary fire had burnt 1800 hectares. He had not seen any of the previous day's SitReps nor had received the Significant Incident page that at least would have advised him of the size of the fireground. Mr Miller candidly admitted that he personally should have asked for SitReps from the Wangary incident. In addition, he could easily have looked at the clipboard at State Headquarters before he left for the day. He would have at least seen that the fire had escalated from the 40 hectares to 150 hectares. Mr Miller also said that it was fair to say that as Deputy State Coordinator it had been part of his responsibility to monitor a going fire such as the Wangary fire on the Monday afternoon and evening. He also said it would be fair to say that he did not do that<sup>863</sup>. The fact that Mr Miller did not monitor the going fire that was Wangary meant that a number of the Deputy State Coordinator responsibilities were not triggered. Mr Miller's last piece of information was that the fire was 40 hectares and that it would be contained overnight, a piece of information that seems to have been taken at face value by Mr Miller. This does seem surprising, especially when the information that was imparted during the course of the weather teleconference was memorable at the very least for the colourful description of the expected weather on the Tuesday.

15.23. Mr Miller's responsibilities in relation to the Wangary fire were clearly set out in SOP 8.4<sup>864</sup>. The Deputy State Coordinator's responsibilities are not confined to generalisations, they are incident specific as well. Included among those responsibilities in SOP 8.4 are to:

- Support the Regional Duty Officer to ensure Incident Controllers have taken control and have established Incident Management Teams;

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<sup>863</sup> Transcript, pages 13539 and 13540

<sup>864</sup> Exhibit C204

- Support the Regional Duty Officer to ensure Incident Controllers and combatant agencies are preparing strategies to overcome or suppress incidents' potential;
- Ensure Regional Coordination Centres (in this case Region 6 Headquarters) have established themselves 'operationally' where necessary, and are preparing strategies to overcome or suppress incidents' potential;
- Support the Regional Duty Officer to ensure the establishment of communication links and procedures between any 'Operational' Regional Coordination Centre and the Incident Controllers to ensure that adequate flow of accurate information occurs – the lack of communication between the Regional Duty Officer and the Incident Controller was a feature of this incident.

15.24. At State level the role of the State Coordinator included, under SOP 8.5, the identification of whether the response is appropriate to the risk, and to review State-wide resource allocation and prioritise State resources as required.

15.25. In practical terms, Mr Miller's response had he known the information that had been contained in the overnight SitReps would have been to have communicated with Mr Vogel, the Regional Duty Officer, particularly in relation to resources. The fact that the fire was escalating in size would have been but one reason for such an approach. If Mr Miller had seen the SitRep of 11pm, that is the one that described the fireground as being 1800 hectares, he would have needed to make sure the Region was appropriately resourced and would have looked at potentially bringing in other resources from elsewhere in the State. It is to be acknowledged of course that resources from elsewhere in the State would have taken some time to have reached the Wangary fireground, and it is also to be recognised that resources can be difficult to mobilise in the middle of the night. But an attempt could nevertheless have been made.

15.26. Mr Miller stated that if he had received these SitReps on the Monday night he would also have discussed with Mr Vogel the potential provision of aircraft support from the State. He would have offered him the assistance of an air observer aircraft from first light to see if they could pick up anything that might have been a problem. If there had been a need for water bombing, he could have arranged for that resource to be there close to first light as well. He could have assisted with the gathering of strike teams to deploy to the Wangary fire. That of course is on the understanding that Mr

Vogel would have identified the need for those resources himself. Mr Vogel's difficulty was that he had little idea of what was going on at the fireground and little idea of the risk that was developing.

- 15.27. Mr Miller said specifically that if an Incident Management Team had indicated that breakaways were likely on the Tuesday morning he would have spoken to Mr Vogel about what the plan was to deal with the breakaways and whether they needed additional support from the State as in aircraft or strike teams. Mr Miller suggested that he could probably have had two water bombing aircraft and an air observer aircraft to the Lower Eyre Peninsula within two hours. If for instance he had received information at 7am that there were no breaks around the area that was seen as having potential for breakaways then he might have been able to have water bombers there by 9am. Mr Miller suggested that water bombing activity with good ground support at that time of the day can be reasonably successful. There were water bombers available on the Tuesday morning. There were two fixed wing water bombers in the Mount Lofty Ranges that could have been the subject of release to Port Lincoln. Of course, there would have had to have been a weighing up exercise to ascertain whether that was appropriate given the potential risk to the Mount Lofty Ranges. No doubt one factor that would have been considered was the fact that there was an uncontrolled fire on the Lower Eyre Peninsula and no fire at that stage in the Adelaide Hills.
- 15.28. Mr Miller said that if the FDI was too high or if there was too much wind then the success of water bombing operations is greatly reduced. That is another matter that would have to be considered as to whether water bombing aircraft would have been released. Mr Miller had previous experience with the Tulka fire in inaccessible country. Although there is usually a limited effect of water bombing in those circumstances, he said that if there was no other option they might put many loads on a hot spot and to monitor it. In that event you would need a good break to reduce the chance of the fire getting outside of the break. However, Mr Miller did say that if one can get on top of breakaways early there is a good chance of success with water bombing depending on the conditions and the deployment of ground resources.
- 15.29. I deal elsewhere with the chances of success of water bombing on the Tuesday morning.

15.30. Mr Owen Glover who was the State Air Resources Coordinator did not tell Ms Post that water bombers were not available for the Tuesday contrary to an assertion of hers. I accept Mr Glover in that regard. Mr Glover did not know of any reason why water bombers could not have been placed, even on standby in Port Lincoln, on the Tuesday if they had been requested. If they had been asked for he would have had a discussion with the Deputy State Coordinator, the State Coordinator and the Regional Duty Officer as to whether they would be required. In the circumstances, no-one ever enquired of him about the availability of aircraft to go to the West Coast on the Monday night. If they had made an enquiry he would have acted differently. Mr Glover made the point that it would not have been his decision but that of the Deputy State Coordinator who was Mr Miller. Mr Glover told me that if a decision had been made on the Monday afternoon or evening to make water bombing resources available on the fireground he would be inclined to say that it would have had some effect on outbreaks. Naturally he could not be definite about that. Others have said that it would have made little difference if any. The point he did make, however, was that decisions as to whether or not to use aircraft would be made by the Air Attack Supervisor and the Incident Controller on the basis of knowledge and disseminations as to whether the aircraft were being effective or not. That is not based on a risk assessment of whether it will work or not – it is based on an assessment of whether it is working or not. In other words, an attempt is made to see whether or not it is working and you cannot dismiss the possibility of water bombing having some benefit without actually trying it. Mr Glover said this:

'There is no hard and fast set of rules or points at which you can say that it won't work, but generally strong winds and low relative humidities and high temperatures make flying difficult to begin with. Then the question is whether or not the pattern that you are dropping from the aircraft is hitting the ground in the way that it's meant to be effective in doing so. As I indicated yesterday it's more likely that aerial attack would be tried and assessed as opposed to not tried at all. That is because it is very difficult to say at this temperature and at this set of relative humidity and wind speeds it won't be effective. However, there is no great benchmark, but 60 km/h winds for example, depending on the direction, would make take off and flying quite difficult. Then dropping the pattern of foam from the aircraft in a way that places it on the ground where you want it to go is also extremely difficult in those high winds.'<sup>865</sup>

It has to be said that Mr Glover's approach has a lot of merit.

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<sup>865</sup> Transcript, page 13790

- 15.31. The distinct impression I had from the evidence of both Mr Miller and Mr Glover was that if a full appreciation had been received at State level about the actual risk of breakaways from the fireground on the Tuesday morning, the deployment of water bombers to the Lower Eyre Peninsula would have been seriously considered and their use would have been at least attempted. Mr Ferguson also said in his statement<sup>866</sup> that if a request had been received and the time extent known, it is likely that the request would have been favourably considered, but it is likely that bombers would have only been provided if back up aircraft could have been sourced for Adelaide. Mr Ferguson said it is possible that aircraft would have been sent over on Monday night and held in readiness for Tuesday. Mr Ferguson said that at a teleconference with Victoria and New South Wales on the Tuesday morning, there was a reluctance on Victoria's behalf to part with back-up aircraft. As far as New South Wales was concerned, they flagged that they were experiencing extreme conditions as well. These comments are to be examined against the background that water bombers were in fact sent on the Tuesday morning after the fires had broken away. It will never be known for certain what the effect of water bombing would have been. It will never be known for certain whether, for example, at a particular breakaway location a water bomber could have been deployed in time to have made a difference. An opportunity to use water bombing and to see how effective it may have been was lost.
- 15.32. For Mr Ferguson's part, he told me candidly that he was disappointed that he had not been advised earlier of the size of the fire. He said that he should have been told about that before receiving the Significant Incident page at 11:14pm. He is manifestly right about that. Mr Ferguson said that '*in hindsight*'<sup>867</sup> criticism of Mr Miller for not having checked the information that had been available was a 'fair and valid comment'. I reject that observation in so far as criticism could only be valid in hindsight. Mr Miller himself accepts that he should have monitored the situation. Mr Ferguson told me that he did not take any action after receiving the page because he would have expected the Deputy State Coordinator, Mr Miller, to contact him if there had been any issues of concern. The difficulty of course was that Mr Miller did not get the page. The fact that the Significant Incident page mentioned that the fire was contained generated an assumption on Mr Ferguson's part that it was simply a case of mopping up. On the Tuesday morning there was nothing in the briefing that Mr

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<sup>866</sup> Exhibit C280b, page 196

<sup>867</sup> Transcript, page 18818

Vogel provided at 8am to contradict the earlier assertions that the fire was contained. In fact Mr Ferguson had a belief that the fire was controlled on the Tuesday morning. That was the statement that had been made at the fireground by Mr Maddern. He also understood that there had been a mineral earth break around the fire that had led Mr Ferguson to believe that the fire was actually controlled as opposed to contained.

- 15.33. Mr Ferguson accepted that the Significant Incident page should have gone out at 6pm, not 11:14pm. A Significant Incident page at 6pm would have triggered a different set of actions. He said:

'Yes, a quite different set of actions because obviously the key information would have been that you've got a significant incident, 150 hectares, still going, the group for all intents and purposes fully involved with the forecast for the next day. There would have been, in my view, quite considerable discussion and analysis going on at State Headquarters about the prognosis for that fire both overnight and into the next day.'<sup>868</sup>

- 15.34. The overdue Significant Incident page of 11:14pm did not reach Mr Miller because of technical difficulties associated with receiving pager messages at certain locations in Adelaide. It was a difficulty that had been recognised at the time. Since this incident, steps have been taken to ensure that responses are made to Significant Incident pages and that follow ups occur in the case of no response.
- 15.35. Mr Ferguson testified that there were certainly people available at both State and Regional level to have come up with a valid Incident Action Plan on the Monday night<sup>869</sup>. As far as aircraft on the Tuesday morning was concerned, Mr Ferguson told me that if he was asked to send over aircraft merely to put out hot spots in the swamp without any mention of breakaways being likely he would have said no. On the other hand if he had been told that breakaways were very likely he would have sent aircraft over at first light.

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<sup>868</sup> Transcript, pages 13783 and 18784

<sup>869</sup> Transcript, page 18936



## 16. **The level of the incident**

- 16.1. I have set out elsewhere the criteria for incidents to be characterised as Level 2 or Level 3 incidents. It seems to me that the overarching consideration as to whether an incident is Level 2 or Level 3 is contained within the very first paragraph dealing with the whole subject which is located in the CFS Operational Management Guidelines<sup>870</sup>. It states that *‘common sense and flexibility need to be taken into account when determining an incident level’*.
- 16.2. The classification of the level of incident can have implications in terms of the structure of an Incident Management Team. Whereas in Level 2 incidents some incident management functions will usually be delegated, in a Level 3 incident delegation of all AIIMS functions usually occurs. This would mean of course that the functions of Incident Controller and Planning Officer would be conducted by different people. There are other implications flowing from the classification of the level of incident that would include a heightened level of interest and involvement by the Region and by State Headquarters. As well, the classification of an incident as a Level 3 incident would also trigger high level talks between different agencies and might involve even the administration of public warnings<sup>871</sup>. As seen within the CFS’ own Operations Management Guidelines, there was a scheme of incident management arrangements and facilities that would be activated depending on the level of incident. This might involve certain AIIMS functionaries having a heightened level of training and accreditation. In addition, the classification of an incident as a Level 3 incident would now at any rate involve the deployment of a Level 3 Incident Management Team that would have as the Incident Controller a highly trained, paid member of the CFS.
- 16.3. As far as I can tell there is little or no evidence that would suggest that the level of incident became a consideration before the breakaways of fire on the Tuesday morning. Beyond that time it was clearly a Level 3 incident and no-one would suggest otherwise. Before the breakaways on the Tuesday morning however, it is by no means clear whether any consideration was given to the level of incident. The incident certainly was not a Level 1 incident because it involved the deployment of resources beyond the initial response and it also involved ultimately a sectorisation of

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<sup>870</sup> Exhibit C206, page 35

<sup>871</sup> Transcript, page 18525

the incident. If any assumption was made as to the level of incident, it appears to be that it would have been assumed that it was a Level 2 incident on the Monday and the Tuesday until the breakaways occurred. The matter is of course complicated by the fact that shortly before 9pm on the Monday night Mr Chambers declared the fire as contained. That piece of information was taken at face value at regional level and in any event was not taken on board at State level until the Significant Incident page of 11:14pm. In the expectation that the fire would remain contained, there is an argument available that it was only a Level 2 incident overnight and into the Tuesday morning before the breakaways. However, there are arguments to the contrary. The resources that had been applied to the incident on the Monday had involved brigades and appliances outside the Group. I refer here of course to the Tumby Bay strike team. The incident escalated until the point in time when it was declared contained. There was an argument available that this fireground was so complex, bearing in mind the swamp and its multi-facets and the weather forecast, that the fireground ought to have been divided into two divisions. There could have been a northern division and a southern division. The southern division comprising the swamp and the sugar gums had complexities and difficulties all of its own. In the event, the fireground was merely sectorised.

- 16.4. It will be seen that one of the criteria for the classification of an incident as a Level 3 incident is a '*significant threat or impact to the community at a local, Regional or State level*'<sup>872</sup>. With the significant threat to the community that this fireground in my view posed on the Monday night and first thing on the Tuesday morning was recognised, it seems to be that consideration would, or at least ought to have been given, to declaring the incident to be a Level 3 incident and bringing the necessary resources to bear on it. That declaration would no doubt have been a matter for consideration by the Incident Controller and the Regional Duty Officer<sup>873</sup>.
- 16.5. Many opinions were expressed by a number of the witnesses as to whether this was a Level 2 or Level 3 incident. Whether it was a Level 2 or Level 3 incident would have to be examined at the time the assessment is made. The issue in that regard is whether, for example, it was a Level 2 or Level 3 incident when the fire was said to be contained and whether it remained Level 2, if that was the appropriate level, until the following morning.

- 16.6. Dr Tolhurst suggested that on the Monday night the incident was a Level 2 incident with Level 3 complexities about it<sup>874</sup>. Mr Ferguson believed that the fire was a Level 2 incident on the Monday night but that there should have been some contingency planning undertaken for the possibility of it becoming Level 3<sup>875</sup>. Mr Ferguson based that opinion on the existence of the forecast and '*uncertainty of the fire status in the swamp area*'. Mr Lawson, the Deputy Chief Officer of the CFS and Mr Glover would have regarded it as a Level 2 incident because of the declaration that it was contained on the Monday night. However, Mr Ferguson agreed that it is better to err on the side of caution when classifying an incident and he would not have disagreed if the fire had been classified as a Level 3 incident on the Monday night by the Incident Management Team. That of course is not to say that a decision not to so classify it would have been manifestly incorrect.
- 16.7. Whether the fire was contained or not on the Monday night, there was in my opinion still in existence a high level of risk to the community and assets from this very large and complex fireground. It will be remembered that in Mr Ferguson's statement he said that to his way of thinking this was a very complex situation as it existed on the Monday night. In my opinion there were a large number of complicated decisions that had to be made by the members of the Incident Management Team in order to address risk. Among those decisions, naturally, were a consideration of the type of containment measures that would be appropriate and effective. This involved the consideration of not only whether blacking out was appropriate, but whether other additional or alternative measures could be or should be implemented. There was also the question of the need for aircraft to be considered. There was also a duty on those managing this incident to ensure that there were adequate resources generally and adequate resources placed in areas of vulnerability. To my mind an exceptionally unfavourable onus had been placed on Ms Whillas and Mr Branson who were the only two AIIMS functionaries overnight. Ms Whillas was performing two of the most vital functions of Incident Controller and Planning Officer.
- 16.8. Clearly the Operation Management Guidelines, insofar as they deal with level of incident, called for the classifier of the incident to look at the matter in the round and not just base a classification on a purely 'box ticking' exercise. Given the complexity

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<sup>872</sup> Exhibit C206, page 37

<sup>873</sup> Lawson, Transcript, page 17134

<sup>874</sup> Transcript, page 19281

<sup>875</sup> Transcript, page 18508

of the incident, and the risk that it posed to the community and assets, when one takes into account the weather in particular, in my view there was a very powerful argument that this was a Level 3 incident on the Monday night notwithstanding the declaration of containment, and notwithstanding whether that declaration was accurate or not. It will be remembered that containment does not carry the implication of permanent containment. This fire clearly was not going to remain contained if nothing was done to properly implement containment strategies.

- 16.9. If the incident had been declared a Level 3 incident, Mr Ferguson suggested high level talks between agencies may well have been triggered. There was dialogue between the Incident Management Team and SAPOL. However, Chief Inspector Schluter was told in essence that there was no cause for alarm. Mr Ferguson told me that if it was a Level 3 incident the State would have been sourcing additional personnel for the Incident Management Team. Enquiries would have been made as to what other resources could be sourced from other agencies in Port Lincoln while a specialist Level 3 Incident Management Team was assembled and transported to the fireground. I hasten to add here that with that level of classification, Mr Tilley's services as a member of an Incident Management Team could have been employed. Mr Ferguson said also that the classification as a Level 3 incident would be a reflection of the recognition by the Incident Controller that there was going to be a breakaway. That in turn triggers consideration of a number of issues such as the need for aircraft, including aerial response aircraft, firebombing aircraft and even helicopters. Mr Ferguson described a scenario whereby there would be many other important responses. However, he was still of the view that it was a Level 2 incident at all material times.
- 16.10. In any event, according to page 38 of the Operations Management Guidelines reproduced elsewhere, even a Level 2 incident would require training and accreditation of its Incident Management Team members as follows:

**'Australasian Inter-service Incident Management System Module and Specialist Training in Specific roles**

Accredited for Level 2 Incident Management Refreshed bi-annually.<sup>1876</sup>

As I understand the evidence, there was no accreditation for Level 2 incident management in existence as opposed to a general accreditation for AIIMS' roles. Mr

Tilley told me that he had Victorian accreditation as Operations Officer. I was given to understand that the document at page 38 of the OMGs was a document created in anticipation of arrangements that would be made, to have certain accreditations identified for various personnel. In South Australia, there were no specialised causes relating to the individual four functions of AIIMS.

- 16.11. It will be noted that the Incident Controller, Ms Whillas, had completed a general AIIMS course in 2004 but had had little experience as an Incident Controller beyond managing some appliances in relatively small incidents.
- 16.12. Mr Ferguson told me during the course of the Inquest that Level 2 Incident Management Teams were being assembled for each region. To my mind that is a positive step in the right direction. If this was truly a Level 2 incident, it was a very complicated one and one that required intervention of at a professional level. A properly trained Level 2 Incident Management Team to my way of thinking would have been more appropriate in the circumstances. Indeed, Dr Tolhurst gave me to understand that in Victoria the Incident Controller is almost always a paid employee of the fire authority for both Level 2 and Level 3 fires. An Incident Management Team in Victoria for a Level 2 fire might only be constituted by 30% or 40% volunteers<sup>877</sup>. Dr Tolhurst suggested that to be effective in an Incident Management Team one would need to have a high level of training that is regularly updated and have experience in attending a number of incidents. Dr Tolhurst described a scenario involving Level 2 incidents where a volunteer would in the early stages of an incident be the Incident Controller, but that would change if, say, the incident went beyond 3 or 4 hours, in which case a professional person may take over.
- 16.13. Mr Ferguson suggested that the Victorian situation for Level 2 incidents was a '*great idea*'<sup>878</sup> and in this context he suggested that Department of Environment and Heritage personnel were particularly suited to the planning role in a Level 2 and Level 3 incident. This harkens back of course as to how useful Mr Tilley may have been on the Monday night and Tuesday morning. Mr Ferguson suggested that the formation of Level 2 Incident Management Teams will go a long way to changing the mindset amongst CFS people. He suggested that at Group level and Regional level in the CFS there is room for improvement. As to why it was a good idea to have paid staff on

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<sup>876</sup> Exhibit C206, page 38

<sup>877</sup> Transcript, page 19145

Level 2 Incident Management Teams, Mr Ferguson agreed that it would involve the injection of greater expertise and greater training into an operation, but also because paid staff are used to operating in an institutional environment and are more used to dealing with planning and logistics issues.

- 16.14. One of my recommendations is that the CFS continue to develop Level 2 Incident Management Teams that contain paid operatives, be they Officers of the CFS or from other institutions. It is worthwhile observing that the number of stakeholders interested in bushfire outcomes are many and varied. No doubt all of them employ competent people. I understand that the State Bushfire Coordination Committee has, or will have amongst its members, officers from organisations such as the South Australian Metropolitan Fire Service, Forestry SA, the Department of Environment and Heritage, the Local Government Association, the Farmers' Federation of South Australia, Planning SA, the Conservation Council of South Australia, Natural Resource Management, SA Water, the Outback Areas Community Development Trust, the Department for Transport and Infrastructure and SAPOL. If these entities are genuinely serious about bushfire management then it seems to me that all or at least some of those entities could provide competent people to undergo the necessary training to become members of either Level 2 or Level 3 Incident Management Teams.

**17. Available fire suppression options for the Monday night and Tuesday morning**

- 17.1. A great deal of evidence was given during the course of the Inquest as to the firefighting and fire suppression strategies that could and/or should have been adopted on the Monday night and the Tuesday morning, but were not.
- 17.2. As already seen, as far as the vulnerable south-eastern perimeter of the fireground was concerned, and I here speak in the main of the south-eastern perimeter as it existed in the paperbark swamp on Mr Cabot's property and Christopher Hull's property, there was very limited amount of suppression work undertaken overnight and on the Tuesday morning. In particular there is no evidence that any fire suppression activity took place in the swamp adjacent to Area A on Exhibit C176b. The lack of any activity in that Region pertains to both the eastern and western sides of the swamp. The only available conclusion is that no work was undertaken on either side of the swamp or indeed in the swamp at that location. That there was significant fire activity within the swamp at that particular location is clear. It is to be remembered that Branson and Lock saw flames of a significant height when they attempted to make their way into the swamp along the extension of Warunda Road during their truncated tour of the fireground on the Monday evening.
- 17.3. In addition, as seen earlier, the work in Area C, which includes stubble paddocks both to the east and the west of the hundred line, was undertaken only in the early hours of the Tuesday morning. The exception to this was the Cabot backburn that I deal with separately. As far as CFS activity is concerned, it was confined to the time after 3am. I speak here of the presence of the Lincoln and Greenpatch appliances in the area of the hundred line deep in the swamp, and to the activity of the Karkoo appliance led by Mr Leon Modra in the area of the swamp that had been the subject of the Cabot backburn.
- 17.4. Overnight firefighting and suppression activity seems to have been concentrated in the main on the sugar gum area, part of the Lady Franklyn Road Sector in the vicinity of the junction of Yorkies Gully Road and Duck Lake Road. This difficult area was the main focus of CFS activity overnight. I do not say that critically because it was clear that it was a feature of the fireground which was of profound significance given the difficulty of extinguishing trees of that nature and the potential for flare-ups under

the influence of a strong wind. In some ways it is not surprising that attention was bestowed upon this area to a significant degree.

- 17.5. That the sugar gums were a problem overnight has to be recognised. However, any proper risk assessment in respect of the fireground as a whole had to take into account the potential for breakaways to occur out of the swamp. Given the forecast weather conditions for the Tuesday morning, the potential for breakouts from the swamp to its south or south-east was great. Some spoke of it in terms of inevitability.
- 17.6. The overnight Incident Action Plan (IAP) as it applied to the swamp, and insofar as it applied to what had been identified as the Yorkies Crossing Sector and the Swampy Sector, involved blacking out only. The original plan called for blacking out to a distance of 30 metres. This was revised by Ms Whillas, who was the Incident Controller overnight, to 60 metres. This strategy was inherently flawed in that it erroneously assumed that a fire edge within the swamp had been clearly identified along its entire length and that it was at all places accessible.
- 17.7. Many of the witnesses who gave evidence in the Inquest, for example members of the Coultas CFS Brigade and residents of Coultas generally, were highly critical that the CFS did nothing overnight or in the daylight hours of the Tuesday morning to eliminate either flammable vegetation in the swamp that was available to burn under the influence of a north or north-easterly wind or to eliminate the stubble that existed to the east, south-east and south of the swamp in Mr Cabot's property and that of Christopher Hull, that is Areas A, B and C. Aside from Mr Cabot's limited backburning operation in Area C, it is common ground that nothing was done in the paddocks to eliminate flammable stubble and pasture. As it was to transpire, it was that type of fuel which propagated the inferno across the landscape on the Tuesday.
- 17.8. In addition, it is evident that no work was undertaken to eliminate stubble to the south and south-east of the sugar gums. Again, it was that type of fuel that propagated and advanced the fire that proceeded to the south-east of the sugar gums on the Tuesday morning. The fire that was erupted in the sugar gums and burnt through stubble to the south and south-east of that location was in due course stopped by the fire line that had emanated from Christopher Hull's property in Area C. It is clear that the sugar gum fire was not responsible for any of the deaths that occurred on the Lower Eyre Peninsula on the Tuesday. There is no evidence before me that property damage of a



significant nature was caused by the sugar gum fire. The evidence would suggest that the sugar gum fire proceeded in a south-east direction and at one point in time was closely aligned to Gerschwitz Road on which the property of Messrs Charlton stood. I do not understand that there were major losses as a result of that discrete fire breakaway, although I can imagine that there must have been a great deal of fencing lost. Whilst not wishing to minimise the impact of that fire, there is force in the submissions of some counsel that I need not be troubled by conducting an in-depth analysis of how and why the sugar gums fire was generated. However, that is not to say that it is wholly irrelevant. The sugar gum fire was a difficult fire to suppress overnight. It had its own significant problems and attracted much of the resources that were at the disposal of the CFS and local landowners. It was an unwanted distraction to CFS appliances that might otherwise have been available to work in Areas A and C.

- 17.9. A conclusion is available that if the stubble in Areas A and C had been eliminated, or if not eliminated in its entirety, reduced or modified in some way, the fate of the deceased may have been different. If the fire had not been stopped altogether, which is somewhat unlikely, the timing of the arrival of the fire and its intensity at the fatal locations may have been different. It also has to be considered that if an element in a series of events is altered, then the outcome of that series of events may be altered as well. For example, if the breakout from Area A had been delayed, and if fire had arrived at the fatal location on Settlers Road at a later time, Messrs Murnane and Richardson may not have been at that location when the fire arrived.
- 17.10. There was an issue ventilated in the course of the Inquest as to whether or not the elimination or modification of stubble in Areas A and C, either wholly or in part was in any sense feasible and whether it would have made any difference. Same for water bombing. Such an analysis, as some have pointed out, is necessarily hypothetical. It is true that it is a hypothetical exercise not only in the sense that it involves hypothesising as to what suppression plan would have been appropriate, but also in the sense that it involves a measure of guesswork as to what information would have been available and would have been considered relevant by those making the necessary plans. There are limitations upon the ability of one to be definitive now as to the appropriateness of a number of options that may have been available to eliminate, or at least minimise, the risk of fire proceeding into the stubble adjacent to

the swamp. It is said that there is a limitation of one's ability to determine the precise weather conditions that existed in those locations at relevant times, where the fire edge was located precisely at material times and what the impact of local knowledge might have been on the ability to implement appropriate strategies. While that is true in part, in my view it is still an appropriate exercise to enquire whether if appropriate and feasible strategies had been considered and undertaken the deaths of the nine deceased might have been avoided or whether their chances of survival might have been enhanced. In this regard, for example, it is evident that Messrs Murnane and Richardson met their deaths because the fire that proceeded from the swamp across Area A towards their location did so largely unchecked. I do not mean here to diminish the courageous efforts of firefighting crews in that area including Wanilla and Coultas CFS Brigades, who fought bravely to quench the unquenchable. However, it has to be acknowledged that if an effort had been made to address the risk of fire proceeding across that area, and certain strategies had been implemented, the fate of Messrs Murnane and Richardson may well have been different. We know in this regard that as far as the swamp to the west of Area A was concerned, no firefighting or fire suppression strategy of any consequence was undertaken, as a result of which fire was able to escape from that part of the swamp without anything there to prevent it or reduce its impact. If its impact had even been reduced slightly, who is to say that the fatal outcome would still have occurred.

- 17.11. Accordingly, in my view it is not a purely hypothetical exercise to enquire what the appropriate strategies may have been on the Monday night and Tuesday morning so as to reduce the likelihood or impact of fire escaping from the swamp.
- 17.12. The south-eastern perimeter of the fireground overnight was approximately 7 kilometres in length. The areas comprised of the paddocks marked A, B and C on Exhibit C176b are approximately 800 hectares in total<sup>879</sup>. It is to be understood that these are not insignificant areas. In any analysis of what might have been achieved, one has to keep in mind that anything that was to be undertaken to modify the fuel load in those areas was going to be resource intensive.

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<sup>879</sup> Exhibit C192, page 1, Mr Cabot advises his property consists of 2000 acres of workable land = approx 800 hectares

17.13. The various firefighting and fire suppression strategies that might have been implemented

A number of differing firefighting and fire suppression strategies were discussed during the Inquest as possibly having been available to the CFS on the Monday night and Tuesday morning in an effort to stop breakaways of the fire from the south-east perimeter. The possible effect, chances of success and feasibility of these options were analysed in the course of the Inquest. These various options were not only analysed individually, but were subjected to a discussion of whether or not they could be used in combination and with what possible effect. In this regard, the views expressed by various witnesses, not only experts in the strict sense but also by experienced men of the land and firefighters was at times quite polarised.

17.14. A number of individuals have been passionately critical of the CFS and its members both volunteer and paid. Many of those individuals were themselves long time members of the CFS. The passion with which they agitated their views was an element of this Inquest that was not foreseen. In large measure, the length of this Inquest was the product of the vehemence with which these individuals were advancing their cause on the one hand and the determination of those who resisted them on the other.

17.15. The Inquest was sidetracked from time to time by an acrimonious ventilation of the motives of citizens who had participated in a series of meetings after these events and who had also engaged in provocative correspondence. There were accusations and counter accusations. Despite assurances from some quarters that this was all relevant to my inquiry, the assistance that I am meant to have derived from it all eludes me. I do not intend to deal with these issues.

17.16. The polarisation of views about what should have been done to limit the impact of this fire is exemplified by the issue of backburning. It was suggested in some quarters that a major backburning operation could and ought to have been conducted overnight in Areas A and C on Exhibit C176b, including not only backburning of the stubble in those areas but also into the swamp itself. At the other end of the spectrum, others suggested that such an exercise was simply not feasible and indeed would have been foolhardy and dangerous in the circumstances, bearing in mind the overnight weather forecast and a lack of human resources and firefighting appliances. This issue engaged the Inquest in much time consuming debate.

- 17.17. Other fire suppression strategies were debated in terms of their feasibility and possible effectiveness. These included the use of heavy machinery to eliminate or disrupt the stubble in the relevant areas, the use of water bombing aircraft and simply blacking out as much of the fireground as was possible.
- 17.18. A brief description of what is involved in each of those strategies, taken from the first report of Dr Kevin Tolhurst, is set out below:

### **'Backburning**

Backburning is a fire control operation undertaken, using a fire lit from a secure control line, to remove the fuel in front of a wildfire so as to stop its progress. The term "backburning" refers to the fact that the deliberately lit fire is burning in the opposite direction to the travel of the wildfire. To be effective, a backburn must be lit far enough away from the main fire so as to have time to Burn-out an area of sufficient depth to prevent it being breached by the wildfire either by burning across the backburn or by spotting across it. A backburn is usually hundreds of metres if not kilometres away from the main fire. When a backburn is lit, it burns independently of the main fire. It may take several hours or even days for the main fire to meet with the backburn. Burning-out operations may be needed to supplement backburning if the projected time for the main fire to reach the backburn is unacceptably long, e.g. may occur during a time of forecasted severe fire weather.

Backburning is undertaken at a time, location and in a way to enhance the controllability of the fire. Two main reasons for Backburning are: 1) to bring the fire out to a control-line in a location and at a time that can be more easily defended, or 2) to Burn-out the fuel ahead of an advancing fire front so as to make the fire front more controllable. If the head of the main fire would not be controllable at the time and location of putting in the backburn, then there is a high probability of the Backburn escaping and advancing the fire front. Areas chosen as being suitable for backburning would have the advantage of lower fuel hazard levels, more favourable topography (burning downslope rather than upslope, or sheltered rather than exposed), and pre-existing fuel breaks such as roads, bare/green paddocks, lakes, rivers, etc.. The time chosen to undertake a backburn is likely to be in the milder part of a diurnal or synoptic weather pattern when the fire danger is lower.

An essential component of a Backburning operation is Blacking-out to prevent an escape downwind of the Backburn.

Backburning is a complex and dangerous task and should only be undertaken by skilful firefighters after a due planning process including a risk analysis.

### **Burning-Out**

Burning-out is a fire control operation, using a fire lit from a secure control line, to remove the fuel between the control line and the fire edge. Burning-out can be conducted anywhere around the fire perimeter. The purpose of burning-out is to reduce the amount of time taken for the fuel within the fire area to be burnt out and for this burning out to occur under close surveillance, hence reducing the chance of the fire breaching the control line. The distance between the burning-out operation and the wildfire edge ranges

from metres to tens of metres. The burning-out fire and the wildfire edge are close enough for them to interact and hence they do not burn independently of one another. The time taken for the burning-out fire and the wildfire to join is a matter of minutes. Burning-out operations start from a secure point (an anchor point) on the fire edge and systematically progresses around the perimeter of the fire. The anchor point is usually an area of recently burnt ground abutting the control line.

A variation of Burning-Out is when there is a significant area of unburnt fuel between a Backburn and the fire. This intervening fuel may be burnt out under favourable conditions to prevent the wildfire from making a significant “run at” the backburn with the possibility of the wildfire becoming large enough to breach the backburn. This type of Burning-Out is within a burnt boundary and so should have a lesser likelihood of escape than a Backburn.

Burning-Out requires constant vigilance, but is a simpler operation than Backburning. Most experienced firefighters can successfully conduct Burning Out operations.

### **Blackening-Out**

Blackening-Out is the active process of seeking and locating burning or hot points within a burnt area and then going about cooling them to ambient temperature. As a training guide, if it is too hot to put your hand on, then it is a potential source of ignition. Blackening-Out is an integral part of the fire control process and can begin soon after the first suppression action is taken, and will continue until a fire is Safe. A fire is declared Safe when there is no possibility of reignition or escape and this is when the fire has been completely Blackened-Out. This may take several days, several weeks or several months in the case of large fires. Typically, Blackening-Out will be done progressively from the edge of the fire. In the first instance, Blackening-Out may only extend a few meters from the control line, but progressively, the depth of the Blackening-Out operation will typically move 30 m, 50 m, 100 m in from the edge.

The process of Blackening-Out involves the dissipation of heat and the prevention of further combustion by exposing burning material to the air, quenching with water or foam or a combination of all three. With burning woody material or large accumulations of fuel such as haystacks, it is seldom adequate to use water or foam alone, it is necessary to physically break open or disperse the burning material so that it can cool in the air or be completely exposed to water or foam. Water and foam are really only effective on the surface of fuels unless flooding is used which is almost always an inefficient and often ineffective means of fire suppression. The use of handtools such as axes, shovels, chainsaws and rakehoes are important in Blackening-Out and earthmoving equipment such as bulldozers, backhoes and excavators may be used to break open fuels to cool them.

### **Mopping Up**

Mopping Up is used almost synonymously with Blackening-Out, but has the unfortunate association of being more water or foam based. Mopping Up has the connotation of “cleaning up” after a fire. Blackening-Out is a more forceful and useful term when referring to fire suppression

### **Patrolling**

Patrolling, in the context of fire suppression, is the act of moving around a fire and looking for problems or potential problems. Patrolling may be foot-based, vehicle based or aircraft based. The implied assumption of Patrolling is that once a problem is found, it will be dealt with appropriately. Patrolling should be more than about gaining “awareness”, it should be about reducing the level of risk.

The types of problems that Patrolling may identify include hotspots that may cause reignition, areas of unburnt fuel which may reignite and cause an escape across the control line, trees or other obstructions across the control line preventing free movement around the fire, and trees, power poles, rocks or other potential hazards that may fall or move and cause damage.

### **Black Edge**

Used in the context of fire control, to “Black Edge” is to use the burnt out edge of a fire as a control line. The implication is that whereas the usual fire control practice is to use a mineral earth fuel break as a control line, when you “Black Edge” you rely on burnt out fuel as the fuel break. This is normally done in light fuels that burn out quickly, such as grasslands, or in remote and inaccessible locations where fuels and/or topography combine to create conditions where there is little burning edge and few hotspots. Typically, “Black Edging” is used where fuels are very light or in drainage lines such as dry creek beds or along rocky ridges. A Black Edge can be considered secure when all hotspots along the edge have been located and Blacked-Out.’<sup>880</sup>

- 17.19. It will be noted that none of the fire suppression techniques described above, other than blacking out or possibly black edging if you like, were undertaken either on the Monday night or the Tuesday morning in relation to the south-eastern perimeter of the fireground. The only exception to that was the Cabot backburn in Area C. This was conducted by Mr Cabot on his own land with the assistance of one or two other people. The CFS were not aware of this operation at the time that it was conducted.
- 17.20. It will also be noted that no-one has suggested that any of the strategies other than blacking out or black edging were in any sense unusual or rarely conducted. In respect of backburning, and one would include in this burning out as well, it was said that it was a strategy of last resort. This appears to have been the accepted CFS doctrine<sup>881</sup>. However, such a claim has to be examined against the background that four other backburning operations of some significance were conducted on the Monday. Although a distinction is drawn between backburning and burning out in Dr Tolhurst’s report, it is a fairly nice distinction and one which really had no discernible impact in the course of the Inquest in terms of terminology. Where in these findings I refer to the practice of backburning, I am referring to the strategy of burning

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<sup>880</sup> Exhibit C281, pages 17 to 19

vegetation in order to eliminate it in the front of an existing or potential fire. Indeed, further backburning was conducted on the Tuesday evening which was supervised by the Group Officer of the Cleve CFS Group on the northern edge of the vastly expanded fireground. Suffice it to say at this stage that this particular backburn was successful and had been, significantly, attended with some risk. The practice of backburning was a practice that was not foreign to many of the participants in this firefighting effort both on the Monday and the Tuesday. It was a practice that seems to have been implemented with good effect for the most part. I will discuss the inherent dangers in backburning when I deal with that as a possible firefighting strategy.

## 18. Efforts at blacking out in the swamp

18.1. As seen, the Incident Action Plan involved a strategy of blacking out the fire perimeter to a depth of 30 metres. This was revised to 60 metres by Ms Whillas. Thirty metres is selected as a basic measurement because it is approximately the length of a CFS appliance fire hose. Sixty metres therefore represents two hose lengths.

18.2. Many opinions were offered during the course of the Inquest by farmers and experienced firefighters as to the efficacy of blacking out in the circumstances that prevailed on the Monday night. For instance Mr Peter Doudle, the Captain of the Coultas CFS Brigade said this:

'If they were aware of the situation that was in this creek in Peter Cabot's and they thought that they could go all through that area there and black that out (INDICATES) and black it out for some distance inside, remembering that this virtually was inaccessible to a vehicle, you would want an army of men with knapsacks, rake hoes and whatever else that you could get in there to deal with it, it possibly could be done, but the timeframe wasn't there and the planning wasn't there to do that. So I would say that would be a pretty doubtful plan.'<sup>882</sup>

Mr Doudle suggested that the plan of blacking out simply was not practical. He pointed out that the terrain involved 'scrubby country' and was difficult to walk through. He said:

'... - if you imagine trying to drag a hose through stuff you need a lot of men on the side of the hose, shifting it, lifting it, pulling it with you; no, its not an option.'<sup>883</sup>

18.3. Mr Brian Foster of Coultas said this in relation to blacking out:

'You can't, its impossible to do it unless you've got an extraordinary amount of resources like the Army or something.'<sup>884</sup>

Mr Foster also suggested that it would be impossible to determine an action plan for a fire edge unless you knew what it involved and had the edge been physically inspected. He said:

'In other words, you either had to have a look at it or you had to talk to in this case, to the landowner - yes. You would have needed that information before you determined a course of action. Now in the case of a swamp, there are two or three courses of action that could have been taken. Blacking it out was not an option in this case because of

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<sup>882</sup> Transcript, page 1341

<sup>883</sup> Transcript, page 1342

<sup>884</sup> Transcript, page 1971



where it was, because of its inaccessibility and because there was water involved as well. You had the option of walking people in with rake hose (sic) and knapsacks and following any tracks that naturally occur and attempting to -' <sup>885</sup>

- 18.4. Similar opinions were expressed by others, in particular Mr George Hull<sup>886</sup>, Mr Wayne Hull<sup>887</sup>, Mr John Myers<sup>888</sup> and Mr Grant Shepperd<sup>889</sup>.
- 18.5. On the other hand others expressed the view that blacking out can be quite effective. Mr Robert Maddern and Ms Angela Whillas were obviously in favour of the strategy of blacking out, as was Mr Chambers. They were to defend this as the appropriate strategy as the measure of choice for this fireground. Mr Napier, the Captain of the Lincoln CFS Brigade which was involved in the blacking out exercise, said that in respect of the exercise, which in his case involved blacking out to a distance of up to 90 metres, that he was satisfied that he had put everything out in the area that he had been working in<sup>890</sup>. On the other hand, he agreed that certain types of vegetation such as cutting grass may appear to be out and then reignite when the wind strengthens<sup>891</sup>. He also agreed that it was difficult to be satisfied that everything had been put out completely. It has to be borne in mind that Mr Napier's efforts and those of his crew were confined to a specific location in the vicinity of the hundred line and that this work took place in the early hours of the Tuesday morning. Mr Napier told me that the 90 metres of blacking out had been achieved by way of hose-laying and in the particular circumstances at that particular location, their efforts had been successful. The Greenpatch CFS appliance were also involved in the blacking out exercise in nearby locations. However, whilst their efforts are to be lauded, there was a far greater task of blacking out that needed to be undertaken than that which was confined to that particular location, which was for the most part, in the vicinity of the hundred line that divided Christopher Hull's property from that of Peter Cabot. Dr Tolhurst said this:

'I don't think it would be very effective given the shortage of water in the area. Hose lays are quite laborious exercises and they certainly get you further into the swamp, but it takes a lot of effort to shift them. I'd still be supporting the drive-by (sic) firefighting because it's easier to carry an axe than it is to drag a hose around through a swamp area. There may be some situations on parts of the swamp where that might be feasible, but in

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<sup>885</sup> Transcript, pages 1971 and 1972

<sup>886</sup> Transcript, page 2832

<sup>887</sup> Transcript, page 3213

<sup>888</sup> Transcript, page 4860

<sup>889</sup> Transcript, page 7871

<sup>890</sup> Transcript, page 5155

<sup>891</sup> Transcript, page 5156

general it's not a feasible option to deal with the kilometres of swamp that needed to be treated.'<sup>892</sup>

- 18.6. Messrs Gould and Smith offered certain views about the strategy of blacking out. Mr Gould regarded the swamp area to be very difficult in terms of direct blacking out because of access and other factors<sup>893</sup>. Dr Smith was of the view that blacking out can be a successful containment measure that requires constant monitoring particularly in treed areas. He suggested that it was very difficult to black out in swampy areas because of burning residual material such as in roots that cannot be seen. He described it as a '*very, very difficult activity*'<sup>894</sup>. Dr Smith suggested that it would be a very difficult job to black out within the swamp with any degree of certainty. In addition, the finer material within the blacked out area would have the tendency to dry out in low humidity and would again become available for ignition. In all, Dr Smith agreed that unless you are able to extinguish all fire by blacking out you would achieve very little and said:

'Yes, it is not an exercise I would actually, from my experience - you would undertake with a high degree of probability of success at all.'<sup>895</sup>

- 18.7. Mr Ferguson on the other hand suggested that with proper blacking out and when the heat is completely removed from burning or burnt material there should not be any reignition<sup>896</sup>. Mr Ferguson suggested that fine material such as that referred to by Dr Smith would have been likely to have already burnt out in any event. Mr Ferguson rejected the notion expressed by some that blacking out on the Monday night was a waste of time. He said this:

'Well, I think any blacking out is reducing the amount of burning material within the fire area, and it will be reducing the probability of the - or reduce the number of potential fire brand and hot spots that could then send a spot fire. Now you don't know that you are going to guarantee - sorry, you can't guarantee there won't be a spot over, but the more blacking out you do, the lower the probability of getting a spot over or a reignition. Now because you know that it's not going to guarantee it, I would be proposing this strategy of blacking out along the actual fire edge be done in conjunction with another strategy.'<sup>897</sup>

Mr Ferguson suggested that in addition to blacking out the construction of a mineral earth line was also highly desirable with the weather conditions forecast. He

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<sup>892</sup> Transcript, page 19524

<sup>893</sup> Transcript, page 17363

<sup>894</sup> Transcript, page 18056

<sup>895</sup> Transcript, page 18056

<sup>896</sup> Transcript, page 18255

<sup>897</sup> Transcript, page 18263

suggested that such a line would be placed as close as practicable to the burnt edge, although acknowledged that even that exercise could be problematic because of the location of the scrub.

- 18.8. Dr Tolhurst in his first report described and analysed the chances of success for a number of options that may have been utilised in relation to the south-eastern perimeter of the overnight fireground. Included in that discussion was analysis of the means by which a blacking out exercise may have been implemented.

### 'Option 1 Black-out and Consolidate

**Objective:** To minimise the amount of active fire in the burnt area and reduce the chance of an escape under the strong northerly winds forecast for Tuesday.

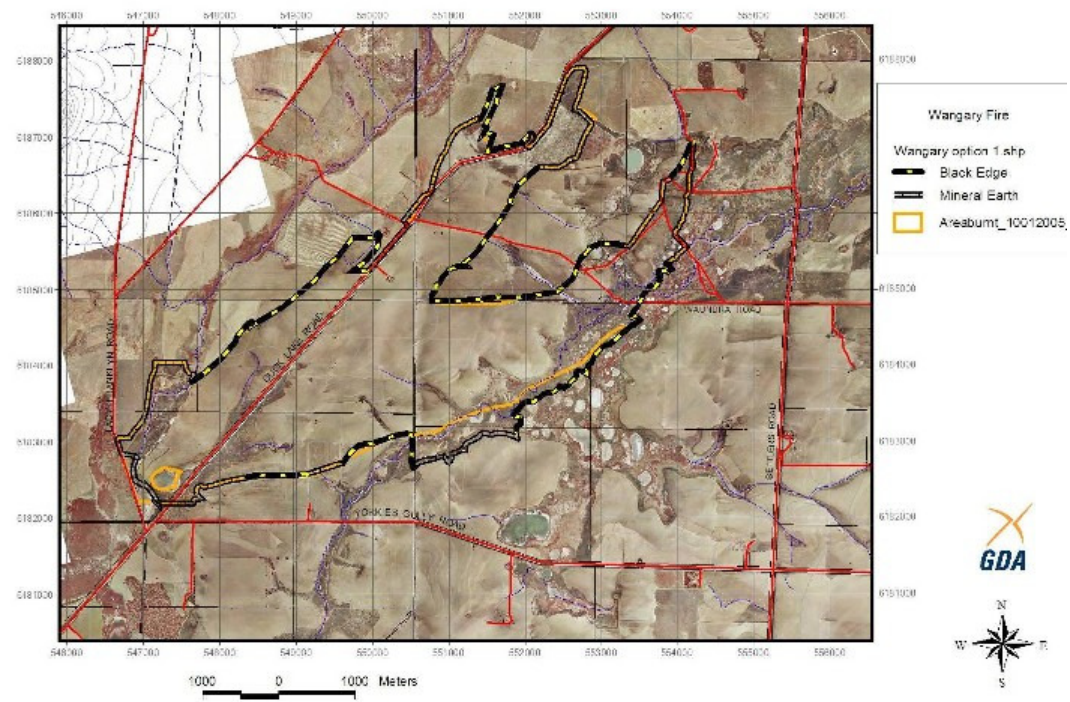


Figure 11 Option 1. Proposed method of control on Monday 10th January 2005 around the Wangary Fire perimeter. Black Edge means blacking out fire edge without necessarily using a mineral earth fuel break. Mineral Earth means a fuel break is used in conjunction with blacking out and burning out.

### Works Required by 0700 hrs:

Lady Franklyn Sector –

- 2.0 km of edge to treat
- Establish a mineral earth break on all edges and make sure there is no area of continuous surface fuel for 50 m back from the earth break. Burn-out areas as required or realign control line.
- Black-out all burning trees, stumps, logs etc for two tree heights from the fire edge (about 50 m).

- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

Northwest Sector –

- 11.3 km of edge to patrol and treat.
- Black-out all burning material within 50 m of fire edge

Scrubby Sector –

- 3.3 km of edge to treat.
- Establish a mineral earth break on all edges and make sure there is no area of continuous surface fuel for 50 m back from the earth break. Burn-out areas as required or realign control line.
- Black-out all burning trees, stumps, logs etc for 50 m from the fire edge. The two main areas to concentrate on are the Mallee block and the “scrub” block near Hull’s property.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

Swampy Sector –

- 3.1 km of edge to treat.
- Establish a mineral earth break or a “black edge” on all edges and make sure there is no area of continuous surface fuel for 50 m back from the break. Burn-out areas as required or realign control line.
- Black-out all burning material etc. for 50 m from the fire edge. Tie control line into existing claypans and clearings as much as possible.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

Yorkies Gully Sector –

- 3.6 km of edge to treat
- Establish a mineral earth break or a “black edge” on all edges and make sure there is no area of continuous surface fuel for 50 m back from the break. Burn-out areas as required or realign control line.
- Black-out all burning material etc. for 50 m from the fire edge. Tie control line into existing claypans and clearings as much as possible.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge..

**Resource Allocation:**

Lady Franklyn Sector – 4 tankers and crew

Northwest Sector – 1 tanker and crew

Scrubby Sector – 3 tankers and crew

Swampy Sector – 3 tankers and crew

Yorkies Gully Sector – 4 tankers and crew

**Risk Assessment:**

Hazards / Impediments

- No earthmoving equipment available until daylight so all line construction will have to be by hand and therefore limited in extent.
- Weather conditions may deteriorate soon after midnight and therefore time will be spent chasing flare ups rather than burning out and Blacking-Out.
- Difficult to see in dark along inactive edge without head-lamps.
- Difficult getting to fire edge in swamp area.
- Crews have been working all day so will be tired and not able to do a lot of physical work.
- Poorly mapped fire boundary and little intelligence on extent and condition of control lines.

**Chance of Success (completion and control)**

- Moderate chance of completion by Tuesday morning.
- Moderate chance of control on Tuesday.

**Consequence of Failure**

- An escape from the fire boundary with forecast conditions for Tuesday would mean that escapes are likely to be uncontrollable.
- Area to south and east of fire area is highly populated and productive farmland Port Lincoln within range of an early escape.
- Fire could potentially spread for 12 hours under Very High to Extreme fire danger conditions on Tuesday – potential spread is therefore 10's of kilometres to the south or east.<sup>898</sup>

Dr Tolhurst was to discuss a number of other options that may have been considered. They were all premised on the assumption that a blacking out exercise would have been conducted as well. Dr Tolhurst expressed the view that what he suggested above in terms of blacking out was similar to the fire suppression plan that had been utilised on the Monday evening, save and expect for the distribution of resources. That to my mind was something of an understatement. I say this because only very limited resources were employed on the Monday night in respect of the task of blacking out the south-eastern perimeter in the swamp. However, Dr Tolhurst expressed the view that a comprehensive blacking out exercise had the greatest chance of success in terms of the likelihood of completing the task with the resources available and in terms of being successful in controlling the fire under the forecast weather conditions

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<sup>898</sup> Exhibit C281, pages 32 to 34

for Monday night and Tuesday. The reason that Dr Tolhurst advanced for this proposition was that blacking out provided the greatest period of time for burning and smouldering material to burn out of its own accord and because there were in his view sufficient resources at hand for the task to be completed.

18.9. Dr Tolhurst said this in relation to blacking out:

'In summary, it is my considered opinion, that the option to black-out and consolidate was the most appropriate course of action to take. It is also my considered opinion, that there was insufficient intelligence about the fire perimeter for adequate and effective planning to be undertaken, particularly in regard to the Yorkies Gully Sector. It is also my considered opinion, that the Blacking-Out operations were not as effective as they might have been. It is my opinion that greater use of dry firefighting techniques should have been used.'<sup>899</sup>

18.10. In his oral evidence, Dr Tolhurst acknowledged that as a general rule it takes two days to black out a line to make it safe<sup>900</sup> and that one would not necessarily achieve 100% blacking out in the swamp, although one would be able of course to reduce the number of hot spots.

18.11. Dr Tolhurst also referred in his evidence to the strategy of dry firefighting in which firefighters on foot use implements such as rake hoes to turn over burning material and extinguish it. Such a strategy of course requires firefighters to leave the appliance and venture into the fireground. No-one suggested that such a strategy did not involve significant manual labour. Mr Ferguson was also of the view that dry firefighting strategies could be employed. Dr Tolhurst suggested that such dry firefighting techniques did not seem to be part of the culture or the training of firefighters in the Region with which this Inquest is concerned. There was evidence before me, however, that members of the Lincoln crew did in fact engage in dry firefighting with the use of implements, albeit in a very confined area near the hundred line.

18.12. It will be noted that in Dr Tolhurst's first report<sup>901</sup> he suggested that there had been, in his opinion, enough resources to achieve the blacking out option within the time available. Of course, his view was predicated on the basis that the work would be complete by 0700 hours on the Tuesday. There appears to be no obvious reason as to why work of this nature could not be continued after that time. In addition, there does

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<sup>899</sup> Exhibit C281, page 44

<sup>900</sup> Transcript, page 19083

not appear to have been any reason as to why blacking out along the south-eastern perimeter of the fire could not have started as early as 9pm on the Monday evening if it was correct that by then the fire had been contained.

18.13. In evidence, Dr Tolhurst was asked this:

- 'Q. In any event, you reached the conclusion, I think, that the number of appliances and number of crew, was sufficient to adequately blackout the whole of the perimeter in accordance with what you thought should be done.
- A. That's correct, I think it was achievable if they were able to work efficiently and effectively, yes.
- Q. But in the knowledge that there was still a likelihood that it was going to get out in the morning.
- A. Yes.
- Q. If you'd called in more appliances and crews of course you would diminish that likelihood, wouldn't you, of a break-out.
- A. Diminish but not remove, yes.
- Q. I'm not suggesting absolute removal but you would enhance your chances of there being no breakaways or fewer breakaways.
- A. Well, you would be able to blackout to a greater depth for example if you had more resources.'<sup>902</sup>

Specifically, Dr Tolhurst suggested that with some effort the task of dry firefighting as a containment measure should have been achievable in relation to Area C by using three CFS crews<sup>903</sup>.

18.14. In Dr Tolhurst's report, he said this:

'It is my opinion that the resources were not as effective in Blacking-Out the fire as they could have been. This was due to poor intelligence on the fire perimeter, consequential poor allocation of resources between the sectors, and inadequate use of dry-firefighting techniques in Blacking-Out.'<sup>904</sup>

The fact of the matter was, as Mr Humphries in cross-examination pointed out to Dr Tolhurst, there was no work of the kind that Dr Tolhurst contemplated undertaken in the area south of Warunda Road, that is Area A and only limited work undertaken in the Yorkies Crossing Sector after 3:30am. Dr Tolhurst said that in his view the work was inadequate, given the potential issues and amount of work needing to be done.

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<sup>901</sup> Exhibit C281

<sup>902</sup> Transcript, page 19390

<sup>903</sup> Transcript, page 19276

<sup>904</sup> Exhibit C281, page 46

He suggested that the perimeter in question should have been an area of relatively high priority and required '*a fair amount of manual work*'<sup>905</sup>. Dr Tolhurst summed it up by saying in relation to the work that was undertaken:

'So it was inadequate in the context of the fire and the potential for the fire later.'<sup>906</sup>

18.15. In Section 7.4 of Dr Tolhurst's first report he addresses the issue of the best suppression strategy 'with the information available after the event'<sup>907</sup>. Dr Tolhurst in this section premises a number of conclusions 'given the hindsight of what weather conditions actually occurred and the size and extent of the disaster that followed the escape of the fire on Tuesday 11 January, 2005'<sup>908</sup>. Insofar as Dr Tolhurst suggests here that the matter can only be examined with the wisdom of hindsight, especially insofar as it relates to the strategy of blacking out, I would reject that. As seen, the strategy of blacking out was the very Incident Action Plan that was said to have been utilised in respect of this fireground overnight. Furthermore, the weather conditions that actually occurred at the time of the breakouts from Areas A and C on the Tuesday morning were in keeping with what had been predicted. In my opinion there is no reason to conclude that the strategies that Dr Tolhurst said ought to have been implemented with the benefit of hindsight should not have been implemented with the benefit of foresight. The risk of breakouts was foreseeable, if not foreseen, as was the potential destruction. If blacking out should have been the strategy of choice, then quite clearly it was a strategy that should have been implemented with the necessary planning and vigour. The necessary planning and vigour that was required in my view was also ascertainable at the time. In this section of his report Dr Tolhurst states as follows:

'Blacking-Out should have been undertaken to a depth of 50 m and sections of the control line where this had been achieved should have been accurately reported back to the IMT so that it could be accurately mapped and resource allocation reviewed as needed. This would also have reduced the need patrolling in those areas so efforts could be concentrated on more problematic areas.

Any areas not treated by 0400 hrs should have become a major concern for the IMT and action should have been taken then to reduce the level of risk.'<sup>909</sup>

18.16. For Mr Ferguson's part, he suggested that he would have commenced blacking out in the swamp from the north as early as possible<sup>910</sup>.

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<sup>905</sup> Transcript, page 19287

<sup>906</sup> Transcript, pages 19287 and 19288

<sup>907</sup> Exhibit C281, page 44



18.17. That blacking out should have been commenced as early as possible, and should have been conducted extensively in the areas where access was feasible, is self-evident.

18.18. There was really no suggestion during the course of the evidence that there were insufficient resources to facilitate an attempt to black out the south-eastern perimeter. At page 33 of Dr Tolhurst's report he suggests that an appropriate level of resources for the blacking out in those two sectors would have been three tankers plus their crews for the Swampy Sector and four tankers and crew for the Yorkies Crossing Sector. There is no suggestion that such a level of resources would not have been available on the Monday night if an effort had been made to acquire them. Mr Trigg, the Group Officer for Cleve Group had spoken to Mr Vogel, the Regional Duty Officer, at 10pm on the Monday evening and offered to send four appliances overnight. His offer was refused. Mr Damian Puckridge, the Sector Commander of the Scrubby Sector on the Monday night, said that at one stage seven trucks sat idle for a period of time in his sector<sup>911</sup>. This is no reflection on Mr Puckridge or the crews of the seven appliances because that is what they were instructed to do. In any event, there does not appear to be anything standing in the way of other appliances and crews having been sought from other groups in the region for the purposes of blacking out.

18.19. As to resources, Dr Tolhurst said this in relation to blacking out:

'In my judgment and experience I would have thought that the number of crew and appliances on line were sufficient to carry out that task. More appliances, for example if you had doubled the number of appliances it may have given you maybe a 10 or 15% increase in productivity. Doubling the number of resources doesn't necessarily double your productivity rate. I think there were adequate resources to do that blacking out and consolidation task at the night. More resources, yes, would have helped, but it would have been of marginal benefit.'<sup>912</sup>

I accept that evidence and accordingly find that better use and deployment of the existing resources probably would have resulted in more effective blacking out of the fire perimeter.

18.20. In Dr Tolhurst's report he suggested that the chance of success of a blacking out operation of the kind he described involved a moderate chance of completion by the

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<sup>908</sup> Exhibit C281, page 44

<sup>909</sup> Exhibit C281, page 45

<sup>910</sup> Exhibit C280a, page 44

<sup>911</sup> Transcript, page 1106

Tuesday morning and a moderate chance of control on the Tuesday<sup>913</sup>. As to what he meant by a moderate chance of control he said a number of things in the course of his evidence. Dr Tolhurst expressed the view that there probably would not have been a 100% blackout achieved because some of the fuels would have continued to burn for a number of hours. He suggested that you would not expect a 100% extinguishment of hot spots in an 8 to 12 hour period but that it could be achieved in a period of two days. However, blacking out would have reduced the number of hot spots as opposed to eliminating all of them<sup>914</sup>. The precise degree of control that the blacking out exercise contemplated by Dr Tolhurst would have provided will of course never be known. However, Dr Tolhurst agreed with Mr Morcombe's proposition that '*there was still a likelihood that it was going to get out in the morning*'<sup>915</sup>, but agreed with another of his propositions that if there had been more appliances called in it would diminish, albeit not remove, that likelihood.

18.21. In explaining what Dr Tolhurst regarded as a moderate chance of success as far as blacking out was concerned, he expressed the view that whatever was done on the Monday night the fire was probably going to escape. He said this:

'It is. It's been my experience that you really need about two days to adequately black-out an edge to be able to call it controlled from the point of view of the next severe fire weather day. The chance of it escaping in one or a few locations I think in my analysis I think I said the chance of success was only moderate, which I would consider to be perhaps less than 50:50 chance might be 40-50% chance of preventing escapes, which is not a very good odd. But still probably the best you could have hoped for in that situation, which was minimising the impact rather than preventing any impact.'<sup>916</sup>

I asked Dr Tolhurst this question:

'Q. If, as you say, even with the necessary work being conducted along that southern south-eastern boundary by way of blacking out and the use of hand tools and what have you, it was still likely that you would get breaks out of that swamp because you couldn't necessarily deal with everything overnight. That's something that could be foreseen, presumably.'

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<sup>912</sup> Transcript, page 19094

<sup>913</sup> Exhibit C281, page 34

<sup>914</sup> Transcript, page 19084

<sup>915</sup> Transcript, page 19390

<sup>916</sup> Transcript, pages 19141 and 19142

He gave the following answer:

'A. In the circumstances, I think, it had a high probability of occurring, so from that point of view I think you would have expected that that would be a realistic scenario.'<sup>917</sup>

Nevertheless, Dr Tolhurst did suggest that a proper blacking out exercise would give one cause for hope that the impact of a breakout would be minimised. Dr Tolhurst explained it in these terms, namely that the more blacking out that is achieved the more controllable the fire will be, and the less damage will be likely to occur the following day. That would be so if one could reduce the amount of spotting by increasing the amount of blacking out in the time available. Dr Tolhurst said:

'...so it's really about not trying to achieve 100% control but trying to mitigate against the potential losses, and increase your chance of early suppression of any escapes, the chance of escapes I think were still probably better than 50%.'<sup>918</sup>

18.22. It is to be acknowledged that a clear majority of firefighters and farmers who were asked to express a view during the course of the Inquest about the feasibility of blacking out in Areas A and C on Exhibit C176b were of the view that it would be extremely difficult, and in any event would require a significant level of knowledge about the conditions within the swamp. Mr Cabot, the owner of the property abutting the swamp suggested that it would be very difficult to get to the overnight fire line, particularly along the line A to D on his plan PNC2<sup>919</sup>. Mr Russell Branson who was the overnight Operations Officer suggests that a plan to blackout adjacent to Area A would have been very difficult. The fire at its closest point to the edge of A on the Monday night would have been about 200 metres. Mr Branson suggested that you would be able to gain access to a location within 200 metres. However, he said that the fire was up to 500 metres in and gaining access to fire at that sort of distance was going to be a lot more difficult. Mr Branson later in his evidence acknowledged that while blacking out in the swamp to the west of Area A would be very difficult, it would not be totally impossible. Nevertheless, Mr Branson seemed to agree with the proposition that an Incident Action Plan that involved blacking out was flawed to the extent that it applied to that part of the swamp to the west of Area A<sup>920</sup>. There appears to be some little tension between the views of men who were involved in the firefighting exercise on the Monday night and those of Dr Tolhurst about the

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<sup>917</sup> Transcript, page 19292

<sup>918</sup> Transcript, page 19143

<sup>919</sup> Transcript, page 3696

feasibility of blacking out in the swamp. There was blacking out in Area C as we have seen, albeit occurred quite late in the piece and did not appear to be extensive. As far as Area A is concerned it is impossible for me to determine how difficult it would have been to blackout in the swamp adjacent to that area because at the end of the day no-one attempted to do so.

- 18.23. As to the feasibility of blacking out, Mr Ferguson gave a great deal of evidence. This evidence supplemented and expanded upon views that he had expressed in his witness statement<sup>921</sup>. Mr Ferguson pointed out that in coming to the conclusions that he did, he had the benefit of about 3 or 4 hours of driving around the fireground from the properties of Messrs George and Les Hull through the Warunda Road extension and through the paddocks to the south. Mr Ferguson told me that in order for effective blacking out to have been achieved in the swamp a proper reconnaissance might have involved a detailed walk of the whole edge. He suggested that the most effective way to approach the fire edge in the swamp would have been from the northern side, that is the side opposite Areas A, B and C, or when one looks at Exhibit C176b, on the left-hand side of the swamp. That would have meant that fire crews would proceed through burnt ground to arrive at the edge of the fire. To have approached it from the south, or from Areas A, B and C, would have meant that firefighters would have had to work through unburnt fuel to gain access to the fire edge. The unburnt fuel presented as a more significant barrier to access on foot than burnt fuel. He said:

'But generally, to walk through burnt ground in a swamp or in a forest, is relatively easy, or easier than walking through the unburnt fuel, because obviously the fuel has been removed by the fire, so long as it's cool enough and there are not trip hazards or fall hazards.'<sup>922</sup>

Naturally at night time there are potential difficulties. However, Mr Ferguson was of the view that access is easier and visibility is greater and accordingly the safety aspect might be better fulfilled by approaching a fire edge through burnt material. As part of such a strategy, Mr Ferguson suggested that tools would be utilised such as rake hoes, so that with a combination of direct attack with water, using hose lays, supplemented by rake hoes, very effective work could be achieved by approaching the edge of the fire from the northern side<sup>923</sup>.

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<sup>920</sup> Transcript, page 10434

<sup>921</sup> Exhibit C280a

<sup>922</sup> Transcript, page 18241

<sup>923</sup> Transcript, page 18243

- 18.24. Mr Ferguson made it plain that the task that he contemplated would not necessarily be an easy one and clearly that is correct. Mr Ferguson suggested that to commence the strategy one would select an area that possessed the least complex fuel structure. He suggested in this case that area would be that to the north of Area C. Mr Ferguson suggested that this would enable one to gauge more quickly how successful the tactic could be. Mr Ferguson suggested that if one worked along the edge of the fire through the swamp in a north-easterly direction towards Messrs Hull's properties, and as the fuel structure became more complex, so too would the suppression task, particularly when one was confronted with elevated melaleuca and mallee vegetation. Mr Ferguson, however, suggested that this was a tactic that could have been employed all the way along the northern edge of the swamp, and that would include of course that part of the swamp that was to the west of Area A on Mr Cabot's property. That observation of course was subject to the riders that I have identified such as the fuel structure becoming more complex as one proceeded along the swamp in a north-easterly direction.
- 18.25. As to the resources that might be required in order to carry out this strategy, Mr Ferguson suggested that if one had a strike team, or more, of vehicles on the Monday night, *'they could do some fairly serious damage, in terms of mopping up that edge'*<sup>924</sup>. Mr Ferguson told me that if he was on the spot he would have asked for a strike team and if there had been another strike team available perhaps he would have asked for that as well. That of course would have depended on reports from the crews about ease of access and difficulty of extinguishment. However, Mr Ferguson stated that with the complexities and uncertainties involved in the fire through the swamp on the Monday night, in his view there was no certainty that by the time the wind shifted to the north that the task would have been completed, and so other tactics would have required consideration in addition to blacking out<sup>925</sup>. Indeed, Mr Ferguson said that it was always going to be very difficult in any event to have any real surety that one would have extinguished the fire right to its edge and back from the edge. Nevertheless, blacking out by the use of hose lays and tools in terrain of this nature in Mr Ferguson's view could constitute a very effective technique, but one that needed confidence that it could be used and used well on the part of those implementing it.

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<sup>924</sup> Transcript, page 18246

<sup>925</sup> Transcript, page 18248

## 18.26. Mr Ferguson said:

'One perhaps just needs to have a little bit of experience or a bit of leadership shown at the crew leader level to say 'Yes, we can do this'.'<sup>926</sup>

The observation needs to be made that far no-one really considered whether the fire edge in the swamp could be treated in this fashion, particularly in relation to the swamp opposite Area A. The difficulty was that the fire edge in the swamp to the west of Area A was never properly surveyed either from Area A or from the northern side of the swamp. No real and meaningful assessment was made as to whether or not the strategies suggested by Mr Ferguson could have been employed. Suffice it to say, they were never attempted and so one can not be entirely certain what the feasibility of the strategy would have been in relation to the swamp to the west of Area A and whether it would have made any difference in terms of breakouts the following morning under the influence of a north or north-westerly wind.

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<sup>926</sup> Transcript, page 18245

## 19. **Backburning**

- 19.1. If any one topic occupied more time than any other during the course of this Inquest it was backburning. The issue under much discussion was the appropriateness and feasibility of conducting backburning along the south-eastern perimeter of the fire in Areas A, B and C on Exhibit C176b, that is to say the paddocks in Mr Cabot's and Christopher Hull's properties. As already observed, the elimination of the stubble fuel in Areas A and C would have dramatically altered the course of the fire following breakaways from the swamp on the Tuesday morning. There does not seem to be any serious contention to the contrary that backburning, particularly if it had been conducted in the stubble of Areas A and C, would have had some positive effect on the course of the fire on the Tuesday morning, either by stopping it dead in its tracks or at least altering its course, speed or timing. The bone of contention involved the appropriateness and feasibility of backburning, bearing in mind the weather forecast for the early hours of the morning and resources in terms of appliances, firefighters and water. Another issue under discussion was whether backburning should have also taken place in the swamp. One school of thought was that backburning into the swamp would simply have introduced an even bigger inferno into that part of the fireground. Others contended that burning into the swamp would have eliminated much of the swamp fuels that were available to burn when the conditions deteriorated on the Tuesday morning.
- 19.2. Backburning was conducted in other locations on the Monday evening, including that conducted by Mr Cabot. Mr Cabot's backburn was held up as an example par excellence of why one should not backburn into swamp.
- 19.3. As to whether wholesale backburning should have taken place in Areas A and C, from where the breakouts ultimately emanated on the Tuesday morning, opinions varied markedly. At one stage of the Inquest there were about as many different opinions about this issue as there had been witnesses called. At one end of the spectrum Messrs Peter Doudle and Brian Foster of the Coultas CFS Brigade advocated extensive backburning in Areas A and C and near the sugar gums and into the swamp. They say it could have been conducted quickly, easily and safely. At the other end of the spectrum, some witnesses suggested that the idea of backburning to the extent that Messrs Doudle and Foster suggested was a preposterous idea. It is neither necessary nor indeed possible to discuss each and every opinion expressed by farmers and

firefighters about the necessity or feasibility of backburning. While I have no doubt that the opinions expressed by these gentlemen were genuinely held, and that many of the opinions stemmed from hard experience on their farms and in the field, the difficulty that I have is that there is simply no way to test the validity of these assertions and opinions.

- 19.4. As the Inquest progressed over its many months, counsel's enthusiasm for the concept of backburning as having been the complete solution to the difficulty posed by the overnight fireground waned as an increasing number of witnesses including very experienced experts who came to the witness box and failed to embrace the notion. Whereas at the beginning of the Inquest the question of backburning was a fecund area for argument as to what should have taken place on the Monday night, by the end of the Inquest a different attitude to the issue had arisen. There was not much enthusiasm expressed for the notion that the wholesale backburning on the scale envisaged by Messrs Doudle and Foster should have occurred. In my view any decision that may have been taken not to backburn in Areas A and C and in the swamp adjacent would have been a decision, had it been taken after giving due consideration to all of the relevant factors, that could not really be criticised after all this time.
- 19.5. As far as I can tell nobody ever made such a decision so we will never know what would have taken place. If a proper risk assessment had been conducted, a robust approach may have been brought to bear on the subject and an attempt may have been made to at least attempt to burn some stubble in the paddocks. Mr Brian Trigg, the Group Officer for the Cleve Group was to conduct an extensive and effective backburning operation on the Tuesday night off the Bratten Highway. This occurred because he took the view that it was necessary to minimise a risk of the fire crossing the highway and putting assets at risk. The operation was affected by risk. There were predicted unfavourable weather conditions. Mr Trigg said he was unaware of the forecast weather conditions but, in consultation with local farmers, made the decision that they needed to '*take a stand*'<sup>927</sup>. Others may have taken a different view of the matter, but Mr Trigg's 'stand' is an example of a robust approach being taken when circumstances demand it.

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<sup>927</sup> Transcript, page 19810



- 19.6. So if a thorough risk assessment had been conducted on the Monday night, and a proper appreciation of the risk of the fire breaking away from the south-eastern perimeter had been appreciated, it is not beyond the realms of possibility that some backburning at that location may have been attempted. We do not know because it is now not possible to recreate the exact set of circumstances.
- 19.7. Opinions were expressed by a number of witnesses who are professionally involved in firefighting and advising in relation to firefighting. I speak here of course of Dr Tolhurst, Mr Gould, Mr Euan Ferguson and other professional members of the CFS who were asked about the subject. While their opinions to a certain extent suffer from the same weaknesses as the opinions of non-professional people, insofar as they are expressed after the event and are now not able to be tested, in my view their opinions ought to be accorded greater weight. This is especially so given that many of the witnesses who were volunteer firefighters and/or farmers were asked for the very first time to offer an opinion this issue when they arrived in the witness box. The opinions expressed by Dr Tolhurst, Mr Gould and Mr Ferguson were more considered and were also based upon their experience in relation to other fires. They were also based upon what appears to have been in the case of each man a thorough inspection of the fireground.
- 19.8. The other point that needs to be made about backburning is that there is little evidence that as far as the south-eastern perimeter of the fireground was concerned, particularly Areas A and C, backburning was ever given serious consideration by the members of the Incident Management Team either on the Monday evening or the Tuesday morning. While some members claim that they entertained the idea conceptually, but dismissed it, there was no joint discussion about it. Mr Lock, who entertained the idea more enthusiastically than others, said there was no discussion about backburning. Certainly by the Tuesday morning the evidence is reasonably clear that the conditions would not have been suitable and time would have been a serious issue. However, as far as the Monday evening is concerned, neither the first Incident Management Team shift nor the second, comprising as it did of Ms Whillas and Mr Branson, at any stage seriously contemplated backburning in the paddocks to the south and east of the swamp or in the swamp itself. In a statement made very soon after these events, Mr Robert Chambers, the Incident Controller on the first shift, said he contemplated backburning from Settlers Road and Yorkies Gully Road, possibly as

a contingency and that he discussed this with others. There appears to have been no discussion between the individual members of any Incident Management Teams on the Monday night or the early hours of the Tuesday morning about backburning as a primary containment measure.

- 19.9. The basic contention of those acting for the CFS and the individual members of the Incident Management Teams is that no criticism should be attached to the fact that backburning was not undertaken by the CFS on the south-eastern perimeter of the fireground. In this regard it is contended that a decision not to backburn would have been the appropriate decision, or at least it would have been a decision that was open to be made by incident management personnel. It has not, in my opinion, been demonstrated to me that a decision not to backburn to the extent suggested by Messrs Doudle and Foster would have been manifestly wrong. The point is, however, no such decision was ever made. Therein lies the difficulty. If a decision had been made by the Incident Management Team members not to backburn, and if that decision had been based upon all of the relevant considerations that prevailed at the time, such as the suitability of the weather, the ease with which stubble could be lit, the resources available and the dangers associated with introducing more fire into the swamp, then consideration may well have been given to adopting other strategies that were discussed in the evidence, such as a more thorough blacking out and the use of heavy machinery. In that regard, it was almost as if the Incident Action Plan of blacking out to 30 or 60 metres was a strategy by default insofar as no other strategy was considered. The Incident Management Team for the Monday night seems to have fixated on the strategy of blacking out without giving other alternative strategies the due consideration that they may have deserved, at least as far as some areas on the south-eastern perimeter of the fireground were concerned. It seems to have been a case of it's blacking out to the exclusion of all else without due consideration being given to its method of implementation at relevant locations, and its feasibility, and its efficacy as a measure that would likely bring some degree of control by the morning. Some might say that the Incident Action Plan to black out to 30 or 60 metres was a plan that was easily articulated but never really properly aligned to the needs of this very difficult fireground. In many respects it was a facile solution to a complex problem.

19.10. Be all that as it may, it is still worthwhile considering some of the evidence that was given about the feasibility of backburning, not necessarily to the extent that some witnesses suggested ought to have been implemented, but at least in certain areas.

19.11. Some other experienced and professional witnesses were asked about backburning. Mr Joseph Tilley of the Department of Environment and Heritage, a man who is very experienced in firefighting and who was not asked to provide any of his expertise on the Monday night, suggested that there were a number of factors that may have deterred an Incident Management Team from implementing backburns such as the large area involved, particularly that contemplated by Mr Brian Foster as illustrated in his diagram<sup>928</sup>, the predicted weather overnight, involving as it did a predicted north-easterly, and logistical considerations bearing in mind the approximately 7 kilometres of fire edge involved. As far as resources were concerned, Mr Tilley candidly told me that he was not in a position to address that issue. He said:

'If you put that to me on the night, I may have a hope of telling you what I'd think would be fair but it's just too difficult to say that now.'<sup>929</sup>

Mr Tilley on more than one occasion indicated to me that he was reluctant to be drawn into offering a view about resources required to conduct a backburn in the relevant locations, especially without knowing the conditions actually experienced at the time. Dr Bob Smith suggested that the backburning scenario contemplated by Mr Brian Foster as illustrated in Exhibit C183e represented what he thought was a:

'... fairly scary backburn approach and it's fairly simplistic...'<sup>930</sup>

Nevertheless, Dr Smith was of the view that one would still need to consider whether a piece meal approach to backburning would have been appropriate, and that would have necessitated an identification of potential risk points and a consideration of resources. Dr Smith identified Areas A and C on Exhibit C176b as being areas of concern given the weather forecast for the following day.

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<sup>928</sup> Exhibit C183e

<sup>929</sup> Transcript, page 14363

<sup>930</sup> Transcript, page 18013

19.12. Dr Tolhurst in his first report set out in two sections what he believed to be the suitability and appropriateness of ‘burning out’ as he preferred to describe the process. They were Options 2 and 3 set out in his report. I here set out those two sections.

### **'Option 2 Develop New Containment Lines and Burnt-out to Those**

**Objective:** To make access to the fire perimeter easier to travel and patrol and reduce irregularities in the perimeter which may be a control weaknesses.

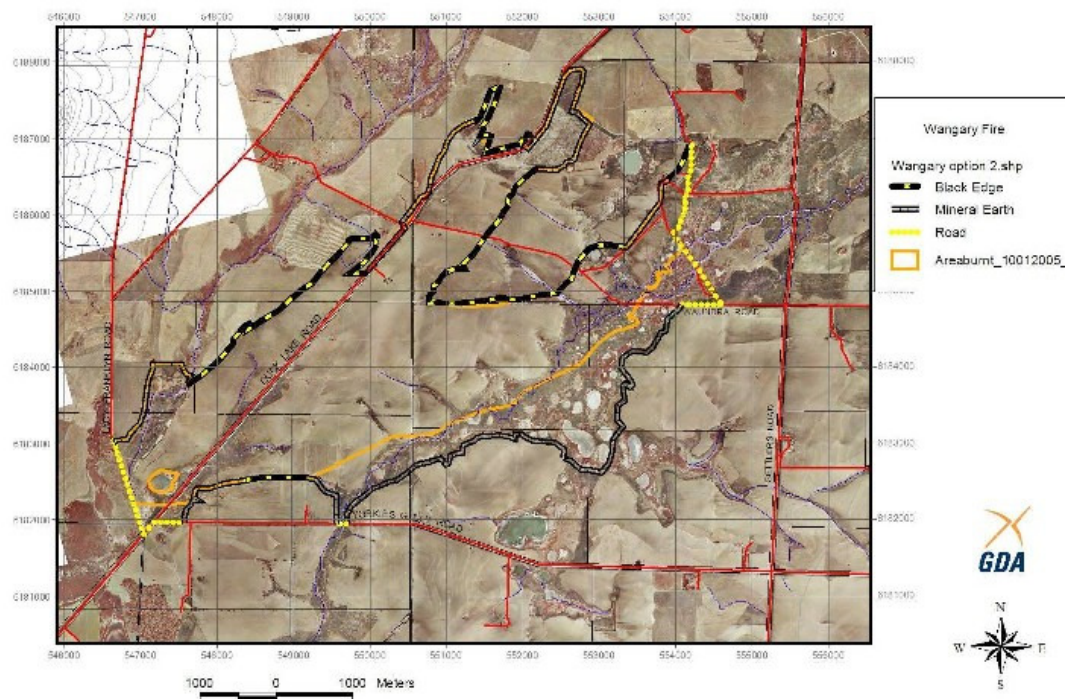


Figure 12 Option 2. Proposed method of control on Monday 10th January 2005 around the Wangary Fire perimeter. Black Edge means blacking out fire edge without necessarily using a mineral earth fuel break. Mineral Earth means a fuel break is used in conjunction with blacking out and burning out. Road means using existing roads as the control lines.

### **Works Required by 0700 hrs:**

#### **Lady Franklin Sector –**

- 2.0 km of edge to treat
- Extend area burnt out to existing main roads
- Black-out all burning trees, stumps, logs etc for two tree heights from the fire edge (about 50 m).
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

#### **Northwest Sector –**

- 11.3 km of edge to patrol and treat.
- Black-out all burning material within 50 m of fire edge

#### Scrubby Sector –

- 3.3 km of edge to treat.
- Establish a mineral earth break on all edges and make sure there is no area of continuous surface fuel for 50 m back from the earth break. Burn-out areas as required or realign control line.
- Black-out all burning trees, stumps, logs etc for 50 m from the fire edge. The two main areas to concentrate on are the Mallee block and the “scrub” block near Hull’s property.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

#### Swampy Sector –

- North of Warunda Rd, move control line out to existing tracks and burnt-out in between – 1.5 km or road.
- South of Warunda Rd, establish a trafficable mineral earth track between swamp and cropland, cut through swamp to link up with Yorkies Sector. Total length of trail approximately 3.5 km.
- Burn-out areas between new control line and fire edge.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

#### Yorkies Gully Sector –

- Continue mineral earth break on from Swampy Sector, along swamp edge to Yorkies Gully Road, return up Yorkies Gully and link in with burnt edge in paddock (4.6 km to establish).
- Burn-out swamp to new fire break.
- Black-out all burning material etc. for 50 m from the fire edge. Tie control line into existing claypans and clearings as much as possible.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

#### **Resource Allocation:**

Lady Franklyn Sector – 4 tankers and crew (need 6 tankers and crews to complete)

Northwest Sector – 1 tanker and crew

Scrubby Sector – 3 tankers and crew

Swampy Sector – 3 tankers and crew (need 6 to 8 tankers and crews plus grader to complete)

Yorkies Gully Sector – 4 tankers and crew (need 6 tankers and crews plus grader to complete)

Additional resources needed – 9 tankers and 2 graders.

**Risk Assessment:****Hazards / Impediments**

- No earthmoving equipment available until daylight.
- Need about 9 more tankers to cope with the amount of work required.
- Weather conditions may deteriorate soon after midnight and therefore time will be spent chasing flare ups rather than burning out and Blacking-Out.
- Newly ignited areas may flare up and escape jeopardising the whole plan.
- Newly burnt areas will still be 'hot' by the time the winds are expected to pick up (about 0800 hrs) increasing the chance of escapes.
- A lot more area will need to be blacked out in the few hours before dawn due to freshly burnt area.
- Crews have been working all day so will be tired and not able to do a lot of physical work.
- Poorly mapped fire boundary and little intelligence on extent and condition of control lines.

**Chance of Success (completion and control)**

- Low to Moderate

**Consequence of Failure**

- An escape from the fire boundary with forecast conditions for Tuesday would mean that escapes are likely to be uncontrollable.
- Area to south and east of fire area is highly populated and productive farmland Port Lincoln within range of an early escape.
- Fire could potentially spread for 12 hours under Very High to Extreme fire danger conditions on Tuesday – potential spread is therefore 10's of kilometres to the south or east .
- An escape from a planned expansion of fire is legally and politically dangerous.

### Option 3 Aggressively Burn-out Area to Limit Possible Escape on Tuesday

**Objective:** To burn-out an area large enough to catch most spotfires emanating from the swamp and Sugar Gum woodland under the strong northerly winds forecast for Tuesday and have the fire edge in open areas with light fuels which are easy to black out. Make Yorkies Gully Road and Settlers Road the southern and eastern boundary of the fire

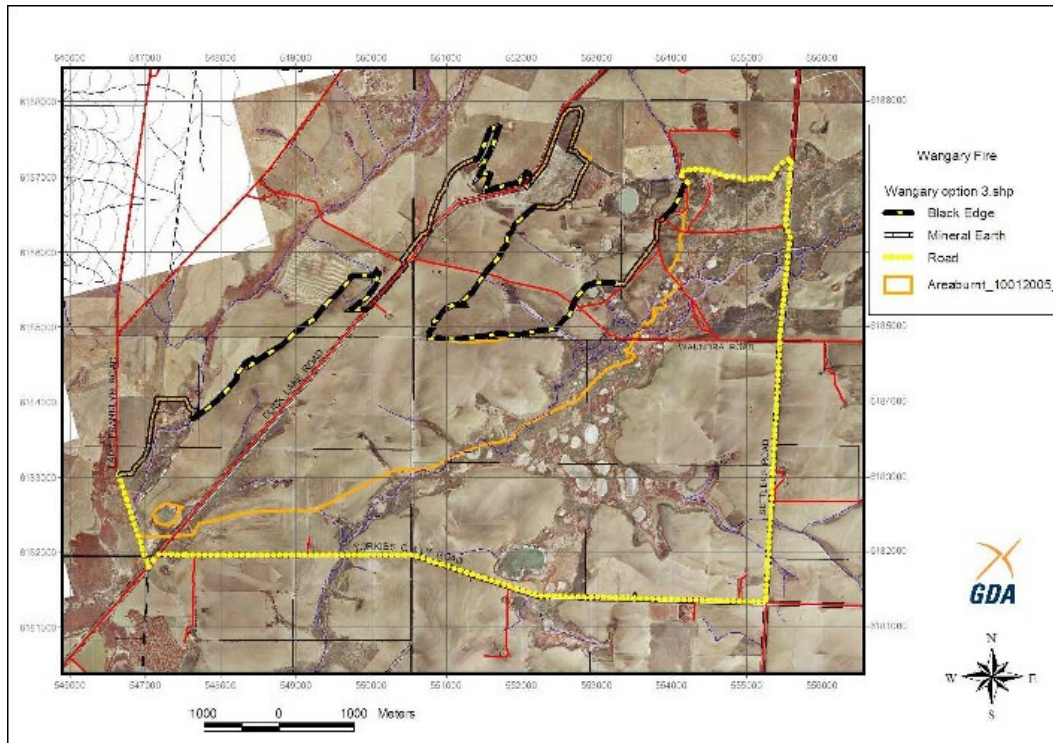


Figure 13 Option 3. Proposed method of control on Monday 10th January 2005 around the Wangary Fire perimeter. Black Edge means blacking out fire edge without necessarily using a mineral earth fuel break. Mineral Earth means a fuel break is used in conjunction with blacking out and burning out. Road means using existing roads as the control lines.

#### Works Required by 0700 hrs:

##### Lady Franklyn Sector –

- 2.0 km of edge to treat
- Extend area burnt out to existing main roads
- Burn-out areas to new control line (approx. 12ha)
- Black-out all burning trees, stumps, logs etc for two tree heights from the fire edge (about 50 m).
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

##### Northwest Sector –

- 11.3 km of edge to patrol and treat.
- Black-out all burning material within 50 m of fire edge



#### Scrubby Sector –

- 3.3 km of edge to treat.
- Establish a mineral earth break on all edges and make sure there is no area of continuous surface fuel for 50 m back from the earth break. Burn-out areas as required or realign control line.
- Black-out all burning trees, stumps, logs etc for 50 m from the fire edge. The two main areas to concentrate on are the Mallee block and the “scrub” block near Hull’s property.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

#### Swampy Sector and Yorkies Gully Sector –

- North of Warunda Rd, include all of swamp area within fire control perimeter. Take boundary along north side of swamp out to Settlers Road and Burn-out swamp.
- South of Warunda Rd, burn-out all stubble and pasture paddocks between Settlers Road and the swamp, down to Yorkies Gully Road to Yorkies Crossing and Burn-out all pasture and stubble back to the swamp.
- West of Yorkies Crossing burn the paddocks out to the north to meet up with the fire edge. Link up with Duck Lake Road.
- Black-out along the road.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.
- Approximately 1,500 ha to burn-out.

#### **Resource Allocation:**

Lady Franklyn Sector – 4 tankers and crew (need 6 tankers and crews to complete)

Northwest Sector – 1 tanker and crew

Scrubby Sector – 3 tankers and crew

Swampy Sector – 3 tankers and crew (need 8 tankers and crews to complete)

Yorkies Gully Sector – 4 tankers and crew (need 6 tankers and crews to complete)

**Additional resources needed – 9 tankers and crews, all landholder in area to shift stock and protect key assets.**

#### **Risk Assessment:**

##### Hazards / Impediments

- No earthmoving equipment available until daylight.
- Need about 9 more tankers to cope with the amount of work required.
- Significant loss of fencing, pasture, and stubble.
- Would need to protect house and sheds within burn area.



- Would need to shift stock out of areas to be burnt.
- Would need to consult with all landholders before undertaking burn (some may not want their paddocks burnt).
- Weather conditions may deteriorate soon after midnight and therefore time will be spent chasing flare ups rather than burning out and Blacking-Out.
- Northerly winds around midnight will make control of burn-out operation very risky.
- Newly ignited areas may flare up and escape jeopardising the whole plan.
- Newly burnt areas will still be 'hot' by the time the winds are expected to pick up (about 0800 hrs) increasing the chance of escapes.
- A lot more area will need to be blacked out in the few hours before dawn due to freshly burnt area.
- Crews have been working all day so will be tired and not able to do a lot of physical work.
- Poorly mapped fire boundary and little intelligence on extent and condition of control lines.

**Chance of Success (completion and control)**

- Very Low

**Consequence of Failure**

- An escape from the fire boundary with forecast conditions for Tuesday would mean that escapes are likely to be uncontrollable.
- Area to south and east of fire area is highly populated and productive farmland Port Lincoln within range of an early escape.
- Fire could potentially spread for 12 hours under Very High to Extreme fire danger conditions on Tuesday – potential spread is therefore 10's of kilometres to the south or east .
- An escape from a planned expansion of fire is legally and politically dangerous.'<sup>931</sup>

19.13. It will be seen that Dr Tolhurst regarded the first burning out option (Option 2) as having a low to moderate chance of success. In respect of the second (Option 3), more aggressive burning out option, he regarded it as having a very low chance of success.

19.14. Dr Tolhurst's resistance to the idea of backburning in relation to the south-eastern perimeter of the overnight fireground, particularly in the swamp, stems in the main from his perception of the risk involved and the low to very low chance of completion. It will be remembered that Dr Tolhurst was of the strong view that

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<sup>931</sup> Exhibit C281, pages 35 to 40

Cabot's backburn significantly contributed to the extent and intensity of the fires that broke out in Area C on the Tuesday morning.

19.15. Mr Gould was also asked to consider the possible effectiveness of backburning in relation to the south-eastern perimeter of the fireground. Mr Gould incorporated his views in a supplementary report<sup>932</sup>. Mr Gould in his report stresses a number of what he describes as 'key points' requiring special attention when conducting a backburn. They are as follows:

- '1. Back burning operation should always be supervised by experience personnel who understands fire behaviour and knows how to take advantage of favorable topography, fuel and weather conditions.
2. Requires considerable time and resources to effectively establish and patrol the back burning operations.
3. Bare earth breaks are essential around any burning off operations. The breaks will not only contain the fire but will reduce the effort required for mopping-up once the burn is completed.
4. Once the back burning operation has started it is essential that all the fuel between the fire line and the main fire is burnt out as soon as possible.
5. The effectiveness of the back burn operation depends on the depth of burn and spotting potential of the main fire spotting over the back burn breaks.'<sup>933</sup>

Mr Gould also makes the observation in his report that once the backburning operation has started it is essential that all of the fuel between the fire line and the main fire is burnt out 'well before the weather conditions worsen'<sup>934</sup>.

19.16. Mr Gould analysed a number of options that may have been considered as far as backburning along the south-eastern perimeter of the fire was concerned. The first option (Option 1) involved backburning the unburnt south-eastern edge of the swamp towards the existing fire perimeter. Mr Gould suggested, like others, that this would increase the fire activity in the swamp area with the end result being a higher degree of unlikelihood that the operation would be completely blacked out by 8am on the Tuesday morning. Mr Gould pointed out in this regard that the fire edge in the swamp did not in any event burn out overnight. Mr Gould suggested that if a large backburn had been placed along the whole south-eastern edge of the swamp it would

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<sup>932</sup> Exhibit C175e

<sup>933</sup> Exhibit C175e, pages 12 and 13

<sup>934</sup> Exhibit C175e, page 12

have increased the potential for more spotting and breakouts from the swamp area on the Tuesday morning.

- 19.17. Mr Gould's second option (Option 2) involved backburning in the paddocks to burn towards the swamp area. Mr Gould said that the depth of the backburn into the stubble using this strategy should be more than 50 metres wide and further suggested that a break of this magnitude would be likely to hold a developing head fire burning out of the swamp. However, he suggested that a 50 metre wide break would still most likely be breached by spot fires. As evidence of this, he pointed out the Cabot backburn was breached by spot fires on the Tuesday morning. Mr Gould also suggested that as part of this strategy bare earth breaks would also be essential to provide a platform for firefighting crews to ignite the backburn. Patrolling of the edges that spotting can escape from would also be required. Mr Gould would not be drawn on the resources that would be required to conduct a large strip of backburning. He also suggested that he lacked the expertise to offer an opinion as to the time that would be required to conduct this exercise.
- 19.18. Mr Gould's third option (Option 3) involved the burning out of a 200 metre wide 'buffer strip' in the stubble paddocks along Settlers Road and Yorkies Gully Road. Mr Gould suggested that a strip of this nature would have to cover a 6 kilometre roadside edge and would require substantial resources and a substantial period of time to implement. It would also require the construction of bare earth breaks around the complete proposed burnt area to enable crews to work off for the purposes of ignition and patrolling of the burnt areas. In addition, bare earth breaks would be required along the side of the roads to prevent fire escaping into the roadside vegetation. Mr Gould suggested that the strip would be unlikely to have been completely blacked out by 8am on the Tuesday morning. The consequence would be an increase in the size of the fire perimeter and a consequent increase of risk of a fire escaping both from the original fire perimeter and from the buffer perimeter. Again, Mr Gould suggested that although substantial resources would be required, the actual logistic and resource magnitude was outside his scope of expertise to estimate. It is to be observed that this option is not dissimilar to what Mr Chambers said he had contemplated at one point in time as a contingency measure.
- 19.19. In his oral evidence, Mr Gould agreed with counsel that with the forecast conditions for the Tuesday morning, it was inevitable that those parts of the swamp that were

susceptible to burn would have burnt through to the edge of the swamp in both Areas A and C on Exhibit C176b. Given that inevitability, Mr Gould agreed with counsel that one might burn into the swamp as well as conduct the 50 metre backburn in the stubble<sup>935</sup>. However, he disagreed strongly with the suggestion that one might execute Option 1 without the creation of the 50 metre stubble backburn. Mr Gould expressed the view that the risk caused by introducing more fire into the swamp was a significant one.

- 19.20. It was obvious from Mr Gould's evidence that out of the three options that he postulated, Option 2 was the preferred option. In this regard, Mr Gould agreed with Counsel Assisting that there was inevitably going to be spotting coming out of the burning swamp. He said '*it always had that potential for spotting*'<sup>936</sup>. He also agreed that if there was no break at all along the edge of the swamp, the firefighting crews not only had to deal with a head fire coming towards them out of the swamp but had to deal with the spot fires going over their heads. Mr Gould said that if one could eliminate a head fire coming out of the swamp as opposed to spotting, the firefighting crews would have an easier task. He said this:

'That's right because they'll know that they have got a good secure break to help them there. It's almost like developing a - you could call it a safety zone as well for them to work in, if spot fires were going to come out. I think it's important whatever tactics you do, you've got to think that the most important thing is your crew safety.'<sup>937</sup>

- 19.21. Mr Gould in his evidence continued to hesitate about the wisdom of introducing more fire into the swamp itself unless one could be satisfied that it could be blacked out by the morning. Mr Gould, it is fair to say, continued to advocate Option 2. His report sums up what his view is about the possible success of that option:

'My opinion Option 2 may be effective to break up the head fire burning out the swamp areas (Break Out 1 and 2) provided there were crews on hand to suppress the spot fire over the break. Wider the break (i.e. greater than 50) would be more effective in holding a developing head fire burning out of the swamp area. The weather condition at the time of Breakout 1 and 2 were extreme conditions of hot dry strong north westerly winds and a break less than 50 m wide may be quite ineffective in stopping a head fires.'<sup>938</sup>

- 19.22. Mr Gould suggested that one would need to construct bare earth breaks in conjunction with the burning of the stubble. That might involve the use of graders at night, a

<sup>935</sup> Transcript, pages 17342 and 17343

<sup>936</sup> Transcript, page 17311

<sup>937</sup> Transcript, page 17312

<sup>938</sup> Exhibit C175e, page 16

difficult issue in terms of feasibility in itself. In addition, there was an expressed reluctance to attempt to light canola stubble. It will be recalled that Mr Cabot was quite unenthusiastic about backburning in canola stubble in the paddock marked 15 on Exhibit C192a, that is the paddock to the immediate east of the hundred line, although his reluctance was partially as a result of a lack of resources. In Area A on Exhibit C176b, the paddock along the northern edge of Area A was heavy wheat stubble and the area along the southern edge of Area A was canola stubble. Mr Cabot in his statement suggested that to backburn in those paddocks CFS resources would have been required because they are 'higher risk burns',<sup>939</sup>.

19.23. Mr Ferguson, without going into the fine detail of his evidence, was also an unenthusiastic witness when it came to the question of backburning generally, particularly in the conditions that were forecast to exist in the early hours of the morning. He believed that there would not have been enough time, there was too great a risk and it would have been too resource intensive.

19.24. Incident Management Team views on backburning

The most relevant opinions about the futility or otherwise of backburning on the Monday evening are those of the members of the Incident Management Teams from the Monday afternoon and evening shifts.

19.25. Mr Robert Chambers, the Group Officer and Incident Controller on the Monday until 10pm said that backburning creates further problems for fire management. He said:

' ....but the problem being putting in a back-burn you are creating another wider area of the fire that you have got to put out completely to stop it from flaring up again.'<sup>940</sup>

19.26. Under questioning by Mr Cuthbertson for the Minister, Mr Chambers agreed with various suggestions put to him by counsel, that is:

- That an initial risk assessment would need to be done of the area first, including looking at the types of vegetation in the swamp, and that this would take a considerable period of time.
- It would be difficult to get the swamp to light and burn properly during the night
- Breaks would need to be put into the swamp to the north of A and south of C to stop a backburn progressing through the swamp in either a north or south direction

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<sup>939</sup> Exhibit C192a, page 5

<sup>940</sup> Transcript, page 11080

- The trees and fence posts in Areas A and C would need to be either wet down or have bare earth breaks put around them to protect them from a backburn.

19.27. As to whether he turned his mind to backburning as a strategy on the Monday evening when he was the Incident Controller, Mr Chambers said:

Q. Did you consider back-burning on the Monday night, back-burning, that is on the southern edge of the fire.

A. No, I didn't consider burning it. It was an option I could have used but it wasn't a consideration at that stage.

Q. Why didn't you consider it.

A. Time.

Q. Sorry.

A. Time, weather.

Q. What do you mean you didn't consider it because of time and weather.

A. I didn't consider it was appropriate to back-burn at that particular time while I was accident controller.

Q. Let me put the question another way then: on the Monday night did you think about the issue, did the issue of back-burning cross your mind.

A. Yes, the issue would have crossed my mind, but the length and the time it would have taken to do the back-burn it would have been something I wouldn't have considered seriously.

Q. In other words, it might go in your mind but it wouldn't stay there long because it was obviously not appropriate.

A. That's right.

Q. You, of course, made that decision on the spur of the moment Monday night or with an hour or two to think about it.

A. Yes, it wouldn't have been a spur of the moment, it would have been over a period.<sup>941</sup>

I have my doubts as to whether Mr Chambers did think about backburning over and above what he described as a contingency measure or Plan B that he says he shared with other members of the Incident Management Team. I have my doubts about the contingency assertions as well.

19.28. Mr Chambers admitted that on the Monday evening he based all of his planning strategies for fire suppression on incorrect beliefs that he held about the state of the fire.

19.29. Mr Chambers claimed he was of the belief that the fire had already burnt out into the stubble paddocks in Area A and so therefore could be controlled by blacking out<sup>942</sup>. He also held the belief that the swamp had an access track going through the middle of it that would allow CFS trucks to have access into the swamp for blacking out exercises<sup>943</sup>. Mr Chambers appears to have obtained this impression from radio messages he had heard from Mr Quentin Russ about the swamp. However, Mr Russ was working above Warunda Road and not in Area A.

19.30. Mr Chambers in his original statement given to police on 3 March 2005<sup>944</sup> said that on the Monday evening he had formulated a Plan B. This involved backburning from Settlers Road and Yorkies Gully Road if the blacking out exercise could not be completed. He said that he discussed this idea with Ms Whillas and Mr Maddern. He is undoubtedly wrong about Ms Whillas and Mr Maddern for his part, denies any such discussion. The following exchange took place between Mr Boucaut and Mr Chambers when he gave evidence to the Inquest:

Q. 'Plan B contingency was the road on the southern side and the road on the eastern side of the fire edge were in fact fire breaks, that they could conduct back-burns from'. Sorry, I read that poorly. 'The road on the eastern side of the fire edge and the road on the southern side of the fire edge were in fact fire breaks that they could conduct back-burns from. I conveyed this to Angela Whillas and Rob Maddern'. Okay.'

A. Yes.

A. Yes.

Q. That seems to be, in terms of a concept, at loggerheads with what you are saying yesterday and today.

A. No, it's not at loggerheads. The original plan was to control the fire and black it around the edges. If that was totally impossible, then that was a plan B for the future if that didn't work.

Q. What I understood you to say that was rejected as an option.

A. It was rejected as an option, not as plan B, but as an option there and then that night.

Q. Now, what about this bit 'I conveyed this to Angela Whillas and Rob Maddern'.

A. Again, as I said before, it would have been Sonia Post and Robert Maddern.

Q. What about Maddern, were you discussing these things with him.

<sup>941</sup> Transcript, pages 11790 and 11791

<sup>942</sup> Transcript, pages 11288 and 11289

<sup>943</sup> Transcript, page 11287

<sup>944</sup> Exhibit C229

A. Yes, it was discussed that this - that I wanted to blackout 30 m inside the fire line and that plan B would be that there was a good fire break that we could back-burn from if we really had to from those two roads. Back-burning is one of the last resorts that we can use.

Q. So you are saying it wasn't really rejected as an option, back-burning.

A. Not really rejected but as I said, it's one of the last resorts because you are creating such a big fire area again where you are going to have a lot more hot spots in that you are creating problems for the next day again.<sup>945</sup>

19.31. Neither Mr Maddern or Ms Post claimed to have any memory of Mr Chambers mentioning this plan to them at Wanilla Hall on the Monday evening and in any case, it was not put in place.

19.32. Mr Chambers conceded that if he had known that the fire was in fact burning within the swamp to the west of Area A at a distance that was not accessible by CFS crews, he would have considered burning a 30 or 40m firebreak in Area A out from the swamp line into the stubble on the Monday evening<sup>946</sup>.

19.33. Whether Mr Chambers entertained his Plan B in his head or not I seriously doubt whether he told anyone else about it. He had said in his statement that he had conveyed this to Angela Whillas, but it is clear that he and Ms Whillas were not at Wanilla at the same time that evening. Mr Chambers had gone home before she arrived.

19.34. Mr Russell Branson, one of the Deputy Group Officers and the Operations Officer for both the Monday afternoon and Monday evening shift, was of the view that in hindsight either backburning or bare earth breaks should have been put into Areas A and C on the Monday night<sup>947</sup>. Mr Branson said that the period in which backburning could have been undertaken was from 9pm to 3am that night.

19.35. Under questioning from Mr Cuthbertson QC, Mr Branson said that he would not have recommended backburning in Areas A, C and D on the Monday evening given the weather forecast, but that it was still something that would have had to have been considered<sup>948</sup>.

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<sup>945</sup> Transcript, page 11317

<sup>946</sup> Transcript, page 11890

<sup>947</sup> Transcript, page 10304

<sup>948</sup> Transcript, page 10468



19.36. Mr Branson said that when he had undertaken his reconnaissance of the fireground with Mr Lock early on Monday evening, he had not thought it appropriate at that stage to consider backburning in the paddocks of Area A, as the fire was well back in the swamp and at that time it was important that a full reconnaissance of the fireground be completed and areas and risk factors be prioritised<sup>949</sup>. Mr Branson recalled that he and Mr Lock had a brief discussion about backburning whilst driving through the Area A, he said:

'A. As we were travelling through it, I can remember a brief discussion, eg talking about back-burning, but as I said earlier today, canola would have been very difficult to burn in because of the type of material it is and the sparse of it. It wasn't a real thick fuel-loaded area which, as the day went on, the temperature lowers and you start getting humidity, that does make it very hard to burn canola compared to a wheat stubble.

Q. That being the case, did you and Lock, in fact, make a decision that you would not do any back-burning in that particular area.

A. No.

Q. So that was a decision that was still, as it were, up for consideration; is that right.

A. Definitely.

Q. Why then was it not considered, or at least to your knowledge not considered later.

A. In my time, the opportunity wasn't there, eg, as I said, when we got back to the hayshed, it wasn't a brief, which that would have been part of the briefing because that's an area that we found unattended.

Q. You went to Wanilla.

A. Yes.

Q. There was no discussion about it there.

A. No.'<sup>950</sup>

19.37. Mr Branson said that when he returned to the fireground for his second reconnaissance around 2am he did not have any discussions with the new Incident Controller, Ms Whillas as to any strategies for Areas A and C, both of which were unattended at that time. Mr Branson said that he thought it was the Incident Control Centre's responsibility to do the planning for those areas and that he did not ask Ms Whillas what was going to be done as he assumed that something had been planned.

19.38. Mr Branson said he would not have recommended a backburn at that time in Area A, given the distance that the fire perimeter was into the swamp and the small amount of

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<sup>949</sup> Transcript, page 10220

active fire. It should be observed, however, that any amount of active fire in the swamp adjacent to Area A was always going to present danger unless blacked out which it was not.

19.39. Mr Jeff Lock, another Deputy Group Officer, had arrived at the fireground on the Monday evening around 5:30pm and participated in the fireground reconnaissance and sectorisation with Mr Branson shortly after that. Mr Lock said that he thought the obvious thing to be done in Areas A and C on the Monday evening was a backburn from about 50 to 100m into the stubble back into the swamp to meet up with the existing fire. He said this could have been achieved with one appliance and two or three farm units as the wind would have blown the fire back into the swamp<sup>951</sup>.

19.40. Mr Lock said in relation to the south-eastern perimeter of the fire:

Q. You'd, at least, seen the fire in the swamp on the southern side of Warunda Road, hadn't you.

A. Yes.

Q. Did it occur to you on the Monday night that that was going to require attention, that situation.

A. Yes, and I pointed it out during my briefing, that a fire was burning unattended in the swamp and they needed to do something with it.

Q. Was there any discussion at that stage about what could be done in relation to that particular location.

A. No.<sup>952</sup>

19.41. Mr Lock says that after briefing Mr Maddern and Mr Chambers on his observations during his reconnaissance of the fireground, he was no longer involved in any planning discussion as he was assisting in the development of a map of the fire perimeter.

19.42. Mr Robert Maddern, a Deputy Group Officer and who was present at Wanilla Hall with the members of the Incident Management Team on the Monday evening, said that he did not believe that backburning was an option for the Monday night as it was not in line with CFS policy<sup>953</sup>.

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<sup>950</sup> Transcript, page 10340

<sup>951</sup> Transcript, pages 8129 and 8130

<sup>952</sup> Transcript, page 8246

<sup>953</sup> Transcript, page 9077

19.43. Mr Maddern said that any window of opportunity for backburning to be undertaken along the south-eastern perimeter of the fire was closed by 9pm because of the adverse weather conditions forecast for overnight<sup>954</sup>.

19.44. Mr Maddern agreed with Mr Chambers that to undertake any sort of backburn on south-eastern perimeter of the fire a thorough inspection of the area would need to be undertaken first. He was of the view that the size of Areas A and C and the forecast winds for overnight would make backburning on that flank of the fire too big a task.

19.45. Mr Maddern said he did not have any involvement in the discussions of the Incident Management Team or turn his mind to what should or should not be done on the Monday night. He said:

'A. The strategic plan was to black out around the fire perimeter of that fire.

Q. That's things that were discussed amongst the team.

A. Yes.

Q. You were party to those discussions.

A. I was there when those discussions were occurring because I hadn't had any involvement in the fire whatsoever, and I didn't know what the situation was, I couldn't really offer any advice as to what those decisions by that management team should be.'<sup>955</sup>

19.46. Mr Maddern insisted he was not part of the Incident Management Team and did not actively participate or contribute to any of their discussions about the fire, although he said that if he thought that there were issues that the Incident Management Team were not taking into consideration, he would have advised them of his view<sup>956</sup>.

19.47. Ms Angela Whillas was the Incident Controller for the second shift. She arrived at Wanilla Hall at around 11:45pm. Ms Whillas said that she was given an update on the status of the fire by Mr Maddern and told that the overnight incident action plan was to blackout 30 to 60 metres<sup>957</sup>.

19.48. Ms Whillas outlined her views on backburning in her third statement to the Inquest:

'Back burning is the least preferred strategy in strengthening containment lines, as it carries the greatest risk, requires the most dedication of resources and increases the existing fire ground area. Back burning is a last resort tactic and is usually

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<sup>954</sup> Transcript, page 9364

<sup>955</sup> Transcript, page 8793

<sup>956</sup> Transcript, page 9024

<sup>957</sup> Transcript, page 9631

only done on a small area basis. Even if a back burn is conducted, it still requires that the area is blacked out.<sup>958</sup>

19.49. Ms Whillas said in her oral evidence that if backburning was to be considered on the Monday evening, one would have to identify the specific locations that were the highest risk and then determine if there were enough resources, enough time and favourable weather conditions before implementing any backburns<sup>959</sup>.

19.50. In relation to the weather forecast issued by the BoM at 1845, Ms Whillas said that she would not have been keen for backburning to occur under those predicted conditions<sup>960</sup>.

19.51. Ms Whillas said she would be hesitant to backburn areas in the swamp unless the conditions were ideal. Unless one was guaranteed to achieve a good clean burn, one would create the possibility of increasing the potential ignition spots<sup>961</sup>.

19.52. Ms Whillas said she worked under the assumption that the previous Incident Management Team had ruled out a backburn or breaks along the south-eastern perimeter of the fire, as they had not been implemented when she commenced her shift. When asked whether Ms Whillas reconsidered any of those options when she was Incident Controller she said:

'I didn't, in the fact that we didn't have graders operating at night, we didn't have the weather that would support a back-burn and there was reported problems with accessibility to those areas, which would, in my mind, in my decision making process, eliminate that as an option.'<sup>962</sup>

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<sup>958</sup> Exhibit C225b, page 21

<sup>959</sup> Transcript, page 9870

<sup>960</sup> Transcript, page 11000

<sup>961</sup> Transcript, page 9873

<sup>962</sup> Transcript, page 9895

**20. Heavy machinery in respect of the south-eastern perimeter of the fireground**

- 20.1. Mr Euan Ferguson in his statement outlined a number of strategies that he at least would have thought were worthy of consideration in relation to the south-eastern perimeter of the fireground<sup>963</sup>. Mr Ferguson suggested that in respect of backburning, a planner would fairly readily conclude that there was not enough time, that there was too great a risk and that there were too many resources required for that option to be implemented. He suggested that a planner would in most circumstances 'rapidly opt for the ploughing option, concurrently with blacking out'<sup>964</sup>. He also suggested that a rapid conclusion would be reached that somewhere to the south of the swamp one would have to put in a graded or bulldozed or ploughed mineral earth break or use an existing control line such as a ploughed paddock or existing road or a salt pan.
- 20.2. There was evidence from numerous other sources, some of which I will discuss, to the effect that the use of heavy machinery such as ploughs and graders, for the purpose of creating bare earth breaks, would have been appropriate in Areas A and C on Exhibit C176b. Views differed as to the precise nature of the work that would be achievable and effective, but there seemed to be a universal consensus that ploughing or grading the stubble areas, particularly in the early daylight hours of the Tuesday, was a strategy that at least should have been considered if not implemented. If blacking out in the swamp was going to be an imperfect solution, and a decision was taken not to backburn, especially in the swamp, then the stubble in the paddocks adjacent to the swamp and its modification would need to be the focus of attention.
- 20.3. It will be remembered in this regard that the intelligence that was passed on to State Headquarters on the Tuesday morning was that there was a dozed break all around the fireground. This information was incorrect insofar as it suggested that containment work had been conducted around the entire fireground and secondly, the containment work consisted of a dozed break. The fact of the matter was that no heavy machinery had been put into use in Areas A, B and C. As far as the southern perimeter in Area D is concerned, the only machinery that had been utilised was Mr Casanova's SAME

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<sup>963</sup> Exhibit C280a

<sup>964</sup> Exhibit C280a, page 59

tractor with its square angled blade. This work had taken place on the Monday afternoon.

- 20.4. A number of the firefighters and farmers were of the view that ploughing could have been put to good use in Area A. For example, Mr Neil Ackland, the Captain of the Yeelanna CFS suggested that in Area A:

'You'd probably plough a certain area out from the scrub line and then you might do strips through at certain angles, depending where your wind was coming from the next day.'<sup>965</sup>

While a ploughed break would perhaps not be as good as a graded break, because stubble would still remain in the dirt, Mr Ackland said it would slow the rate of progress of the fire and give the firefighting units a greater ability to control a fire than in standing stubble where it is very hard to control a fire that is racing away from firefighters.

- 20.5. Mr Greg Napier, the Captain of the Lincoln Brigade, suggested that at night time at in Area A, a cultivator or plough could be used.
- 20.6. Mr Peter Whittaker suggested that ploughing could have been undertaken in the western portions of Area A, the northern portions of Area C and the north-western portion of Area B right around the swamp, although the exercise would have taken some time. Mr Whittaker suggested that it would take a few hours to do a 200 metre wide break in Area A<sup>966</sup>.
- 20.7. Mr Ian Charlton, a Deputy Group Officer with the Tumby Bay Group and who was appointed Sector Commander of the Swampy Sector on the Monday night, suggested that ploughing canola stubble into the ground '*would just about fix it I would say*'<sup>967</sup>. Mr Charlton added that the effectiveness of ploughing would depend on the conditions.

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<sup>965</sup> Transcript, page 4354

<sup>966</sup> Transcript, page 5236

<sup>967</sup> Transcript, page 5548

- 20.8. Dr Tolhurst as part of his first report proposed two options that both involved blacking out and ploughing the paddocks comprised in Areas A, B and C on Exhibit C176b. Those two options which he referred to in his report as Options 4 and 4a are set out herein:

**'Option 4. Plough Paddocks to South and East of Fire to Limit Possible Escape on Tuesday**

**Objective:** To black-out as much of the fire edge as possible and to create a fuel break at least 500 m wide to catch most of the embers coming from any fire runs in the swamp area.

In my opinion, disc ploughing would be needed to turnover the soil and bury as much of the fuel as possible. I have assumed that offset discs would be used. Calculations of resource requirements and completion time are based on an 8 m plough traveling at 8 km/h (6.4 ha/hr) and assuming that all of the paddock will be ploughed.

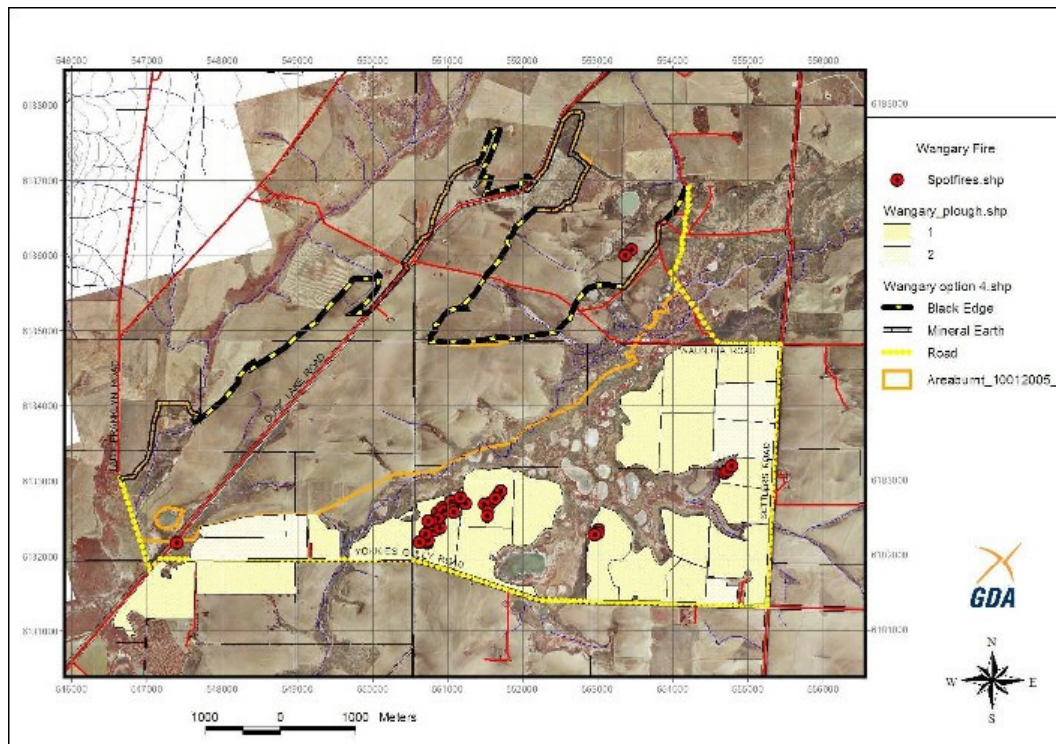


Figure 14. Option 4. Proposed method of control on Monday 10th January 2005 around the Wangary Fire perimeter. Black Edge means blacking out fire edge without necessarily using a mineral earth fuel break. Mineral Earth means a fuel break is used in conjunction with blacking out and burning out. Road means using existing roads as the control lines. This option includes ploughing of cropland paddocks.

**Works Required by 0700 hrs:**

Lady Franklyn Sector –

- 2.0 km of edge to treat
- Extend area burnt out to existing main roads
- Burn-out areas to new control line (approx. 12ha)

- Black-out all burning trees, stumps, logs etc for two tree heights from the fire edge (about 50 m).
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.
- Plough paddocks to south and east of sector (117 ha priority 1, 79 ha priority 2)

Northwest Sector –

- 11.3 km of edge to patrol and treat.
- Black-out all burning material within 50 m of fire edge

Scrubby Sector –

- 3.3 km of edge to treat.
- Establish a mineral earth break on all edges and make sure there is no area of continuous surface fuel for 50 m back from the earth break. Burn-out areas as required or realign control line.
- Black-out all burning trees, stumps, logs etc for 50 m from the fire edge. The two main areas to concentrate on are the Mallee block and the “scrub” block near Hull’s property.
- Burn-out any areas, within the burnt area, of continuous unburnt surface fuel larger than about 20 m across within 100 m of fire edge.

Swampy Sector and Yorkies Gully Sector –

- Continue to black-out and consolidate fire edge as far as possible working from existing tracks and cropland.
- Plough paddocks to the south and east of sector for at least 500 m from swamp edge. In practical terms, this includes most paddocks between the swamp and Yorkies Gully Road and Settlers Road south of Waundra (sic) Road.
- Approximately 850 ha of priority one area to plough and approximately 170 ha of priority two area to plough. Priority one areas are those generally within 500 m of swamp edge (yellow hatched areas in Fig. 14) and priority two areas are those areas remaining between the swamp and the surrounding roads.

**Resource Allocation:**

Lady Franklyn Sector – 4 tankers and crew (need 3 tractors and disc ploughs)

Northwest Sector – 2 tanker and crew

Scrubby Sector – 3 tankers and crew

Swampy Sector – 3 tankers and crew (need 10 tractors and disc ploughs)

Yorkies Gully Sector – 3 tankers and crew (need 6 tractors and disc ploughs)



**Risk Assessment:****Hazards / Impediments**

- Need about 19 tractors and disc ploughs to plough the 20 paddocks before morning. However, ploughing can continue into morning if needed, as ploughing does not provide any addition risk of fire escape.
- Would need to consult with all landholders before undertaking ploughing.
- Weather conditions may deteriorate soon after midnight and therefore time will be spent chasing flare ups rather than burning out and Blacking-Out.
- Crews have been working all day so will be tired and not able to do a lot of physical work.

**Chance of Success (completion and control)**

- Very Low chance of completion, but High chance of containing fire on Tuesday if ploughing complete.

**Consequence of Failure**

- An escape from the fire boundary with forecast conditions for Tuesday would mean that escapes are likely to be uncontrollable.
- Area to south and east of fire area is highly populated and productive farmland Port Lincoln within range of an early escape.
- Fire could potentially spread for 12 hours under Very High to Extreme fire danger conditions on Tuesday – potential spread is therefore 10's of kilometres to the south or east .

#### Option 4a. Plough in Marginal Strips rather than Whole Paddocks

An alternative to ploughing all the paddocks would be to plough a strip about 100 m wide inside the Yorkies Gully Road and Settlers Road boundaries, move in another 100 m and plough a second 100 m strip parallel to the first as shown in Fig. 15. The area ploughed in this case is about 230 ha. This could be achieved with 5 tractors and ploughs in an 8 hour period.

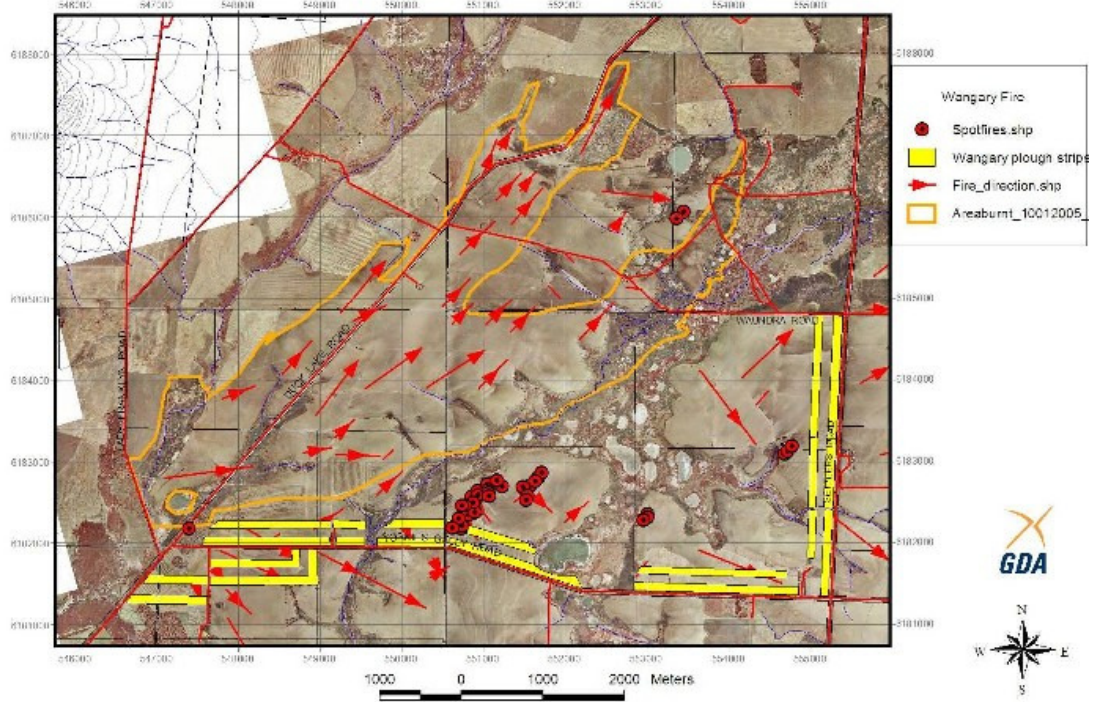


Figure 15 Option 4a is to plough two strips, 100 m wide around the perimeter of the control boundary as shown.<sup>968</sup>

- 20.9. The first alternative involved much greater areas to be ploughed with a corresponding greater need for resources. The second ploughing option involved the ploughing of strips of 100 metres wide, a strategy that would require fewer resources and take considerably less time.
- 20.10. Dr Tolhurst suggests that Option 4, which involved much greater areas and resources, had a very low chance of completion but a very high chance of containing the fire on the Tuesday if the ploughing was complete. It will be observed that Dr Tolhurst suggested this work would be required to be completed by 7am on the Tuesday morning. That would assume that ploughing took place throughout the night. Needless to say if ploughing had continued beyond 7am more could have been achieved with the same resources.

- 20.11. In his report, Dr Tolhurst does not mention anything about the possible effectiveness of Option 4a, that involves less ploughing, and less resources. However, Dr Tolhurst suggested that the restricted amount of ploughing that Option 4a envisages would have been 80% as effective as ploughing the whole of the paddocks. Dr Tolhurst said in respect of Option 4a:

'No, I considered it to be similar to option 4 and, as I mentioned, it probably had about 80% chance - it's still I think - given the situation it had a higher level of chance of completion but I still had some doubt as to whether or not the equipment could be procured. And I think it still had a high but a lesser chance of containing a fire on Tuesday. So it wasn't significantly different, I suppose, to option 4 but significantly less work was involved. So I didn't bother repeating.'<sup>969</sup>

Dr Tolhurst in that passage expresses some doubt as to whether or not the equipment could be procured. The equipment that he envisaged consisted of 5 tractors and ploughs working in an 8 hour period between 2300 hours on the Monday night and 0700 hours on the Tuesday morning. If ploughing had started earlier and continued after 7am, more ploughing could have been achieved or less resources would have been necessary for the same amount of ploughing. Dr Tolhurst suggested that one would probably continue to work after 7am if it was still safe to do so<sup>970</sup>. As part of the planning process for such an operation, one would have to keep an eye on how the weather was developing, what fire activity there was, the rate of progress of the ploughing operation and the wellbeing of the operators. That would require further planning in relation to securing alternative and relief operators<sup>971</sup>. Also as part of the planning process, Dr Tolhurst suggested that Option 4a would have required a large measure of ground reconnaissance before hand.

- 20.12. As to the effectiveness of ploughed strips of 100 metres wide, Dr Tolhurst suggested that there were three major factors to be considered. They were strength of the wind, the nature of the fuel and the width of the break. Dr Tolhurst told me that experience had shown that winds in excess of 40 kilometres per hour can cause fire in grass to easily spot over a dual highway. Therefore, one would need a ploughed break of say,

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<sup>968</sup> Exhibit C281, pages 41 to 43

<sup>969</sup> Transcript, page 19399

<sup>970</sup> Transcript, page 19397

<sup>971</sup> Transcript, page 19398

100 metres to catch the spotting. The idea behind the two ploughed breaks separated from each other as Dr Tolhurst suggested was as follows:

'In my option 4A I have suggested two plough breaks with a break in between so that you - of the ones that get away, you have a second catching barrier, if you like. So you have - two barriers separated are more effective than the equivalent distance in one width. So I am estimating, given the strength of the winds, that you would probably need something in the vicinity of 100 m wide, 80-100 m wide to catch the majority of them and two of those strips would probably catch the relights, if you like, beyond that. I would have to say, I guess, having looked at the mallee vegetation on the edge of the swamp there, I would have expected the possibility of spotting from those mallee trees to have been perhaps 1-3 km. In actual fact, we have evidence they were spotting up to 500 m so I wouldn't have been even having plough breaks along Yorkies Gully Road at the time, in hindsight it's fine, but at the time I wouldn't have been certain that was necessarily going to catch all the embers anyway. You would probably catch the majority of them but not necessarily all of them.'<sup>972</sup>

- 20.13. Mr Humphries of counsel put it to Dr Tolhurst that if proper blacking out had been undertaken and there had been aerial support and secondary protection, as he called it, afforded by bare earth breaks, it would have been more likely than not that the fire would not have broken away from the swamp. To this Dr Tolhurst said that he disagreed that the fire would have been stopped from breaking away from the swamp but that it was less likely that it would have run on uncontrolled.
- 20.14. Dr Tolhurst's evidence as to the required number of tractors and ploughs that would have been required to implement his Option 4a related to areas A, B, C and D. It will be noted that Dr Tolhurst's estimates in that regard do not distinguish between those areas in terms of priority. We know that no work at all was undertaken in relation to implementing a control line in the swamp to the west of Area A, and that includes failure to black out in that area. If that failure can be said to be explicable on the basis that the fire in the swamp at that particular location was inaccessible, either to appliances, lay flat hoses or men, it would follow that the swamp to the west of Area A should have been identified as a priority area. In this regard, if it had been concluded firstly that nothing could be achieved by way of adequate blacking out in that part of the swamp, secondly that backburning was simply not feasible either in the swamp or in the paddocks marked A and thirdly if the high degree of likelihood of a breakout from that part of the swamp, if not the inevitability of the same was identified, a further inevitable conclusion should have been and probably would have

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<sup>972</sup> Transcript, page 19324

been drawn, that the paddocks in Area A required an alternative form of treatment. If such a conclusion had been reached, it is highly unlikely that the state of affairs as it existed on the Tuesday morning in Area A, namely no fuel modification in those paddocks nor CFS appliances being present, would have occurred. It seems to me in those circumstances that ploughing or grading in Area A should have been considered and considered as a matter of priority. If resources had to be allocated to the task of ploughing and grading, either during the night or in the daylight hours of the Tuesday morning, Area A was an area that was crying out for attention. In other words, that is where the available resources could have been put to best use, or at least first use. Mr Ferguson suggested in his evidence that in his view the sugar gums were an area of priority. He prioritised that location and suggested that Area A was the second priority<sup>973</sup>. Obviously that is a matter of judgement. Work was taking place in the sugar gums overnight, whereas no work took place in the swamp to the west of Area A or in Area A itself. If, as I say, the lack of work at that location is justifiable on the basis of a lack of access, the inevitability of breakout from that location was as strong as it was from the sugar gums. To my mind, there was in terms of priority a significant need for the use of heavy machinery in Area A on Exhibit C176b.

- 20.15. Mr Jeffrey Tiller, who was the Officer in Charge of the Wanilla appliance that was sent in to Area A after the breakout on Tuesday morning, told me that ‘in hindsight’ it would have been nice to have seen some kind of break in Area A. He said that when they arrived in the paddocks there was no evidence of bare earth breaks or burnt breaks. He said:

‘Yes, I would have expected to see that there, but I didn’t have a, like at that time, when we got there I had no idea of what weather we were predicting, but normally there is a back-burn put in place if you know what the weather is doing the next day and protect yourselves that way.’<sup>974</sup>

Mr Tiller was asked about graded breaks and their possible efficacy. He suggested that ‘in hindsight’ he would have liked to have seen them in the canola paddock because the fire escalated coming out of the swamp and spotted further into the paddock and once the fire got into the header rows that ran east-west, the canola stubble became virtually unstoppable. In those circumstances, it is very easy to see how ploughing or grading in order to break up that stubble and header rows would

<sup>973</sup> Transcript, pages 18273 and 18274

<sup>974</sup> Transcript, page 20821

have been efficacious in making the fire somewhat more controllable. As it was, both the Wanilla appliance and the Coultas appliance and their crews were somewhat overwhelmed by the task of trying to control fire in the stubble in paddocks A and were placed in some danger.

- 20.16. Mr Ferguson testified as to his view about the use of ploughs.
- 20.17. Mr Ferguson suggested in his statement that a possible strategy would have been to have created a bare earth break 200 metres in from the swamp and then ploughing the land between the control line and the swamp<sup>975</sup>. Mr Ferguson stated that he has seen numerous homesteads with plough breaks around them and has seen burnoffs conducted in ploughed breaks. He said that it is a well recognised exercise that plough breaks can be used for burning off and stubble burning. The logical extension of that, according to Mr Ferguson, is that they can be used for actual firefighting as well. Mr Ferguson suggested that the use of ploughs would be quicker than the use of the grader as they are wider and can travel faster and there is no doubt in their ability to work at night and in dusty environments. Rather than backburn, Mr Ferguson said the measure that readily appealed as having the same effect of modifying the fuel load to the south of the swamp edge and to make it as safe as possible was ploughing. In that situation, he states that he probably would have asked local farmers to instigate this measure<sup>976</sup>.
- 20.18. Having considered Dr Tolhurst's ploughing options, Mr Ferguson suggested in his evidence that a break of 200 metres out from the swamp edge was rather conservative. He suggested that 500 metres might be more appropriate given the possible spotting distance from the swamp<sup>977</sup>. Mr Ferguson further suggested that one would seek out the landowner in an endeavour to ascertain what would be an appropriate strategy and at the same time suggest that the farmers commence doing what they can in their paddocks to break up the fuel load<sup>978</sup>.
- 20.19. As to the timing of ploughing, Mr Ferguson suggested that the decision to start ploughing activity probably would have been taken on receipt of the forecast for the following day and of proper information from a reconnaissance of the affected area<sup>979</sup>.

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<sup>975</sup> Exhibit C280a

<sup>976</sup> Exhibit C280a, page 61

<sup>977</sup> Transcript, page 19019

<sup>978</sup> Transcript, page 19022

<sup>979</sup> Transcript, page 19019 to 19021

As well, as he earlier indicated, one might need to speak to the landowners. On that basis, there would appear to be no reason why ploughing work could not be commenced well before 2300 hours as suggested by Dr Tolhurst.

20.20. Can graders be operated effectively at night?

As to the use of graders, there was considerable debate during the course of the Inquest as to whether graders could work in the dark. Graders would have been more effective than ploughs in creating a bare earth break, but they suffer from the fact that grading in the dark has inherent problems such as the creation of dust, inadequate lighting and an inadequate sighting of the terrain underneath the machine. Again, opinions about this were offered by many people and they differed considerably. On the Monday night, graders did stop working because of the lack of lights and the reluctance on the part of operators to work in the dark. Mr Paul Mickan, who was an employee of the District Council of Lower Eyre Peninsula, was of a view that a grader could work in the dark although he had not used one in those circumstances. While acknowledging that it would be difficult to use a grader at night time, he suggested that it would not have been a problem to work in a cleared paddock, as an experienced driver should know within limits whether the machine was touching the ground with the blade<sup>980</sup>. Mr Mickan suggested that contour lines in the paddock would not have been a problem at night time.

- 20.21. Mr James Barnes, another grader operator, told me that just on dusk on the Monday night there had been a difficulty with visibility because of the dust. While acknowledging that he would not have wanted to work with machinery in the sugar gum area at night, or in the swampy areas, he would have been prepared to have worked in Areas A, C or D at night if he had been asked. He said that he would have been prepared to have worked in the paddocks and the clear areas in A and C<sup>981</sup>. He said that he would have been willing to work *'anywhere in the stubble paddock, as long as the terrain is not too hilly, I'm sure that we would have all worked on if there was need to, if we were asked to'*<sup>982</sup>. Mr Barnes was a front end loader operator. Mr Barnes was asked this question:

'Q. Had you been required to work into the night because of an emergency situation, in areas A, B, C or D, are there sufficient crews - we've heard that there are a number of graders kept at Cummins, belonging to the Lower Eyre Peninsula's District

<sup>980</sup> Transcript, page 5949

<sup>981</sup> Transcript, page 6015

<sup>982</sup> Transcript, page 6016

Council, also a number of graders held at the airport depot, again belonging to the council. If all of those graders and loaders were called into the area to work during the night on the southern edge of that fire, are there sufficient crews, to your knowledge, to relieve drivers during the night.

- A. Well, there's about 13 or 14 of us employed at the district council and the majority of us can operate a piece of plant. So I would say we would have been able to replace operators.<sup>983</sup>

- 20.22. Mr David Hall was the Area Supervisor with the District Council of Lower Eyre Peninsula. In effect, he was the person in charge of plant operators at the Council. Mr Hall suggested that with a grader, one can work at night but it is not desirable because of the visibility and safety factor. Although Mr Hall had worked with a bulldozer at night time, he had not worked with a grader. Mr Hall said that if one were grading, one could grade tracks or breaks in grass, but acknowledged that it would not be easy at night time to do this. He said:

'You could do that, yes, but it wouldn't be easy. You've got things like you don't know whether there is a stone that is going to be there that you are going to hit and you don't want someone being pushed into the windscreen because they have come to a dead stop and stuff like that. It's just difficult, but you can do it.'<sup>984</sup>

Mr Hall told me that one could grade stubble at night in stubble paddocks or pasture paddocks, but was not certain as to the quality of the job that would be done because the operator would have to operate by feel.

- 20.23. On the Monday evening, Mr Hall's preference was that his operators should cease work when it became dark, but to have them return to the fireground first thing in the morning. They left their plant at the fireground overnight and returned there the following morning. They were told that their services were not required. That decision of course has to be examined against the background that they were not asked to stay on, nor asked to attempt to grade in the stubble paddocks on the south-eastern perimeter of the fireground. There was no suggestion to the operators that their services were further required on the Monday evening. However, Mr Hall stated that he would not allow his grader operators to work at night driving at speeds of say 15 kilometres per hour because of the danger of coming to a dead stop as a result of

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<sup>983</sup> Transcript, pages 6016 and 6017

<sup>984</sup> Transcript, page 6067



hitting something on the ground. He suggested that one might be able to maintain an average of 4 kilometres per hour working in stubble at night time<sup>985</sup>.

- 20.24. Mr Steven Konitzka who is the General Manager of Aztec Services Pty Ltd told me that he had instructed grader operators to work graders at night time at certain road construction projects. The grader that was used in the Wangary fire that was owned by his company did not have lights. Mr Konitzka said when asked by the CFS whether his graders would work in stubble, he suggested that they would. Whether they would be prepared to work at night time is another matter, particularly bearing in mind that they did not have lights. He did say, however, that with assistance graders might work at night, acknowledging of course the risk where no lights are available.
- 20.25. Mr Vogel the Regional Duty Officer gave evidence that he had an expectation on the Monday night that there would be bare earth breaks placed around the perimeter of the fire<sup>986</sup>. It will be remembered that Mr Vogel was the source of the understanding entertained at State Headquarters that dozed breaks had been placed around the fireground. Mr Vogel accepted that he had made mention of the fact that there were breaks around the fire, but did not recall whether he had stipulated that they were dozed breaks. Mr Vogel said that he was not certain whether the entirety of the fireground had been surrounded by breaks, but when he had referred to breaks he had meant bare earth breaks. When asked specifically whether he had an understanding that there were bare earth breaks along the south-eastern perimeter, he said he thought there would be because they had the machinery there. His understanding was that they were going to work and put breaks around the fire. Mr Vogel was uncertain as to whether or not he had an understanding that work of that type had been commenced at the time that he concluded his work at 1am on the Tuesday morning. However, when pressed by Mr Boucaut in cross-examination, Mr Vogel was driven to concede that if work was to be done on the southern flank of the fire by way of bare earth breaks, it would have to have been done at night time. Mr Vogel suggested that although dust is a difficulty, which not a great deal can be done about, one can combat a lack of lighting by obtaining magnetic lights for graders. Mr Vogel suggested that graders could operate at night as they had done in the Kellidie Bay fire. Mr Maddern on the other hand suggested that difficulty with the use of heavy machinery at night time had been experienced in the past and in particular there had been an incident in which a

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<sup>985</sup> Transcript, pages 6102 and 6103

bulldozer operator had to flee the scene of a fire because his life was in danger and the result of it all was that the bulldozer was lost. The other difficulty that Mr Maddern raised was that to his belief there had been an understanding reached that council equipment would not be used at night time by the CFS. He said this:

'When I set an agreement with the council, it was basically from that discussion that I had with Mr Bill Watkins who was the chairman of the council, that we should be very careful in terms of using council equipment at night-time. That is how that came about and that was the position I adopted from that point on when I was the group officer in terms of using council equipment and I conveyed that to other CFS people as well. So there was no formal agreement or MOU or anything like that, but it was just that it came out of that particular incident.'<sup>987</sup>

The District Council of Lower Eyre Peninsula refuted any suggestion that there was an understanding or agreement in existence that precluded the use of Council heavy machinery at night time.

- 20.26. Mr Tilley of the Department of Environment and Heritage told me he has heard of machinery working at night with lighting<sup>988</sup>. Mr Tilley told me of a fire that had taken place at Pinkawillinie at the northern end of the Eyre Peninsula where mineral earth breaks had been put in open paddocks. The machinery had worked into the dark but not into the early hours of the morning. There had been lights on the machine. He was speaking of a distance of perhaps 1 to 1.5 kilometres adjacent to mallee woodland. That machinery was graders<sup>989</sup>.
- 20.27. Dr Tolhurst told me that he has seen graders set up with lights on the grader blade so that the grader operator can see what he is doing. He emphasised of course that the efficacy of such an operation would depend upon level of the dust, and of course the soil type and breeze, but told me '*it certainly has been done before*'<sup>990</sup>. He told me that he had seen it take place in the Grampians in flat open grazing country at night time. He described it as '*relatively simple going*'. The graded break that he saw had a length of about 20 or 30 kilometres with a single blade width. Dr Tolhurst described the conditions involving soil that was dry so there would have been dust.
- 20.28. Other witnesses suggest that there is considerable difficulty working graders at night, even with lights. I refer here to evidence given by Mr Ian Huckel, a grader operator

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<sup>986</sup> Transcript, page 12959

<sup>987</sup> Transcript, page 14912

<sup>988</sup> Transcript, page 14379

<sup>989</sup> Transcript, page 14379

and Mr Bryan Trigg the Group Officer for the Cleve Group. The latter described seeing graders work at night in paddocks, but said it was a disaster. The difficulty had arisen when a grader struck a rock.

- 20.29. Whether or not graders could have worked into the night on the south-eastern perimeter of the fire will never be known. The reason for this is that no grader operators, be they Council or private, were ever asked to attempt it. There appears to have been a cautious willingness on the part of the grader operators, who gave evidence before me, to work at night time if they had been asked. It was made clear to me, particularly from the evidence of Mr Hall, that had they been asked they would have attempted to use graders at night time in the paddocks. Mr Vogel says that he had an understanding that that was what was going to take place. However, he does not appear to have made any enquiry as to that and so the use of graders at night was somewhat an assumption on his part.
- 20.30. If there was a valid reason for considering but dismissing the use of graders in the paddocks at night time, there appears to be no valid reason why the graders could not have been put to good use on the Tuesday morning from first light. Grading could have augmented a ploughing operation. In the three hours of daylight before the first breakaway took place, the graders could have been used to have put in bare earth breaks. Another grader operator, Mr Trevor Arnold, suggested that with two graders, upwards of 18 kilometres of a single break could have been put in the southern paddocks in the three daylight hours on the Tuesday morning. Mr Hall suggested that in the daylight hours of the Tuesday morning approximately 15 to 20 kilometres worth of grader breaks 3 metres wide could have been put in place. That calculation was made by Mr Hall on the basis of two graders operating for three hours.
- 20.31. Mr Ferguson was ultimately to agree with Dr Smith that indeed there had been a number of '*missed opportunities*'<sup>991</sup>. Mr Ferguson agreed with Counsel Assisting that one such missed opportunity was the opportunity to use graders to create bare earth breaks on the southern perimeter of the fireground. Mr Ferguson was asked:

'Q. Insofar as various bare earth breaks, no matter how they could have been put in, were not put in south of the swamp, that is yet another missed opportunity.

A. Yes.'<sup>992</sup>

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<sup>990</sup> Transcript, page 19505

<sup>991</sup> Transcript, page 18629

<sup>992</sup> Transcript, page 18630 and 18631

Mr Ferguson considered the dismissal of the District Council plant operators as ‘*unfortunate*’.<sup>993</sup>

20.32. Again, if proper prioritisation had taken place, and it was understood that no work had been undertaken either in the swamp west of Area A or in the paddocks in Area A, it is inevitable in my view that an attempt would have been made on the Tuesday morning in daylight hours to create bare earth breaks with the use of the graders and grader operators that were at the disposal of the CFS.

20.33. What heavy machinery was available on the Tuesday morning

As previously mentioned, the two graders and the loader owned by the District Council of the Lower Eyre Peninsula, and which had put in breaks on the Monday afternoon had been left overnight at the fireground. The operators of the machinery returned to the fireground at around 6:45am and therefore the Council machinery could have been utilised by the CFS from that point forward.

20.34. After being advised by the CFS that they were not required, the Council operators took one of the graders back to Cummins but left the other one and the loader at the fireground in case they were called back, which of course, they subsequently were.

20.35. Evidence was adduced as to other heavy equipment that was available in the general area and that could have been utilised by the CFS if requested on the Tuesday morning.

20.36. In August 2006, the CFS sent out a survey to landowners in the districts surrounding the fireground asking if a serviceable disc plough was on their property and could have been made available for use at the time of the fire. Of the 59 responses to the 270 questionnaires sent out, 24 disc ploughs were identified as being in working order at the time of the fire<sup>994</sup>, including three in the immediate vicinity of the fireground on Mr Trevor Puckridge’s property, Mr Les Hull’s property and Mr John Giddings property.

20.37. Mr Troy Siegert and Mr Christopher Hull also had working disc ploughs on their property at the time of the fire. Mr Hull’s plough was on a property some distance away.

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<sup>993</sup> Transcript, page 18449

<sup>994</sup> Exhibit C319

- 20.38. A statement tendered to the Inquest by Senior Sergeant Hank Swalue<sup>995</sup> indicates that although Mr Chris Hull, Mr Trevor Puckridge and Mr Giddings all had working disc ploughs they were not able to be removed from their properties, either due to their size or unroadworthiness, so therefore could only have been used to cut fire breaks within the boundaries of their own property.
- 20.39. Mr Siegert and Mr Les Hull both used their disc ploughs to attempt to put in breaks on their properties to halt the spread of running fire on the Monday afternoon, neither were successful.
- 20.40. Mr James Casanova had left his SAME tractor with the square blade on Jed Siegert's property overnight and returned to pick it up at around 9:30am on Tuesday morning.
- 20.41. Mr Chambers in his evidence said that he thought there were quite a few disc ploughs available on the Lower Eyre Peninsula at the time of the fire and that if he had wanted to get one at the fireground he would have simply asked Lincoln Base to source one for him or alternatively would have 'chased up' farmers on the fireground to advise of the availability of a plough<sup>996</sup>.
- 20.42. Mr Ferguson was also of the opinion that if the Incident Management Team had made the decision that ploughing was required, that they should just 'keep on looking' until one was located. He suggested that if one could not be quickly located through the local CFS, that police could even be asked to help locate the machinery through the zone emergency management committee<sup>997</sup>.
- 20.43. The survey referred to above was not particularly helpful in establishing what the actual availability of ploughs would have been on the Monday night and Tuesday morning.
- 20.44. Did the Incident Management Team consider the use of heavy machinery  
Mr Maddern was the Planning Officer for the Tuesday morning and was the member of the Incident Management Team who had the discussion with Mr David Hall advising that the council graders were not required that morning. Mr Maddern said he made the decision to send the graders away because their use was not referred to in the Incident Action Plan that had been presented to him by the previous Incident

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<sup>995</sup> Exhibit C244a

<sup>996</sup> Transcript, pages 11635 and 11636

<sup>997</sup> Transcript, page 18294

Controller Ms Whillas. When pressed as to whether he even turned his mind to the use of graders on the Tuesday morning he said:

'Q. Well, tell me if I'm wrong here but it would appear that nobody really applied their mind to whether or not graders could be utilized.

A. I certainly didn't, in my shift at that early stage, no.

Q. And my question then is, why did you not apply your mind to whether or not graders could be used, having regard to the fact that here they were on a silver plate for you.

A. I think I indicated to you yesterday that it's not just a matter of 'Here they are, use them', we've also got to take into consideration the cost factors of hiring these sort of pieces of equipment.<sup>998</sup>

20.45. Mr Maddern agreed having multiple ploughed or bare earth breaks in paddocks would have assisted firefighters in controlling the fire as it creates a buffer which slows the fire down and allows firefighters easier access to it<sup>999</sup>.

20.46. Mr Maddern said that if he had been told that breakaways were highly likely that he would have considered asking farmers to bring their earthmoving equipment into Areas A and C to try and create breaks<sup>1000</sup>. Mr Maddern also agreed that on that scenario he would not have released the council graders on the Tuesday morning as the Incident Management Team would have at least had to consider whether there was any work that they could do to combat the likelihood of breakaways<sup>1001</sup>.

20.47. Mr Maddern was of the view that disc ploughs have a place as a firefighting tool and had himself used one to bury vegetation on his own property<sup>1002</sup>.

20.48. Mr Chambers, the Incident Controller for the Monday afternoon and Tuesday morning said that he had no knowledge of the grader operators even attending the fireground on the Tuesday morning, let alone being dismissed by Mr Maddern. When asked whether he saw a need for the graders to be in attendance that morning he said:

'No, I didn't see any need because I was told that it had been blacked out all around the edge and that there was no recommendation that I could see for a grader to be used.'<sup>1003</sup>

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<sup>998</sup> Transcript, page 9065

<sup>999</sup> Transcript, pages 9060 – 9061

<sup>1000</sup> Transcript, page 14793

<sup>1001</sup> Transcript, page 14854

<sup>1002</sup> Transcript, Pages 14966 – 14967

<sup>1003</sup> Transcript, page 11410

20.49. Mr Chambers agreed that on the information that he has received since the fire, that is that no containment work had been undertaken in Area A overnight and limited containment work had been achieved in Area C, that heavy machinery of some kind should probably have been put into those areas early on Tuesday morning<sup>1004</sup>.

20.50. Ms Angela Whillas, the overnight Incident Controller said she did not turn her mind to creating bare earth breaks during her shift as she was of the opinion that the previous Incident Management Team had created all the bare earth breaks they considered suitable and that any others along the swamp line had been ruled out otherwise they would have been put in prior to her commencing her shift<sup>1005</sup>. Ms Whillas said it would have been ideal to create a break along the swamp lines of Areas A and C if a backburn could not be undertaken. Again she thought this was something that had been ruled out by the previous Incident Management Team. As to whether she considered this as an option for the Tuesday morning:

'Q. I want to go back to where we were about five minutes ago. I'm not talking about a graded break which goes through the middle of C and A that needs to be supported by a back-burn, so forget back-burning for the moment. I'm not talking about a graded break that goes into the swamp and so, therefore, suffers a risk of getting bogged. I'm talking about the perimeter of the paddock immediately outside the swamp; is there any reason why that couldn't have been commenced, for example, assuming graders were available, at first light on the Tuesday morning.

A. Not that I'm aware of.

Q. Did you give any consideration at all to putting in place steps for that to occur.

A. No.'

20.51. Ms Whillas indicated that she would have expected Mr Branson, as the more experienced firefighter to suggest any strategies, including the use of heavy machinery, for the problem areas he had indicated in the swamp<sup>1006</sup>.

20.52. Ms Whillas agreed that after receiving the 4:05am weather forecast which in her mind ruled out any possibility of backburning that the only option available to the Incident Management Team apart from blacking out was machinery, including farming machinery:

'Q. So that the option then becomes machinery.

A. That is really the only option and I would have expected that if we didn't have the capacity to use council plant.

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<sup>1004</sup> Transcript, page 11672

<sup>1005</sup> Transcript, page 9892

<sup>1006</sup> Transcript, pages 9897 and 9899

Q. Which was there.

A. Except we weren't able to use them overnight.

Q. It's getting light.

A. That's true but we didn't have the operators. The operators didn't arrive it is my understanding until 0600. Then we could have utilised some farm machinery if it had been offered to us.

Q. Right.

A. That situation in that stubble area through that whole section could well have been established as a break with a farmer engaging his wide line machine.<sup>1007</sup>

20.53. Ms Whillas claimed to be unaware that Mr Maddern had advised the council grader operators that they were not required on the Tuesday morning. She said that whilst she did not convey in her briefing that graders could be used she highlighted the areas of concern to the incoming Incident Management Team<sup>1008</sup>. Ms Whillas explained why she did not incorporate graders into her action plan for the upcoming shift:

'A. I hadn't incorporated the graders in my plan because I didn't consider that if we had - we weren't sure when the operators were going to arrive and if we had said that we wanted to expand the existing break that had been created prior to my arrival on the Monday, I wasn't confident that they would actually achieve that before this weather had arrived and we had to be very - we had to consider the potential for the operators to be at risk and exposed and, as you indicated, if the FDI had reached 100, a two-blade width break wouldn't have provided much resistance.

Q. I take that answer to mean that you took no steps to get graders on the fire ground prior to 7 a.m. on the Tuesday morning.

A. That's correct, but I was also being guided by suggestions from Russell Branson, as my Operations Officer because he'd seen the fire ground break the Monday and he was still on the fire ground at daybreak and when I radioed the forecast through to him, I expected if he thought that was a strategy we should implement, that that would have come from him.

Q. Just to be clear about that evidence, when you talk about relying upon Mr Branson in relation to the graders, you are relying upon the fact that he said nothing about the graders, which you thought was significant.

A. Sorry?

Q. Mr Branson did not ever saying anything to you to the effect of 'Don't bother with graders', did he.

<sup>1007</sup> Transcript, pages 9800 and 9801

<sup>1008</sup> Transcript, page 9805



A. I asked him, after I'd given him the weather forecast, if he was happy with the way things looked and did he want to do anything else and that question encompassed extending breaks, back burns, or reallocating the resources.

Q. In your mind that's what you were getting at.

A. That's correct.

Q. You assumed when Mr Branson said to you that he was happy and didn't consider anything else needed to be done that he was included ruling out the use of graders.

A. That's correct.<sup>1009</sup>

20.54. Ms Whillas agreed that graders could have worked on the south-eastern perimeter up until 9:30am without having to worry about the weather, but at the same time thought it would be a high risk to place them in those areas. She said that just because she hadn't included graders in her Incident Action Plan for the Tuesday the new Incident Management Team could have still put them to use if they had deemed it necessary. Ms Whillas said she would have preferred to see a wide line machine working in those paddocks as it could have more quickly created a large break<sup>1010</sup>.

20.55. Mr Branson, the Operations Officer for both Monday shifts, and the only member of the Incident Management Team on the fireground from 9pm on Monday evening, had actually made a request of a farmer for a disc plough on the Monday evening. Mr Branson said he spoke to Mr John Giddings at Wanilla Hall around 10:30pm. Mr Giddings was expressing concern about the burning sugar gums in the Lady Franklin Sector and Mr Branson asked him if he was aware of any local farmers with a disc plough. Mr Branson said that he had thought that a disc plough could have put breaks around the southern side of the sugar gums overnight<sup>1011</sup>. This appears to have been the only consideration given by any member of either Incident Management Team as to the use of farm equipment and the request was not followed up by Mr Giddings or Mr Branson.

20.56. Mr Branson said that when he discussed the fire with Mr Maddern at Wanilla Hall on the Tuesday morning he made it clear to Mr Maddern that appliances and resources (graders) were to be sent to the vulnerable locations he had highlighted on the south-eastern perimeter. Mr Branson said he was unsure whether he would have

<sup>1009</sup> Transcript, pages 10792 and 10793

<sup>1010</sup> Transcript, page 10798

<sup>1011</sup> Transcript, page 10177

specifically mentioned graders to Mr Maddern but assumed that a man of Mr Maddern's experience would have recognised the need for their use. He said:

'Q. Do you agree that it was a wise thing to do, to send the operators home when they presented themselves to work on the Tuesday morning.

A. On the Tuesday morning I would have thought there was naturally work for them to do, eg, finish continuing putting their earth mark around the cold perimeter of the fire.

Q. Did you tell Maddern that, by the way.

A. I said it was my thought. I didn't pass that on to anybody.

Q. Why didn't you pass that on, it was your thought that that would be a good strategic move, you didn't appear to pass that on either.

A. I thought a man of his experience he would have naturally continued that way, or the operations officer that took over from me would have continued that way. That is part of the planning, that perhaps should have been happening at night back at the Wanilla control where there wasn't anybody there doing that sort of work.<sup>1012</sup>

20.57. Mr Branson agreed that with the benefit of hindsight some sort of bare earth break, if not a backburn, should have been put into Areas A and C. He said that graders could have started working at first light and could have been sent into the area within 30 minutes of a decision to utilise them being made.

20.58. That no work other than ineffective blacking out was conducted to shore up the south-eastern perimeter of the fireground either overnight or the Tuesday morning is somewhat perplexing when it is borne in mind that there was an obvious risk to life and property posed by the juxtaposition of that perimeter and the weather forecast. The evidence satisfies me, and particularly that of Dr Tolhurst, that ploughed breaks, possibly augmented by grader breaks put in on the Tuesday morning, could have made a significant difference to the progression of the fire in Areas A and C. Dr Tolhurst thought that the ploughing exercise that he described, mainly Option 4a, could have been 80% as effective as ploughing the entire paddocks in those areas. The ploughing of parallel strips of 100 metres wide was an achievable exercise. It would have been even more achievable if priority had been given to identifiably vulnerable areas such as Area A, where no work was achieved overnight in terms of blacking out. I was particularly impressed by the evidence of Mr Tiller, the Wanilla CFS Captain, who told me that bare earth breaks may have made a difference in Area A. He would know, because he was there trying to fight the fire in that location. He

suggested that it would have been nice in hindsight to have had bare earth breaks in that location. To my mind, Mr Tiller was being over generous when he said that the matter should now be considered in hindsight. In my view, there was nothing unforeseeable about the prospect of fire coming out of the swamp to the west into those paddocks. In my view, hindsight is beside the point when it is remembered that it is the task of an Incident Management Team to consider what the possible consequences of inaction would be.

- 20.59. I draw the conclusion that the creation of ploughed or graded breaks in Areas A and C could have made a significant difference to the outcome of the inevitable breakaways. Even if the progression of the fire had been slowed, delayed or diverted as it came out of the swamp and crossed the paddocks, the fire that was ultimately to overwhelm Messrs Murnane and Richardson and Mr and Mrs Griffith and the Borlase children may have arrived at those locations at a different time or perhaps not at all.
- 20.60. Whilst it cannot be said with absolute certainty that their deaths could have been avoided had machinery been used in Areas A and C, in my view they would have had a greater chance of survival had that work taken place. If the question is asked whether one can be absolutely certain that the outcome would have been exactly the same even if heavy machinery had been used in Areas A and C, in my view, it is impossible to give an affirmative answer to that question.
- 20.61. The same applies in my view to a consideration of whether the deaths and destruction at North Shields and Poonindie would have occurred or not. It may well be that even with the use of machinery in Area C the fire may still have reached the east coast of the Lower Eyre Peninsula. Whether it would have reached that location at the same time or at the same speed and with the same intensity will never be known.
- 20.62. In the course of the Inquest there was a question raised as to whether or not safety concerns would have precluded the use of heavy machinery in Areas A and C on the Tuesday morning. As I understand the contention, with a forecast of the kind described for the Tuesday morning, the presence of both heavy machinery and CFS appliances in Areas A and C would have been contra indicated, if not out of the question. Mr Gould in particular expressed some misgivings in relation to that issue. The fact of the matter is that nobody has at any time suggested that that was a reason

or the definitive reason why heavy machinery was not used in the paddocks on the Tuesday morning before the breakaways. Nor has it been suggested that it was a reason that was considered on the Tuesday morning as precluding the presence of appliances in those paddocks. In addition, as we know, there were CFS appliances in those paddocks, albeit that they were sent in there after the breakouts were detected. I speak here of course of Cummins, Edilillie and Karkoo in Area C and Wanilla and Coultas in Area A. Certainly they were in situations of danger, but I did not hear any of the crews of those appliances suggest that their presence in those locations was totally inappropriate. On the contrary, the crews showed remarkable fortitude in unhesitatingly proceeding into those locations. Mr Hall told me that he would have permitted his Council machinery operators to work on the Tuesday morning in those paddocks and would have kept an eye on the wind and perhaps ceased work when the wind sprang up. They had reported for duty that morning in the expectation that their services would be utilised. As it transpired, the grader operator Mr Arnold was that afternoon to work in dangerous circumstances on the northern edge of the fire on the property of Messrs George and Les Hull. His graded breaks delineate the eventual fireground at its northern extremity on the Hull property and a fair inference is that his work was effective.

- 20.63. In any event, with proper planning Mr Ferguson suggested that safe areas could be identified or created so that appliances or machinery had a refuge.
- 20.64. The suggestion that it would not have been appropriate to place machinery and/or appliances in the paddocks marked A and C on the Tuesday morning is now curiously offered as an excuse for failing to undertake any meaningful work in those areas or having any meaningful CFS presence in those areas on the Tuesday morning. I say that for this reason. The contention that it would have been too dangerous to have machinery, appliances and firefighters in Areas A and C assumes that a significant risk of the fire breaking away from the swamp and into those paddocks had been assessed as being so great that it was too dangerous for men or machines to be in those areas. If that were the case, and such a risk had been identified, it would follow that a conclusion had been reached that there was simply nothing that could be done to stop this fire proceeding across the landscape. If that were the case, there would be no justification for keeping that knowledge from the general public. If breakaways were accepted as an inevitability, and if it was recognised that nothing had been done

or could have been done to stop that from happening, even to the point where it was too dangerous to have men and machines near the swamp, then inevitably the general public was at extreme risk as well. It would follow that the general public would need to be made aware of that risk. This simply did not occur on the Tuesday morning, and as seen elsewhere in this report, statements made in the media, for and on behalf of the CFS, were upbeat. No communities were being threatened according to certain statements. The fire had been signed off as being 'controlled' which is meant to signify that the complete perimeter of the fire was secured and no breakaways expected. This declaration is not compatible with the suggestion that it would have been too dangerous to place men and machines in Areas A and C.

**21. Would firefighting aircraft have been effective on the Monday or the Tuesday morning to prevent breakaways?**

- 21.1. Again, this question can only be addressed after the event, without knowing the precise conditions that prevailed at the time of the breakaways on the Tuesday morning.
- 21.2. There is a feeling in the community, voiced by more than one person, that water bombing aircraft should have been utilised in this fire on the Monday afternoon and Tuesday morning.
- 21.3. It is fair to say that the community has very high expectations in relation to the capability of firefighting aircraft that are not met by reality. That expectation appears to have been heightened by publicity that is given to the utility of firefighting aircraft, particularly the larger aircraft such as air cranes, in high profile situations. While aircraft of different varieties have a well recognised role to play in firefighting, some of the on-ground firefighters in this particular event, as well as landholders, were strongly of the opinion that water bombing could have played a much bigger role than reality would dictate. Dr Bob Smith who perhaps more than anyone in the aftermath of this fire became attuned to the public perception, states:

'I think there was an opinion amongst some of the firefighters that aerial water bombing was actually the panacea of bushfire management ...'<sup>1013</sup>

Dr Smith's experience was that the effectiveness of water bombers depends on the circumstances. His experience is that aerial bombing, particularly in an initial attack on a fire in isolated areas is a very useful tool but not necessarily the be all and end all that it is often portrayed in the press to be. In this regard, Mr Kevin Warren, a local aviator and a man experienced in utilising his aircraft for the purposes of aerial water bombing, said this in his evidence to the Inquest:

'... there is also misconception among the wider community too that the aeroplanes are the godsend for fire fighting and that the aeroplane comes in and fixes everything but they are just another tool in the overall fire fighting schemes and whilst they have a very very valuable place in that operation, I believe, and in fact I think their general worth is still underestimated in many areas, you still have to have the back-up of the ground teams following things along but there's this - I mean this has shown up classically in New South Wales and other areas where they had to bring in the big Elvis helicopters at absolutely huge expense for firefighting purposes and so on. Everybody believed they

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<sup>1013</sup> Transcript, page 17608

were going to be the things that were going to stop the fire, but indication is coming out of America and Canada are that with all huge aerial bombing capacity they have over there, with huge aircraft being involved, there's still some consideration and reservations to whether all their firefighting efforts put together are having any real effect in stopping any fire of major proportions.' <sup>1014</sup>

- 21.4. The above statement by Mr Warren basically reflects the tenor of the evidence that I heard in totality in relation to the question of water bombing. I will deal with the issue of the utility of the so-called Elvis skycrane separately. However, the net result of my analysis of the evidence is that the possible effect of water bombing either on the Monday evening or Tuesday morning is not certain, except to say that it is clear that it was useful ultimately as a means of asset protection once the fire became uncontrolled. As to whether it would have prevented the fire from breaking away on the Tuesday morning is a different issue altogether. Opinions differed about that, and as I say, any analysis of this subject is not helped by the fact that we are examining the matter after the event and without the benefit of precise knowledge of all of the relevant circumstances. However, there is validity in the contention that water bombers should have been available on the Tuesday morning if for no other reason than as an additional tool that could have been available given the major risk that this overnight fireground presented on the Tuesday morning.
- 21.5. In my view the evidence as to the potential efficacy of water bombing in general terms, not necessarily related to the Wangary fire, is as follows:
- The best use of aircraft is in the initial stages of a fire and the sooner an aircraft can start placing water on a fire the better chance it has of putting it out;
  - Water bombing aircraft are generally relatively ineffective in a running fire;
  - In extreme conditions with high grass fire danger indices water bombing is less effective;
  - Under less extreme conditions aircraft may be able to slow the spread of a fire in order to allow time for more planning and other operations;
  - Water bombing aircraft may be hampered in their effectiveness by high winds, high temperatures, low humidity and poor visibility through smoke;
  - Water bombing aircraft require the supervision of an Air Attack Supervisor so that coordination between the pilot and the Air Attack Supervisor can be

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<sup>1014</sup> Transcript, page 6538

maintained, taking into account observations and effectiveness of previous drops and feedback from ground crews;

- Water bombing aircraft are but one tool in firefighting and it is important to use aircraft within a correct combination of firefighting strategies overall;
- The effectiveness of water bombing aircraft is very dependent upon the presence of ground crews to continue firefighting work on the ground and to reduce the likelihood of reignition after a water bombing exercise;
- Attempts to water bomb an inaccessible fire edge are not normally successful;
- In a running or uncontrolled fire, water bombers still have a role to play in asset protection, for example, in placing water on a house or other structure.

21.6. As seen, the Lower Eyre Peninsula was not in itself, or part of, a primary response zone at the time of the fire. Accordingly, on the Monday there were no CFS contracted water bombers in the Region. Now that the Lower Eyre Peninsula is part of a primary response zone, there are two air tractors on standby during the fire danger season. The air tractors are based at the Port Lincoln Airport. This state of affairs has existed since the 2005 - 2006 bushfire season.

21.7. In the Lower Eyre Peninsula there was a history of aerial support provided by a local agricultural spraying company Eyreial Agricultural Services. This company was run by Mr Kevin Warren and his wife Margaret Warren. Their company has provided aerial support to CFS at fires on the Lower Eyre Peninsula for several years including the Tulka fires in 2003. Mr and Mrs Warren did not have a contract with the CFS to provide such aerial support but did so on a voluntary basis.

21.8. Eyreial Agricultural Services had five aircraft available on 10 January 2005. Four Piper Braves which hold a capacity of 1,000 litres of liquid and a Glasair 3 which does not carry liquid but is able to be used for observation purposes. Mr Warren stated that at least three, if not all four of the Piper Braves were operational on Monday 10 January 2005<sup>1015</sup>. The aircraft were all based at Cummins apart from one Piper Brave which was at the property of Mr and Mrs Warren just to the west of Port Lincoln.

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<sup>1015</sup> Transcript, page 6378



21.9. Aerial support on Monday 10 January 2005

The first request for aerial assistance in relation to this fire was made by Mr Ross Pope, the Wanilla CFS captain on the Monday afternoon around 5:30pm. Mr Pope was fighting the fire in the vicinity of Messrs George and Les Hull's property when he saw that the fire had entered the swamp. He promptly contacted the Incident Controller, Mr Chambers and advised him that the fire was in inaccessible swamp and that a water bomber would be required. Mr Chambers advised Mr Pope that he would look into it.

21.10. Mr Chambers in his evidence, says that after the conversation with Mr Pope he contacted Region 6 headquarters and spoke to Mr Vogel. Mr Chambers said he asked Mr Vogel whether water bombers were available or whether they could use the local water bombing aircraft owned by Mr Anthony Warren. Mr Vogel advised Mr Chambers that the CFS were not allowed to employ private contractors to undertake water bombing work<sup>1016</sup>. Mr Chambers did not query this decision and does not appear to have made any other attempt to arrange for a water bombing aircraft that afternoon.

21.11. Mr Vogel's log indicates that he spoke to Mr Chambers at 1756 and advised him that no planes were permitted unless they were contracted with the CFS<sup>1017</sup>. Mr Vogel did not specifically recall Mr Chambers requesting a water bomber be sent to the fireground. Mr Vogel's recollection was more that a request had come into the regional office via another means and that he was just advising Mr Chambers that private aircraft would not be contracted by the CFS to provide water bombing support<sup>1018</sup>.

21.12. At around the same time period Ms Angela Whillas, who had been assisting at CFS Lincoln Base during the afternoon, contacted Mrs Warren of Eyreial Agricultural Services to advise them of the fire and to ascertain whether Mr and Mrs Warren would be able to provide any aerial support. Ms Whillas did this as a personal request, not as a request from the CFS. Ms Whillas was a family friend of the Warrens and had worked with them before when fighting fires in the Greenpatch area.

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<sup>1016</sup> Transcript, page 11175

<sup>1017</sup> Exhibit C241a

<sup>1018</sup> Transcript, page 12799

- 21.13. Ms Whillas initiated this call after hearing the request from Mr Pope on the fireground for water bombing assistance. Ms Whillas said that at the time of making the request to Mrs Warren she had been advised by Mr Vogel that there was not the capacity to contract the Warrens to provide any aerial assistance but that they could certainly assist at the fire in a voluntary basis if they were so inclined<sup>1019</sup>.
- 21.14. Ms Whillas also spoke to Mr Anthony Warren, the son of Mr and Mrs Warren and one of the principal pilots with their company, and he indicated to her that he would take a plane up over the fire. Ms Whillas said that her impression was that he would provide some aerial surveillance for the CFS crews<sup>1020</sup>.
- 21.15. Mrs Warren told me that after receiving the telephone message from Ms Whillas on the Monday afternoon in which the latter had requested assistance, she telephoned CFS Region 6 headquarters and spoke to Ms Sonia Post. Mrs Warren said she asked Ms Post if they had any instructions for them in relation to the fire and that Ms Post advised her that they were not to water bomb unless they received specific instructions from CFS Region 6 headquarters.
- 21.16. Ms Post's recollection of this telephone conversation slightly differs in that she believes that she initiated the telephone call to Mrs Warren and that Mrs Warren seemed panicky. Ms Post states that she told Mrs Warren that whilst CFS would not officially engage the Warren's to attend the fire they were certainly able to attend in a private capacity if they wished<sup>1021</sup>. Ms Post then had a discussion with Mrs Warren about the level of insurance coverage that their company held as it did not meet the requirements of coverage that the CFS had for engaging private contractors to provide aerial assistance.
- 21.17. Mr Anthony Warren, self deployed on the Monday evening. He was flying a Piper Brave with water bombing capability. He took to the air at approximately 6:30pm and was over the fireground at about 6:45pm. From the air the fire appeared to be out of control and at its peak, it would have been travelling at about 30 kilometres per hour in some locations. Mr Warren had a load of water and dropped it on a particular front which was able to be extinguished. Later he dropped a further load at about 8:40pm in the property of George and Les Hull. Mr Les Hull suggested that this had

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<sup>1019</sup> Transcript, pages 9574-9575

<sup>1020</sup> Transcript, page 9576

<sup>1021</sup> Transcript, page 11989

been done with good effect, whereas Mr Warren from what he could see did not believe it had any beneficial effect at all. That was the extent of water bombing on the Monday.

- 21.18. The issue of water bombers had been discussed at a State level by the CFS on the Monday afternoon. Following the briefing with the Bureau of Meteorology at 4:30pm, Mr Ferguson in his teleconference with all CFS regions, specifically discussed the placement and usage of water bombers for the Tuesday given the extreme weather conditions that were being forecast.
- 21.19. Ms Post who was participating in the teleconference on behalf of Mr Vogel, said that Mr Ferguson instructed her to undertake some contingency work to arrange for aircraft to be on standby for Region 6 the following day. Ms Post said that she then undertook several phone calls with local aerial services to ascertain their availability for the following day, including the phone call in which she spoke to Mrs Margaret Warren.
- 21.20. Ms Post also spoke to Mr Owen Glover, who was the CFS State Air Resources Coordinator, to determine whether AMR planes would be available for Region 6 if required on the Tuesday. Ms Post states that Mr Glover informed her that the AMR planes were unavailable to be stationed at Port Lincoln and that their availability if required would depend on what fires were going at the time.<sup>1022</sup> Mr Glover's recollection of this conversation differs in that he believes that he had a general discussion with Ms Post about the process involved with getting water bombers to Region 6 if required at any stage and that he did not tell her that they were not available to that region<sup>1023</sup>.
- 21.21. In any event, it appears that as a result of the enquires made by Ms Post in relation to aircraft on the Monday afternoon, she arranged to have the CFS air support trailer on standby if needed for the following day. She also advised Mrs Warren that they would need to meet certain requirements if they were to be involved in fire suppression work in an official capacity with the CFS, or that they could self respond in a private capacity if so inclined.

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<sup>1022</sup> Transcript, page 11985

<sup>1023</sup> Transcript, page 13709

- 21.22. Mr Ferguson in his evidence had absolutely no recollection of asking Ms Post to undertake such contingency work and he believes it is unlikely that he would have as it is the responsibility of every Regional Commander to have such contingency arrangements already in place<sup>1024</sup>.
- 21.23. Mr Samuel McCabe who is the Managing Director of Australian Maritime Services Pty Ltd (AMR), the company with whom the CFS contract for the provision of water bombing services, told the Inquest that two AT-802 aircraft could have been made available from Woodside in the Adelaide Hills and one AT-602 and one AT-502 could have been made available on the Monday afternoon if required<sup>1025</sup>.
- 21.24. Mr McCabe suggested that the AT-802 aircraft being on auto-dispatch from Woodside could have been delivering its first load approximately one hour from activation. The other two aircraft could have been in a position to deliver their first loads within approximately 1 hour and 45 minutes.
- 21.25. Mr Richard Alder who is the General Manager of the National Aerial Firefighting Centre and the Executive Officer of the Australasian Fire Authorities Council Wildfire Aviation Technical Group suggested in his statement that on the basis of a request for aerial bombers at 6pm on Monday, 10 January 2005, getting the aircraft into the air under appropriate supervision and coordinating the aerial operation with the on-ground operation would have been 'quite a challenging task'<sup>1026</sup>. He suggested that even if good supervision had been in place, two or three drops at the most would probably have been achieved before sunset. This represented in his view not a significant achievement at all, particularly when it is understood that late on the Monday evening the fire had become reasonably benign in any event. Accordingly, there does not seem to be any basis for criticism of any decision that may have been made not to secure the attendance of AMR contracted water bombers on the late Monday afternoon or evening. The desirability of getting them there for the Tuesday morning is, however, an entirely different matter.

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<sup>1024</sup> Transcript, page 17878

<sup>1025</sup> Exhibit C266

<sup>1026</sup> Exhibit C269, page 50

21.26. Discussions surrounding the need for water bombers on the Tuesday morning

The evidence by members of the Incident Management Team's is clear that they did not consider requesting aerial assistance until after the fires broke out on the Tuesday morning.

- 21.27. Mr Chambers, who was the Incident Controller on the Tuesday morning said that there was no need for aerial support on the Tuesday morning and that he did not think about it until the breakaways later that morning. Mr Vogel, the Regional Duty Officer for the Tuesday said that as he had not received any requests for aerial support from the fireground he had assumed they were not required.
- 21.28. According to Mr Ferguson and Mr Miller who conducted a teleconference with Mr Vogel at 8am on the Tuesday morning to be briefed on the Wangary fire situation, Mr Vogel indicated to them that there was no need for bombing aircraft.
- 21.29. The first request for aerial assistance on the Tuesday morning was made by Mr Robert Maddern to Mr Vogel at 10:35am after the fire had been burning uncontrollably for nearly forty minutes. Mr Vogel contacted Mr Leigh Miller at CFS State Headquarters requesting that aerial support be dispatched to Port Lincoln. This request was approved by State Headquarters just after 11am and a bomber was dispatched to the region at 11:26am<sup>1027</sup>. This aircraft commenced work at the Wangary fire around 1:30pm and dropped 54,000 litres of foam on the fire over the next seven hours<sup>1028</sup>.
- 21.30. Mr Vogel also later contacted CFS State Headquarters seeking approval for the Warren's to be officially contracted to assist, having received that request from Mr Maddern.
- 21.31. Mrs Warren, after hearing of the fire breaking out on the Tuesday, contacted Region 6 Headquarters to ascertain whether the CFS required their assistance. Mrs Warren said she was informed they were not required and that water bombers were being dispatched from Adelaide. She was later contacted by CFS advising that approval had been given for them to officially assist. The CFS State Headquarters approved the use of the Warren aircraft at 12:15pm on the Tuesday afternoon.
- 21.32. Mr Kevin Warren and his son Tony Warren decided to respond two of their aircraft in a voluntary capacity to assist with the fire at around 11:30am on the Tuesday. They

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<sup>1027</sup> Exhibit C247, page 16

did so after preparing their own properties which were at risk from the fire. Both Kevin and Tony Warren said that they were unable to prevent the spread of the fire which was unstoppable by that time, but that they were able to drop water on individual houses in an attempt to extinguish the burning material and to provide direction to people as to the fire's path. Indeed Mr Kevin Warren rang his wife Margaret several times during the Tuesday afternoon asking her to contact people whose homes were in the direct path of the fire<sup>1029</sup>.

21.33. Aircraft available on Tuesday 11 January 2005

Given the extreme weather that was forecast for the Tuesday, the CFS had the following aircraft based in its two primary response zones:

'2 AMR fixed wing (and 1 AUSDINE fixed wing) at Mt Gambier

2 AMR fixed wing at Woodside and 1 NAFFS rotary wing at Brunkunga<sup>1030</sup>

21.34. A fire at Rendelsham early on the Tuesday morning resulted in one of the AMR fixed wing bombers being sent from Woodside to assist the aircraft fighting the fire in the south-east. That fire was contained at 10:42am and the bomber from Woodside was released. It was that bomber that was subsequently sent to the Wangary fire at 11:26am.

21.35. The Warren's plane availability was the same as the previous day, with three aircraft at Cummins and one at the family farm near Greenpatch. The Warren's on their own initiative responded to the fire with two Piper Braves just before midday.

21.36. What use would water bombers have been at the fireground on the Tuesday morning

As far as the efficacy of water bombing on the Tuesday morning is concerned, Mr Alder suggested that the best use of aircraft before the fire broke away on the Tuesday morning would have been aerial observation and intelligence gathering. He suggested that having a loaded water bomber in the air in the expectation that there may be breakaways would not be an appropriate use of the aircraft. As well, it is not normal practice to put a load of water or foam on a fire edge to prevent the possibility of the fire beginning to run. Mr Alder suggested that this would not be undertaken unless you had specific knowledge of a target that one knew was a particular problem and where someone had verified and assessed that aircraft would be of some benefit. As

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<sup>1028</sup> Exhibit C266, pages 5 and 6

<sup>1029</sup> Transcript, page 6655

an example of this, aircraft could potentially be used to drop on a small area that ground crews were trying to black out and which had the potential to break away.

21.37. The effect of dropping on an area inaccessible to ground crews would depend on the fuel type. Dropping could be potentially useful and might lower the probability of the flames reigniting, but only before the water content in the foam evaporated. Any use that aircraft may have had before the wind picked up and before spotting of the fire occurred would depend on ground crews being available to follow up what the aircraft were doing, especially so given that on this particular occasion the GFDI was so high. Mr Alder expressed the view that even if this had occurred it is unlikely to have changed the outcome because the fire escaped from multiple locations. The observation can be made, however, that there were multiple outcomes in this fire and who is to say that perhaps one of them may have been altered by the strategic use of aircraft at a place on the Tuesday morning.

21.38. There were multiple breakouts in Area C, but it will be remembered that the flare-up in the swamp to the west of Area A occurred about half an hour later at 10:25am. Even if there was no work for aircraft to do in Area C because of the overwhelming scenario there, the question would need to be asked whether aircraft would have been useful in at least reducing the intensity of the 'napalm' like flare-up in the swamp to the west of Area A. However, Mr Alder expressed the following overall view in relation to the usefulness of aircraft on the Tuesday morning:

'However under the severe conditions on the 11/1//05 I doubt whether aircraft would have been able to reduce or significantly affect the rate of spread of the fire. The aircraft and ground crews would have eventually been overwhelmed by the degree of multiple spotting. This is a difficult situation for aircraft. Once the fire was running it is unlikely that the aircraft could have done anything to reduce or control rate of spread of the edges given the intensity of the fire and even buying-time strategies would have overwhelmed the aircraft. This does not mean that you wouldn't use aircraft because you don't necessarily know with certainty how things are going to develop.

Under those conditions aerial bombers would need to be at the location of the spotting very quickly to be of any potential assistance. Having aircraft over a break out increases the chances of controlling the break out but ultimately the aircraft would have been overwhelmed. As the fire intensity increases and the rate of spread increases you are more likely to get multiple spots. When you get multiple spotting the effectiveness and ability of aerial bombers to control rate of spread diminishes markedly.

Under the conditions occurring one or two or multiple aircraft may have had some impact on one or two spots but the effectiveness of the aircraft would still be dependant upon having adequate ground crews in the area of the outbreak to come in and follow up as soon as the drops were made.

Under less extreme conditions aircraft may have been able to slow the spread of the fire in order to allow time for more planning and other operations, for example for sending in ground crews to reinforce control lines or possibly back-burning, blacking out and securing the area. This would have been dependant upon factors such as accessibility and prevailing weather.

It is very unlikely that aircraft would have been useful, assuming they would fly near the head of the fire, in halting the spread of the fire as there may have been an issue with visibility due to the presence of smoke and aircraft could not cope with a fire intensity of that degree under those conditions.

Aircraft could have been used for other purposes such as observation, depending on visibility, and asset protection and flanking where drops are made on the flanks of the fire where the fire intensity is not so great to restrict the width of the head, depending on the aircraft available.'<sup>1031</sup>

- 21.39. Those opinions were in a large measure echoed by Mr Kevin Warren who colourfully expressed the view that once the fire got away on the Tuesday and had broken out of the swamp, there was no way that his aircraft, together with all of the fire bombers in South Australia could have stopped it. Mr Warren suggested that the Monday night was the time when the fire ought to have been contained. Mr Warren did say however that in his view aircraft on the Tuesday morning could have been useful in a situation where an imminent breakout was identified by an increase of fire intensity within the scrub as evidenced by flame and smoke<sup>1032</sup>. Mr Warren suggested that a breakaway might be delayed by bombing an identified hot spot. Mr Warren agreed that one possible effect of water bombing an identified hot spot in the swamp would be to delay a breakaway gaining intensity, but added that the circumstances that prevailed at the time would have to be assessed before any meaningful opinion could be given about the possible effect of delay given that the fire may have been spotting in numerous places into the paddock. Mr Warren said this:

'A. Yes, and I think that in the really early stages of the morning, before the breakouts occurred, as soon as there was any - because of the damp, overnight conditions, it got everything settled down pretty well. Once things started to dry up a little bit as the morning went on, one would become aware of areas which were starting to burn better than others - they would become patently obvious from the air - so one could have been at least directing vehicles right there and dropping water, if necessary,

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<sup>1031</sup> Exhibit C269, pages 52 to 54

<sup>1032</sup> Transcript, page 6641



but you could be directing vehicles to any of these areas where there was the potential, visible potential anyway, for the fire to be breaking away out of the scrub. As soon as there was any intensity of the fire increasing, one could have directed people to it.

Q. Or indeed dumped water on it yourself.

A. Exactly, yes.

Q. Would that have an effect.

A. Certainly. Certainly it would have.

CORONER

Q. What sort of effect.

A. Anything from extinguishing it virtually completely, except for maybe embers and that underneath logs and things, to just having a dampening effect, where it just takes the heat out of it and then the fire's got to re-establish itself, so there is a variation there which very much depends on what intensity of fire is there right from the start, what sort of undergrowth it's in, whether it's in mallee or just the typical scrubby undergrowth in the swamp area or in grass.

MR BOUCAUT

Q. Well, if it slows it down like that and takes the heat out of it, once again that would give people time.

A. Certainly, and you would be calling like mad for backup to 'Get in here straightaway because it's getting away here, we need some help. We have knocked it down for the moment, but we want backup straightaway'.<sup>1033</sup>

Again, the question has to be posed whether in all of the circumstances water bombing may have been beneficial at the identified flare-up in Area A. It will be remembered that the members of the Wanilla crew suggested that there was some delay between the flare-up in the swamp and fire emerging from the swamp as a front. It will also be recalled that there was a large measure of spotting from that location in the swamp. If the flare-up in the swamp to the west of Area A had been water bombed a contention that no beneficial effect would have occurred, at least in terms of delay, would have to be greeted with scepticism. Delay of course is all important because in general terms timing is important when one assesses whether for example, Messrs Murnane and Richardson's deaths could have been avoided. For instance, if the breakaway into the paddocks in Area A could have been delayed, the possibility that Messrs Murnane and Richardson would not have been at the fatal location or at that location at the same time, would need to be considered.

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<sup>1033</sup> Transcript, pages 6642 and 6643

21.40. Mr Alder in his statement specifically dealt with the effectiveness of aircraft in the swamp. As to that he said that assuming the fuel was not too elevated, there was no reason why aircraft could not be considered useful to slow the rate of spread of a fire in the swamp. Again, it would be necessary to have ground crews follow up any drops. If the swamp was inaccessible to ground crews Mr Alder suggested that there would be little point in such a drop because as a general rule ground crews are needed to follow up to ensure the effectiveness of the aircraft. On the other hand, Mr McCabe, also an experienced person in relation to the effectiveness of fire bombing, suggested in a situation where there were concentrated patches of breakaways from a swamp into stubble paddocks, aircraft might have a role to play in suppressing that type of fire as it came out of the swamp. Mr McCabe suggested that aircraft would be able to attack the fire as it came out into the stubble to try and slow its spread as much as possible in order to give the ground crews time to get in there and support the operation<sup>1034</sup>. Mr McCabe suggested that aircraft might slow flare-ups in a swamp setting. He said:

'You could slow them down, certainly. You may put them out, I mean it's impossible to say.'<sup>1035</sup>

Mr McCabe agreed that one would make an attempt in order to discover whether or not there would be any beneficial effect<sup>1036</sup>.

21.41. Mr McCabe, however, added that in his view with the multiple breakaways that to his knowledge occurred on the Tuesday morning, and in the weather conditions that existed, one would have needed three large aircraft plus a large ground crew in support and that if one was very lucky there may have been a slight chance of holding the fires. At one point he suggested it was a very remote chance<sup>1037</sup>. On the other hand, he suggested that water bombing might have been of some use in calming the flare-ups in the swamp that were causing spotting. Mr McCabe agreed with the proposition that one would not know exactly what the usefulness of aircraft would be in those circumstances until one tried to use them. Mr McCabe, unlike others, was not averse to the idea of having a loaded water bombing aircraft in the sky in anticipation of a breakout. Mr McCabe suggested this could happen and has happened, particularly as a fire approaches a break. Mr McCabe suggested that a

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<sup>1034</sup> Transcript, page 15999

<sup>1035</sup> Transcript, page 16000

<sup>1036</sup> Transcript, page 16000

<sup>1037</sup> Transcript, page 16511

loaded aircraft might be held to ensure that when a fire reaches a break, the fire is going to be halted, or the aircraft might be utilised in those circumstances to support firefighters on the ground. Mr McCabe told me that they have dealt with situations in the past where a fire was said to have been contained but that as a result of deteriorating conditions, flare-ups in a scrub might occur. As to the effect of aircraft in those circumstances he said:

'Normally we would be - if there was a break in - if. It's contained, depending on what level of containment I suppose, but we would be on standby in case it was to get away or to fight spot fires if they were to break the containment line.'<sup>1038</sup>

As to dropping a load from an aircraft onto flare-ups in scrub, Mr McCabe suggested that this would slow a flare-up down but not necessarily stop it under '*any kind of decent fire conditions*'<sup>1039</sup>. But, Mr McCabe suggested that dropping a load on a flare-up in scrub will calm the fire as it approaches a break so that crews at the break could support the efforts of the aircraft. In terms of slowing it down, he suggested that it would take the heat out of the fire and slow its advance down and reduce its flame height.

- 21.42. Mr Owen Glover, the CFS State Air Resources Coordinator, also suggested that the delivery of foam from an aircraft into a swamp might potentially slow a fire at the point when it came out of the swamp, but would not be of any effect once into the stubble under extreme conditions. Mr Glover agreed that if a fire in a swamp were slowed down by the aerial delivery of foam, there was a good chance that the fire would reach the perimeter of the swamp where it borders stubble at a slower rate than otherwise. As to whether that would make it easier for ground crew to fight the fire at the perimeter, Mr Glover suggested that it would depend on such factors as the distance between the stubble and the swamp, spotting distances and whether there was any kind of break in the stubble<sup>1040</sup>. Mr Glover suggested that a break of perhaps two road widths might be defensible. The break could consist of a bare earth break or a burnt break. Of course, Mr Glover was saying these things in the abstract without knowing precisely what the conditions were at Areas A and C at the time of the breakouts from the swamp at those locations. In that regard, his views suffer from the same weaknesses as those of others who were asked to express an opinion about the

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<sup>1038</sup> Transcript, page 16505

<sup>1039</sup> Transcript, page 16506

<sup>1040</sup> Transcript, pages 13855 and 13856

effectiveness of water bombers in the swamp. However, Mr Glover gave the following evidence:

Q. If you were able to partially quell a flare-up with a water bomber; in other words it doesn't flare up with the intensity that it might otherwise have flared up in say swampy terrain, would that have any effect on the intensity say of spotting.

A. In theory it should, yes.

Q. So that if you're able to partially quell a flare-up by using water bombing strategies you might reduce the intensity of spotting which would include the amount of spotting and the distance perhaps it spots.

A. Yes.

Q. And whether that in a given case would have that positive effect you could only try it and see what happened I suppose.

A. Yes, and it would also clearly rely on having reduced the intensity of the head fire in enough places to be of significant reduction, meaning if you reduced only a portion of it you've still got the other portion to deal with, but yes.

Q. But are you ever going to be able to use a water bomber to completely douse a fire in inaccessible swamp country.

A. No.<sup>1041</sup>

21.43. Mr Gould told me that the usefulness of aircraft for direction suppression in a grass fire with an FDI of 20 or greater is quite limited. Once a fire has taken hold in grass and has burnt for 20 minutes the effect of direct suppression by water bombing would not be great. As to whether aircraft would have been useful at the time of the breakaways in Areas A and C, assuming appropriate ground crew and support, Mr Gould suggested that under the weather conditions unless one had a large number of aircraft available there would be no direct impact on those breakaways<sup>1042</sup>. On the whole, Mr Gould was very unenthusiastic, if not pessimistic, as to whether water bombing would have had any positive effect even immediately after the fire in the grasslands had got away. He said:

'Even immediately because of the rapid development of grass fires, they get up and they run very fast under these extreme conditions.'<sup>1043</sup>

21.44. As to the effectiveness of dropping on hot spots or flare-ups in a swamp, Mr Gould told me that such a strategy would have to be supported by ground crews. If ground crews were unable to gain access to the area that an aircraft was to dump a load on,

<sup>1041</sup> Transcript, pages 13856 and 13857

<sup>1042</sup> Transcript, page 17315

<sup>1043</sup> Transcript, page 17316

Mr Gould suggested that one would keep adding more loads to the area. Mr Gould suggested that aircraft might cool things down, but eventually under the weather conditions that prevailed, the water would evaporate and dry out. Foam only lasts so long as well, and if crews could not be brought in to support, a breach would eventually occur. However, such an approach might buy time<sup>1044</sup>. The difficulty with that approach however, according to Mr Gould is that there is difficulty in identifying the particular hot spots that are going to breakout. One might end up water bombing the wrong hot spots. Clearly in those circumstances resources are the key. Mr Gould suggested, however, that such a strategy would not be a complete waste of time and that one would at least try and engage aerial water bombing in such a situation.

- 21.45. Mr Gould suggested that the chances of holding any breakaways in this fire until after the westerly change came in were very small. However, with the breaks that he envisaged, such as the burns 50 metres into the stubble, together with aerial support, the probability of the breakaways would have been reduced although not eliminated<sup>1045</sup>. Mr Gould suggested the same considerations would apply with ploughing. Again, ground crews would be essential in conjunction with ploughed breaks and aerial firefighting.
- 21.46. Dr Smith suggested that aircraft on the Tuesday morning could have been used to put additional water on the swamp on hot spots. However, in the weather conditions that prevailed there was a very limited opportunity for the use of aircraft in suppressing spot fires into the stubble<sup>1046</sup>.
- 21.47. Dr Tolhurst had a more positive approach in relation to aerial firefighting in general. Apart from the obvious benefits that aircraft have in intelligence gathering, Dr Tolhurst suggested that aircraft were very useful in relation to working on hot spots. He said it is a preventative measure that can stave off more problems later. His experience in Victoria was that aircraft that are in the air and loaded are quite effective at stopping spot fires or early ignitions, much more so than once a fire has been running for 15 or 20 minutes. In relation to hot spots that cannot be reached by ground crews after they have been identified, Dr Tolhurst said that there is still certainly some benefit in the strategy of water bombing those spots, even if it is simply a delaying process. Dr Tolhurst said that delaying action can be worthwhile

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<sup>1044</sup> Transcript, page 17317

<sup>1045</sup> Transcript, page 17324

even if the fire ultimately gets away. Dr Tolhurst gave an example of this. In a fire in the Grampians in Victoria aircraft were used to bomb hot spots with the effect that a breakaway was significantly delayed to the early evening. The result was that they probably saved about 30,000 hectares of national park. In the situation that prevailed here on the Monday night and Tuesday morning, a delaying of the breakouts would have been beneficial. In this context, Dr Tolhurst raised the question of firefighters approaching the fire perimeter in the swamp from the north through burnt ground, working in conjunction with aircraft. The potential benefits of such a strategy seem to be apparent.

- 21.48. Dr Tolhurst specifically identified the fire that he said crept from the western end of the Cabot backburn towards the hundred line as being amenable to suppression by aerial bombing in the first 5 or 10 minutes<sup>1047</sup>. He suggested that water bombing may have extinguished or significantly slowed the head of the fire. He also said that the fire may have been amenable to suppression by firefighters in conjunction with such an exercise. Of course the observation needs to be made that no-one was there to observe this fire, and no-one was there to do any of the things that Dr Tolhurst said might have been beneficial. There is in my view reason to suppose that the same effect may have been achievable in respect of the fire observed by Messrs Andrews and Byass.
- 21.49. As far as the use of retardant is concerned, retardant is a substance which is laid in the path of a fire to stop a fire's progress. It more or less acts like a fire break. It was suggested during the Inquest that retardant could have helped contain the fire for 20 minutes and that this could have made all the difference<sup>1048</sup>. The evidence to my mind made it clear that the use of retardant would not have been a feasible strategy given the magnitude of the south-eastern perimeter. In any event, as Mr McCabe pointed out, a retardant line is essentially not that much different from a bare earth break. The other disadvantage that retardant has is that it is a limited resource and is extremely expensive. In addition, the laying of retardant line as a fire break is a very time consuming process and in any event is not necessarily effective in tall vegetation.
- 21.50. The preponderance of evidence in my view suggests that water bombing aircraft may well have been useful on the Tuesday morning, particularly in conjunction with

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<sup>1046</sup> Transcript, page 17747

<sup>1047</sup> Transcript, page 21936

breaks in the stubble in Areas A and C. Without such breaks, however, it seems that there would have been little that aircraft could have achieved in terms of preventing the spread of that fire across those areas in the conditions that prevailed. Water bombing aircraft to my mind would also have been useful in an attempt to quell or dampen the identified hot spots in the swamp. There may have been some benefit there in terms of delaying the eventual breakouts from the swamp. The usefulness of the water bombing aircraft in asset protection later on the Tuesday is well documented and does not require repetition here.

- 21.51. It is difficult to see how any proper risk assessment in relation to this particular fireground would not have involved the consideration of whether water bombers would be needed. If it had been predicted that breakaways of fire out of the swamp were inevitable or even highly likely under the freshening north and north-westerly winds on the Tuesday morning, no conclusion other than that water bombers would be required, for at least asset protection purposes, could have been reached.

## 22. **The lack of CFS appliances in Areas A and C**

As seen elsewhere in this report, at the time of the first breakaway (Fire 1) in Area C, there were no CFS appliances in the area. The same applies to the first breakout, if there was more than one, in Area A. There were 13 CFS appliances at the fireground on the Tuesday morning. Five appliances were allocated to the Lady Franklyn Sector which included the sugar gums and two were allocated to the North-West Sector.

- 22.1. In the Scrubby Sector, (which in the morning had been deemed by the Incident Management Team to also take in the Swampy Sector) there were three appliances, Wanilla, Coffin Bay and Coult. The Coffin Bay appliance was released to the Lady Franklyn sector before the breakouts and both Wanilla and Coult were working in Messrs George and Les Hull's property above Warunda Road that morning. Mr Pope, who was appointed the Sector Commander said that he had not been made aware that his sector now also encompassed the Swampy Sector. He said:

'Q. Did you understand that scrubby sector was to the north of the extension of Warunda Road.

A. Yes.

Q. And not to the south.

A. That's correct.

Q. Did you have an understanding of the sector to the south of Warunda Road.

A. The understanding I had was called swampy sector, what was happening in there I'd have no idea.

Q. Or who the sector commander was.

A. Or who the sector commanders were.<sup>1049</sup>

- 22.2. The Yorkies Crossing Sector was also allocated three appliances, which were Wangary, Cummins and Karkoo. The Wangary appliance was not able to fill its crew initially and so remained at Wanilla and then assisted in the subsequent shift of the Incident Control Centre to Wangary. The Cummins and Karkoo appliances had both responded to the earlier sugar gum flare-up and were not in Area C just preceding the breakouts.

- 22.3. The lack of appliances in Areas C and A in my view reflects the fact that there was in the case of Area C no effective Sector Commander for the Yorkies Crossing Sector on

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<sup>1049</sup> Transcript, page 4730



the Tuesday morning. In the case of Area A, the Sector Commander for Scrubby Sector was unaware that the Swampy Sector, which had incorporated Area A, was now part of his sector. Although there had been appliances in Area C earlier, they had left. The last appliance to leave the area, namely Cummins, was called away to the flare-up at the sugar gums at approximately 9:30am. That the flare-up in the sugar gums at that time presented as a distraction is to be acknowledged. The sugar gum area was always going to be a distraction simply by virtue of the fact that the extinguishment of fire in tall sugar gums, and the possibility of ignition and spotting with strong winds, was going to be problematic. However, the sugar gum area was but one difficulty posed by this imperfectly contained south-eastern perimeter of the fireground. At the time of the first breakaway in Area C, i.e. Fire 1 from the narrow of the swamp, the entire south-eastern perimeter from Warunda Road to Yorkies Crossing was unattended by the CFS.

- 22.4. The subsequent attendance by CFS appliances in Area C, whilst not detracting from the heroic efforts of the crew members concerned, was as a result of the detection of the first breakaway, Fire 1, by Messrs Andrew and Byass. When a number of appliances were able to leave the sugar gum area and attend at Christopher Hull's paddock, by then there was little or no chance of stopping the progression of the fire across that paddock towards Yorkies Gully Road. The same applies to Fire 1A in Mr Cabot's paddocks in Area C. As far as breakaways in Area A are concerned, the Wanilla appliance was the first appliance into that area after the flare-up in the swamp was seen by the two Hull brothers. The Wanilla appliance was ultimately overwhelmed, as was the Coultas appliance. Mr Tiller of the Wanilla appliance suggested that a bare earth break would have been very helpful in breaking up the rows of canola.
- 22.5. The fact that the Coultas appliance and its crew had a very narrow escape is some evidence from which it might be suggested that it was simply too dangerous to place appliances in Areas A and C in the expectation that fire would come out of the swamp and burn into the stubble, particularly under the extreme forecast conditions. A number of witnesses said that they would have been reluctant to position appliances in Areas A and C in the path of a likely fire across the paddocks. Messrs Tolhurst, Ferguson and Gould were of that school of thought. Of course we now know that the Coultas appliance and its crew was placed at risk. However, their attendance in the

paddocks in Area A was reactive and unplanned. As well, they derived little support from the presence of other appliances or from breaks to halt or delay the march of the fire across those paddocks. The other point worth making about a reluctance to place appliances in Areas A and C is that such a reluctance would reflect an appreciation of the likelihood with which fire would escape from the swamp and the likelihood of such an escape being uncontrollable in the stubble. If the situation was so dangerous that one would not have utilised heavy equipment in the daylight hours of the Tuesday morning, nor have placed appliances in Areas A and C, there seems to be little excuse for not alerting the general public to those same dangers. Although the majority of the population were at locations more remote from the fireground than Areas A and C, if it was recognised that the fire was going to come out of the swamp and cross Areas A and C unchecked then the likelihood of the fire crossing Yorkies Gully Road and Settlers Road would also have to be recognised. Hindsight is not required to conclude that by that stage the fire would be well away and uncontrollable. In those circumstances, how the existence of a risk of that nature could be justifiably withheld from the general public is a question that has no sensible answer. The decision not to place appliances in Areas A and C, nor for that matter heavy equipment was not because of any perceived danger to appliances and their crews and heavy equipment.

- 22.6. Indeed it is worth noting that both Mr Chambers and Ms Whillas, the two Incident Controllers when faced with the evidence that no containment work had been undertaken in those areas overnight, indicated that they would have urgently looked at placing both appliances and heavy machinery into those areas.
- 22.7. Mr Chambers said that if he had been aware on the Tuesday morning that no containment measures had been undertaken in that Area A overnight, he would not have released the Tumby Bay strike team from the fireground and would have urgently asked a sector commander to assess the area so that measures could be put in place to try and secure that section of the fire edge.
- 22.8. Ms Whillas indicated that if she had been made aware of the lack of appliances in Area A during her shift she would have assigned appliances into that area to patrol and extinguish any fire that came out of the swamp.
- 22.9. The reluctance to place crews and heavy equipment into Areas A and C is an ex post facto for justification for the lack of activity in those areas on the Tuesday morning.

It seems to me that those now agitating the proposition that the dangers in Areas A and C were so great that no reasonable person would place men or equipment in them overlook the fact that some very capable and courageous men did in fact go into those areas without any hesitation whatsoever. It also overlooks the fact that the fire was said to be 'controlled' with a completely secured fire perimeter and no breakaways expected. That the fire was controlled but that it was too dangerous to place men and appliances in Areas A and C cannot be argued at the same time. In addition, there seems to be no real reason why given the high degree of likelihood of breakaways in Areas A and C one would not have as many appliances as one could obtain in those areas, even if more appliances had to be obtained from outside the fireground and indeed outside the Lower Eyre Peninsula Group. If there is an argument available that this would have depleted the resources in other Groups, the only comment that would be made in that regard is that there is no evidence that there was an existing fire in any other location in Region 6 that morning, and certainly no evidence of any fire containing the dangers posed by this fire. It appeared to be accepted that one could plan and cater for escape strategies in the event of appliances present in Areas A and C being threatened by fire getting away from the swamp. In this regard it will be remembered that the Edilillie appliance captained by Damian Puckridge was able to seek refuge on burnt ground in Area C. That kind of strategy could be catered for in advance. Again, if that was thought not to be feasible, then questions of the public being informed of the dangers would need to be considered.

- 22.10. Mr Ferguson suggested that on the Tuesday morning one would marshal resources south of the fireground to pick up on a breakaway. One would need to ensure that crews had an escape route to a safety zone or were in a safety zone. As an example of this Mr Ferguson suggested that on the Tuesday morning an area with a 50 metre radius in the centre of Area A could be ploughed or graded and that could be used as a place that appliances could resort to in a situation of danger. He suggested that the same might apply in Areas C, D and south of the sugar gums. Mr Ferguson suggested that this strategy might be adopted even if one had not been successful in ploughing the relevant areas of the stubble. He also suggested that one would probably station, say, 5 appliances in each of Areas A, C and D to attend on any breakout on Tuesday. As to the potential danger, Mr Ferguson said this:

'If the breakouts occurred as I have been told, i.e. from the sugar gum, from the area southeast of the New South Wales paddock from Cabot's backburn area, from the

location delineated in area A and from the area indicated by Les Hull, northwest of his homestead, then it is unlikely that any amount of resources would have stopped the fire given the actual conditions. There is a significant possibility that there would have been burn overs of appliances and deaths of firefighters working in the areas that I have indicated because they are clearly in the danger zone.

I think I would have still put them there. I would have placed an awful lot of emphasis on a safety zone but, in retrospect, my opinion remains that there may well have been a very high probability that there may have been multiple entrapments possibly leading to serious injury or death and destruction of vehicles.

The danger that these crews would have been placed in is described in the 'deadman zone' concept.

All of this just emphasises again the difficulty and complexity of the suppression task that was demanded on the Monday night and the Tuesday morning in this difficult fire.<sup>1050</sup>

- 22.11. There does not appear to be any sensible reason as to why bare earth areas could not have been created in Areas A and C, or even B, at least as a possible refuge for appliances and heavy equipment. There was an identifiable window of opportunity for that to have occurred commencing at first light. As Mr Hall said, one would have to keep an eye on the weather. Again it needs to be emphasised of course that none of these strategies, be they acceptable or not in terms of feasibility and utility, were ever considered. The attendance of appliances in Areas A and C was reactive and ad hoc and indeed occurred in circumstances where the Coultas appliance in particular was placed in considerable peril.
- 22.12. Dr Tolhurst said that he strongly disagreed with Mr Ferguson's suggested tactic of creating the 50 metre radius break in the middle of the paddock. Dr Tolhurst suggested also that he would not have liked to have had graders present. Dr Tolhurst's preferred option would have been for blacking out to continue with appliances positioned in the already burnt area behind the fire perimeter and for breakaways to be dealt with from that position. Dr Tolhurst had a much more heightened reluctance to have appliances, crews and machinery exposed on unburnt ground. Again, there was no activity in the way of blacking out from burnt ground in Areas A and C after Lincoln and Greenpatch left before 8am. That was in Area C. There was no blacking out from the burnt side of the perimeter in the swamp in Area A at any time.

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<sup>1050</sup> Exhibit C280a, pages 63 and 64

- 22.13. Minds differ as to whether or not one would place appliances in Areas A and C even with the creation of safe refuges in those locations. The dangers that were spoken of by Mr Gould, Dr Tolhurst and Mr Ferguson of course are predicated on the basis that there was a degree of likelihood that fire would get out of the swamp and proceed across the paddock. That likelihood is generated by the fact that not enough had been done to minimise the risk of it happening. If it had been recognised that Area A was particularly at risk, there seems to be no sensible reason as to why some measure of containment could not have been implemented on the Tuesday morning, at least by the creation of graded breaks and/or ploughed breaks of the kind identified by Dr Tolhurst. Such breaks would at least have provided some measure of protection for crews.
- 22.14. All one can say is that the absence of appliances in Areas A and C was not the result of any careful consideration given to the issue, it was as a result of the two areas essentially suffering from neglect, particularly in Area A, recognising that in Area C there had been appliances in there earlier. That the absence of appliances in Areas A and C was not as a result of any careful planning based on an assessment of risk is evidenced by the fact that when the breakaways in those areas did occur, there was no hesitation at all on the part of the incredibly courageous crews of a number of appliances and private farm units going into those areas and there seems to be no effort made by anyone to stop them from doing so.

### **23. Public information and warnings – Stay or Go**

- 23.1. It has been demonstrated from what took place in relation to this particular incident that word of mouth or one's own observations are conspicuously unreliable and are unsatisfactory mediums by which people can be informed of the dangers to which they are exposed. Clearly in an incident of this magnitude there is a very obvious requirement that people should be informed of the dangers that they are exposed to and be kept informed as things develop. It is obvious that this did not take place here.
- 23.2. Some information that was disseminated to the public in a formal way on the Tuesday was either inaccurate, mis-timed or incomplete. This perhaps is not entirely surprising because of the very fast moving nature of the fire. The fact of the matter was that with the adverse weather forecast on the Monday evening and Tuesday morning, there was a need for the general public to be advised that the reality of the situation was that they were exposed to a real danger. The fire was simply not going to go away.
- 23.3. While recognising that there is a responsibility on individual members of the public to keep themselves informed as best they can about dangers to which they may be exposed, there is a corresponding obligation in my view on the part of the authorities to disseminate accurate and timely information, and certainly there is an obligation not to disseminate information that is either inaccurate or unhelpful for other reasons. It is difficult to see how the CFS 'Stay or Go' policy can be properly acted upon in the absence of clear information. This point was made many times over by citizens who participated in the survey conducted by Mr Alan Rhodes from the Country Fire Authority in Victoria. In the executive summary to Mr Rhodes' report entitled 'Householder Preparedness & Response in the Wangary Bushfire, Lower Eyre Peninsula South Australia 2005', July 2005<sup>1051</sup>, Mr Rhodes said this:

'It appears that while most people were aware of the fire at Wangary on the 10 January, and also that the 11 January was a day of total fire ban (TFB), many were unconcerned about the fire or reported that they believed the fire was contained. This appears to have led many people to go about their normal activities on 11 January, with only a small number reporting that they left their home early in the day due to the fire. When the fire broke containment lines and began to spread rapidly, many people who intended to stay with their property were unable to return. Many of these people tried to return but were either stopped at roadblocks or by the severity of the fire. The low levels of awareness and concern about the bushfire risk by some people, the belief that the fire was

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<sup>1051</sup> Exhibit C278

contained, the failure by many people to recognise the signs of heightened risk, and the lack of warning and information during the fire, are all identified as factors that contributed to people being surprised when the fire affected the area where they lived, or they were prevented them returning home.

Of those who were at their properties, most received no formal warning and only knew about the fire by seeing smoke or flames. Approximately two thirds of people at their home reported finding out that the fire was approaching their property fire less than 30 minutes before it reached them. During the fire most people reported receiving very little, if any information about the fire, or what to do.'<sup>1052</sup>

23.4. Mr Rhodes in his report points out a number of relevant factors in considering the chances of survival of citizens in a bushfire. Those factors include the following:

- i. The importance of community understanding of the bushfire risk and the necessity for people to develop the means to play a role in protecting themselves and their assets;
- ii. The level of and accuracy of the information about the risk that is communicated to citizens both prior to and during a bushfire;
- iii. The need for citizens to plan what they will do;
- iv. The need to receive appropriate information to enable them to be better able to respond effectively to protect life and property;
- v. The need to avoid people feeling compelled to make last minute decisions and to take risky action;
- vi. The need for risk identification involving the development of an awareness of the threat through either warnings or environmental cues to enable the citizen to determine whether the threat is real or not.

23.5. Mr Rhodes' survey involved a number of questions that were put to citizens of the Lower Eyre Peninsula. Mr Rhodes gave evidence before me and told me that he received an 88% response rate to the survey which in his experience was a very high rate. No doubt this high response is yet another reflection of the passion that this event generated across the length and breadth of the Lower Eyre Peninsula. Of the people surveyed, 87% reported that they knew that there had been a fire at Wangary on 10 January 2005. The majority of those persons received their information either from their own observations or by word of mouth. Only 18.8% heard of the fire

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<sup>1052</sup> Exhibit C278, page iii

through a media announcement. Despite widespread knowledge of the fire, the level of concern was varied. The survey revealed that 6.2% of citizens reported that they did not think about the fire, whereas 21% thought that the fire might spread but it would not affect them. The largest group, 48.1%, believed that the fire was under control or would not spread. In other sections of Mr Rhodes report he suggests that members of the public believed that the fire was '*contained*'. Mr Rhodes told me in evidence that he had not, for the purposes of his survey, distinguished between people's understanding of the situation of the fire being controlled as opposed to it being contained<sup>1053</sup>. It will be remembered that such a dichotomy exists in CFS parlance. However, it is clear from his report that there was a widespread belief that whether the fire was contained or controlled it was unlikely to affect members of the public. Mr Rhodes makes the accurate observation that if people are concerned about a risk, they are more likely to seek information and take action to deal with that risk<sup>1054</sup>. Mr Rhodes was not able to determine whether members of the public formed the belief that the fire was contained and unlikely to spread or affect them through discussion with others or as a result of media announcements. He makes the observation that the increased risk of fire due to the weather conditions and the declaration of the total fire ban day does not appear to have triggered a heightened awareness of the risk. That may be so, but one could only appreciate the level of risk occasioned by the weather if one had a fundamental understanding of what was happening in respect of the fire, either on the Monday night or the Tuesday morning. It seems to me that if people are of the belief that a fire has been brought under control or alternatively was to be regarded as contained, they are inclined to believe that the risk is minimal. That the risk was thought to be of minimal significance is exemplified by the actions of Mrs Natalie Borlase in going to work on the Tuesday morning.

- 23.6. The situation would not have been assisted by statements and announcements about the fire that were made in the media on the Tuesday morning from which a conclusion could be drawn in the minds of the public that, notwithstanding the forecast weather conditions, and in spite of the fact that a total fire ban was in place, the Wangary fire presented little or no intrinsic danger.

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<sup>1053</sup> Transcript, page 17067 and 17068

<sup>1054</sup> Exhibit C278, page 64



- 23.7. I speak here of, for instance, an ABC news bulletin broadcast in Port Lincoln at 6:30am on the Tuesday morning in which it was reported that the CFS were asserting that '*no communities are threatened by the fire*'. In the same news report, it was stated that the Wangary fire had burnt around 100 hectares of grass and scrub whereas the fact of the matter was that 1800 hectares had been burnt. The same information was broadcast on the ABC for the north and west of South Australia at 6:30am. At 7:30am in the Port Lincoln local news bulletin on the ABC, it was correctly reported that around 1800 hectares of grass and scrub had been burnt in the Wangary region the day before, but that the CFS Regional Commander was stating that no communities were threatened and that crews were working hard to ensure that the fire was '*completely under control*'. Although the report also drew attention to the fact that there was a total fire ban across the State and that people should prepare their houses for the possibility of a fire and decide in advance what they should do if their home was threatened, the report carried a reassuring tone. At 8:30am the local Port Lincoln radio station 5CC reported out of date information which suggested that the fire had burnt only 40 hectares of scrubland in the Wangary district.
- 23.8. The suggestion that no communities were threatened, as reported in a number of broadcasts in the affected area, in my opinion gave an incomplete picture of what was really at stake here. While in the strict sense it was correct that no communities were acutely being threatened insofar as the message was being sent that there was no threat at all posed by the fire, that suggestion was fallacious. The suggestion that no communities were threatened by the fire could also mean to the listener that no communities would be threatened by the fire. It is somewhat difficult to see how in the circumstances that prevailed, namely a very adverse weather forecast and an existing and non-controlled fire, it could be asserted with confidence that no communities were under threat. In the circumstances that prevailed, one could only make such an assertion if it were clearly understood that the fire would not escape whatever containment measures were in place. Although the fire at 7:45am was said to be controlled, there was in my view no proper basis for such an understanding.
- 23.9. The radio broadcasts that contained assertions to the effect that no communities were threatened by the Wangary fire appear to have been engendered more by wishful thinking than by a proper analysis of the risk that the fire presented. This false level of optimism was also reflected in a media release generated by the CFS during the

late morning of the Tuesday. I am here referring to Exhibit C339, which is a set of CFS media releases, and in particular I am referring to the first of those. This document is entitled 'INCIDENT UPGRADE' and is timed 11:26am on the Tuesday. The document refers to two fires being the Wangary fire and the Rendelsham fire in the south east of the State. The reference to the Wangary fire asserts that it was approximately 6km north east of Wangary and covered around 1800 hectares. By 11:26am this was information that was completely out-of-date. However, it did refer to the fact that the fire had recently broken out of containment lines and was burning in a southerly direction. The worrying aspect of this document is the assertion that the fire was '*not threatening homes or property*'. It is difficult to see how this statement could seriously have been made at that time. There were many people on the Lower Eyre Peninsula, including dozens of members of the CFS, who would have begged to differ. It is hoped that a document of this nature will never be compiled again in circumstances like these. The only saving feature is that there is no evidence that the release was broadcast or acted upon.

23.10. It is not known whether any identified individual consciously acted upon any of this misleading broadcast information to his or her detriment. However, there appears to have been a widespread belief entertained by members of the affected community that the fire would not spread or, if it did, it would not affect them. Only a quarter of the people surveyed by Mr Rhodes thought that the fire could spread and affect their property. It may well be that in the nature of things, a belief that the fire would not either spread or adversely affect them was engendered simply by virtue of the fact that nobody told them that it would. In addition, any person who was told in terms that the fire was contained, and who did not appreciate the niceties of the distinction between the concepts of 'contained' and 'controlled', would have a tendency to believe that the fire posed no threat.

23.11. Mr Rhodes makes the point that the widespread belief that the fire was contained or unlikely to affect most respondents to his survey meant that once the fire did in fact begin to spread, warnings about its potential impact on local communities were even more critical to ensure that the individuals understood the significance of the threat<sup>1055</sup>. This is manifestly correct. There are many instances in the evidence where members of the community on the Lower Eyre Peninsula were completely taken by

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<sup>1055</sup> Exhibit C278, page 46

surprise at the turn of events on the Tuesday morning. Those who occupied premises closer to the overnight fireground seemed to have a more heightened awareness of the dangers posed by the fire. For instance the fire breaking out and threatening their properties does not seem to have surprised the likes of Messrs George and Les Hull, Mr Peter Cabot nor Mr Graham Giddings. It will be noted that those citizens who were close to the overnight fireground were involved the next morning in activities that were devoted to firefighting, either at their own properties or elsewhere. It hardly needs stating that in those circumstances that type of person did not require any sort of warning. They seem to have been innately alive to the dangers. The concern, however, relates to citizens who were more remote from the fireground and who were for that reason less likely to be attuned to the dangers posed by the fire and to the implications of the weather that was predicted for the day. The Borlase household is a rather classic example of that. Moreover, the residents of say North Shields and Poonindie probably did not think in their right minds that they would be affected by a bushfire that was tens of kilometres away, especially given their proximity to the coast. Data compiled by Mr Rhodes suggested that in a sub-group of respondents who were present when the fire reached their property on the Tuesday over a third expected to receive both a warning about the approaching fire and assistance from the CFS to defend their property. About the same proportion did not expect to receive either a warning or assistance. The remainder expected to receive a warning (15.7%), or assistance (11.4%). It seems from the survey that very few people received formal warnings through the CFS Phase Warning system. Those that did hear such warnings commented that the warnings were heard '*after the event*' or that they did not understand what the phase warning meant. More than two in three people (67.9%) learnt of the fire nearing their property by observing environmental cues such as smoke or the approaching fire itself. Another 23.1% learnt of the fire's proximity from contact with neighbours, family or friends. Only 3.5% learnt about the fire from media announcements or directly from the emergency services (5.6%). Those statistics would in general terms conform to the experiences as described by a large number of citizens from whom I heard or whose statements were tendered to me. In the final analysis, Mr Rhodes' data indicates that people received little effective warning during the fire itself. That general observation also accords with the experience of this court during the Inquest. In addition, there does not appear to have been any information as to the risks posed by the fire that was made available before

the breakouts actually occurred. What information there was, as seen, was confident in its tone.

- 23.12. Mr Rhodes suggested that people can find themselves leaving their current locations quite late either because of a lack of warning or because of the lateness of a warning, thus exposing themselves to the greatest risk to life - being caught in the open.
- 23.13. In Mr Rhodes' survey, more than two people in three reported that they thought the fire was contained and unlikely to spread or affect them. It is not clear whether they formed this opinion themselves, through discussion with others, or as a result of media announcements. Whatever processes were operating, it seems that many people were not overly concerned about the threat from the fire on 11 January 2005. Even the increased risk due to the weather conditions and the declaration of a total fire ban also did not appear to have triggered heightened awareness of the risk. Mr Rhodes suggested that a warning may have alerted people to the increased risk. There is no question but that a general warning on the Monday night or the Tuesday morning would have generated a heightened awareness of risk. Mr Rhodes suggested that there had been a '*missed opportunity*'<sup>1056</sup> in this regard. Mr Rhodes also makes the point that the phase warning system has a number of weaknesses. He suggests that the main difficulty of the phase warning system is that it focuses on warnings rather than being part of an integrated information flow process. Phase warnings represent the middle stage of the information flow process, that of '*message dissemination*'<sup>1057</sup>. Mr Rhodes suggested that prior to message dissemination there needs to be adequate '*threat appraisal*'<sup>1058</sup> which gathers information from the fireground and assesses its significance, specifically in relation to the threat to the community. In the final analysis, Mr Rhodes suggested that it would appear from his survey results that phase warnings did not meet the needs of the community in terms of timely and specific information advice. Mr Rhodes observes that effective warnings are not only about alerting people about imminent danger, but the topic of warnings needs to be considered as a total warning system that incorporates prediction, assessment, dissemination and response. There is much validity in that observation and clearly Mr Rhodes would agree with the proposition that on the Monday night or Tuesday morning, had the actual risk been properly evaluated and

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<sup>1056</sup> Exhibit C278, page 76

<sup>1057</sup> Exhibit C278, page 77

<sup>1058</sup> Exhibit C278, page 77

identified, a public warning would have been inevitable. The difficulty was that there was no identification of the risk because the fire on the Tuesday morning was said to be controlled and on the Monday night was said to be contained, both expressions having an upbeat tone to them.

23.14. I have already referred to a number of CFS phase warnings that were broadcast during the Tuesday. There were no phase warnings issued on the Monday. The phase warnings that were issued and broadcast on the Tuesday were precipitated by the various breakouts of the fire that were experienced that morning. It is to be observed that all of these phase warnings were issued and broadcast reactively. There was no warning issued prior to any of the breakouts occurring, although the media releases to which I have referred mentioned the extreme fire weather conditions that had been forecast as well as referring to advice that people should consider what plan they might implement. However, as seen, the impression given by some of these broadcasts was that as far as the Wangary fire was concerned, there was little need for alarm. The fact of the matter was however that it ought to have been recognised that there was a significant possibility that under the predicted weather conditions for the Tuesday, especially with a north wind of the intensity forecast, that the fire would escape, given that there was no guarantee that blacking out would occur or had occurred in its entirety. The fire was not controlled and there was no proper basis for thinking that it was. In my view, the general public of the Lower Eyre Peninsula were entitled to know what the true position was. As to the manner in which the public could have been informed of that situation, there was no real reason why information about the possibility of breakouts could not have been imparted to the public by the usual media channels, namely television and radio. There was certainly no warrant in my view for informing the general public on the Tuesday morning that the fire was not threatening any communities.

23.15. As I understand the objection, it is said that a general warning of the kind I have envisaged, and given in circumstances where there is not an immediate threat to a community, might give rise to future difficulties and detract from the credibility of future warnings if the adverse event does not materialise. Mr Ferguson, the Chief Officer of the CFS, made a number of points relevant to a consideration such as this. Mr Ferguson suggested that if a significant possibility of the fire escaping and reaching Port Lincoln had been identified either on the Monday night or the Tuesday

morning, consideration would need to have been given to ramping up warnings. On the Tuesday morning this would probably have involved a more general warning along the lines that it was a possibility that if the fire was lost it might get into Port Lincoln<sup>1059</sup>. On the other hand, Mr Ferguson identified the difficulty with such an approach. Were the adverse consequences not to materialise, warnings in the future might not be heeded. Mr Ferguson foreshadowed the development of an attitude, *'here goes the CFS again, they are getting overexcited'*<sup>1060</sup>.

23.16. The difficulty identified by Mr Ferguson is very much like the boy crying wolf. Mr Vogel used that analogy. The underlying thinking is that if false alarms are raised too frequently and frivolously, ultimately they will be ignored. That point is noted, but to me there seems to be little difference between the public being given a general warning about the potential spread of an existing fire before such spread actually occurs and the warnings that are routinely given to the public on total fire ban days to the effect that citizens should implement their bushfire plans, even to the point of leaving or abandoning their location before a fire even exists let alone threatens their location. For instance, at 7:12am on the Tuesday morning Mr Lawson of the CFS was on ABC 891 radio encouraging all families that live in bushfire prone areas to put their plan in place and when asked by the announcer at what point should people leave their homes if that is what they decide to do, Mr Lawson said if people were not confident with their fire protection measures around their house, the time to go was early in the day before the onset of heat or any major bushfire if one starts. This is good advice, but to me it is little different from alerting the public to a specific bushfire risk based upon the existence of a known bushfire in the area, especially if it is recognised that there is a possibility of it getting away.

23.17. The point is that if in a given incident a view is formed by the CFS, be it the Incident Management Team or the fulltime regional staff, that a fire breakout is a distinct possibility and that there are settlements in an area which would likely be affected by such a breakout, it is difficult to see how that information or that understanding can be withheld from potentially affected citizens. Clearly in that type of situation the public is entitled to know and fully understand the threat to which they are exposed.

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<sup>1059</sup> Transcript, pages 18597 and 18598

<sup>1060</sup> Transcript, page 18597

23.18. Mr Ferguson suggested this:

'...look, if one felt that there was a likelihood that this fire had a high risk of escape, I'd ramp out the warning. I think we would all be tied back to the assessment of the Incident Management Team of the probability of an escape.'<sup>1061</sup>

Mr Ferguson also said this:

'I mean if it was felt by the Incident Controller that it was highly likely or inevitable that there would be breakaways, then one would be planning as though it wasn't a matter of if, it was more a matter of trying to forecast when and put all those actions in place. In respect of warnings, there could have been some general warnings in the form of media releases and so on, there could have been some specific warnings using the Phase warning system, and that would be an unusual application with that because generally in those circumstances Phase warning system is used for an actual going situation. Warning other agencies and also warnings within the CFS and DEH which would have then triggered a whole lot of resources coming down.'<sup>1062</sup>

In this answer, Mr Ferguson highlighted the fact that phase warnings are indeed reactive to a specific fire situation and a specific threat in respect of a particular location. The difficulty with phase warnings is that in a fast moving fire such as this, their relevance is overtaken by events. For example the phase 1 warning for Wanilla Forest was too late and not really appropriate for persons in very close proximity to the forest. A general warning issued either on the Monday night or Tuesday morning, before any breakout occurred would have more relevance and no doubt would have led to better informed decisions being made by citizens in respect of their activities for the day. The decision as to whether to go to work or not is one such decision that comes to mind. At least with a general warning, people are given more time to determine what they will do in the event of an emergency. Mr Quentin Russ, the Group Officer of the Tumby Bay CFS Group, said that the wider community should have at least been given a prior general warning on the Monday evening and that the CFS need to '*upgrade our method of alerting our community*'<sup>1063</sup>. Mr Russ under questioning from Mr Lovell QC for the Motor Accident Commission said that if he had been on the Incident Management Team on the Monday evening, and had seen the predicted weather for the following day, a warning would have been given to the general public about the conditions they were possibly going to encounter<sup>1064</sup>. Mr Malcolm Schluter, who was the Chief Inspector in charge of the West Coast Local Service Area of SA Police at the time of

<sup>1061</sup> Transcript, page 18597 and 18598

<sup>1062</sup> Transcript, page 18599

<sup>1063</sup> Transcript, page 4532

<sup>1064</sup> Transcript, page 4593

the fire, also thought it would have been desirable for such a warning to be given<sup>1065</sup>. Mr Vogel, the Region 6 Duty Officer agreed with Mr Russ and Mr Schluter that the situation on the Monday evening warranted a general public warning being issued. He said:

'Q. In your view did the situation on the Monday night warrant the formal release of information about the state of the fire as it existed on the Monday night.

A. Public notification would have been appropriate, yes.

Q. I don't mean by that the press getting it through word-of-mouth or by going out to the fire ground and having a look themselves, but through some formal means through the CFS.

A. Yes I have to say to that.'<sup>1066</sup>

23.19. Constable Darren Mackenzie<sup>1067</sup> has identified twelve phase warnings that were issued on the Tuesday. It has not been possible for this inquest to analyse the timing and efficacy of each and every phase warning issued on the Tuesday. I have already mentioned the existence of the phase warnings for the Wangary and Wanilla Forest areas. The relevant phase warnings were those that related to Wangary, Wanilla Forest, Greenpatch, North Shields, Poonindie and Louth Bay. I have dealt with those warnings in the context of the circumstances of the nine deaths. There is no evidence that any of these warnings were heard or acted upon by any of the deceased. There is no evidence that any one of the deceased, or Mr Griffith the survivor of the Borlase Road incident, were listening to the radio.

23.20. Messrs Murnane and Richardson met their deaths in the course of their firefighting efforts, so their situation was different. All of the other deaths occurred in circumstances where the deceased had either decided to leave their current locations or, in the case of Mrs Castle at North Shields, decided to stay at her location. The case of Mrs Castle is somewhat puzzling, given that she clearly had information of the approach of the fire some time before the fire arrived at North Shields. She was only a matter of a few seconds away from safe refuge at Poonindie beach. The other deceased persons met their deaths when they left their current locations at a time when it was too late, the fire was too proximate and it was unsafe to do so. In the case of Mr Griffith, although he had seen fire in the Wanilla Forest and then fire along the railway line, he was quite clearly taken by surprise by the rapidity and ferocity of the

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<sup>1065</sup> Transcript, page 14275

<sup>1066</sup> Transcript, page 13089

<sup>1067</sup> Exhibit C173, Exhibit C173a



fire's approach to the fatal location. Mrs Kay, on the other hand, may not have had a full appreciation of the dangers that the highway presented, although she probably would have been able, like others, to have obtained safe refuge at the beach at Poonindie. It is not known with precision exactly what information or knowledge Mrs Kay had in relation to the dangers that the proximity of the fire, or the smoke it was generating, presented to motorists on the highway.

- 23.21. It will be seen that the issue of public warnings, be they warnings given in advance of a fire breakout or warnings reactive to a fire breakout, is intrinsically enmeshed with the efficacy of the Stay or Go policy. As Mr Rhodes has determined, the Stay or Go policy and its successful application is very dependent upon the quality of the information that people are given. If a resident decides to leave early on the basis of information that is broadcast early, clearly their chances of survival are very high. The difficulty arises where a person finds him or herself in a situation where they have to make a decision to stay or go at very short notice. In the normal course of events, that decision can only be made by themselves and very often, the decision will be made under enormous pressure and often in a situation of uncertain knowledge. If one aspect of the Stay or Go policy has been demonstrated to be correct during the course of this Inquest it is that a decision to leave a location late can have fatal consequences. That is why it is said that people that leave should leave early. This message in my opinion has to be reinforced repeatedly. Citizens have to understand that if they are caught in the open in a vehicle on a road that especially has prolific roadside vegetation, their chances of survival are very much reduced from what they would be if they remained inside a properly prepared dwelling.
- 23.22. The other aspect of the issue that requires consideration is the timeliness of warnings and the appropriateness of the advice contained in those warnings. A decision to leave a location that might otherwise be safe, such as Mrs Kay's house, may well be based on information that is out of date or not conveyed at all to affected citizens. While it may have been very sound advice that Mrs Kay should not proceed onto the roads, there was nothing in Poonindie to stop her from doing that if she were to decide in a panic that that is what she ought to do. Similarly, while the advice to North Shields residents to assemble at the beach was also sound, there was little in North Shields to encourage Mrs Castle to do so. While it is a valid truism that people have to be responsible for their own safety, it seems to me that there are measures that can

be employed to enhance the safety of citizens who may not necessarily receive appropriate information, or may not have the right temperament to act on that information in an appropriate way.

- 23.23. In an ideal world, North Shields and Poonindie would have been evacuated, or at least steps would have been taken to ensure that people did go to the beach. The difficulty in this particular case was that there was no SAPOL or emergency services presence in North Shields and Poonindie. I do not say that critically. In this regard it will be remembered that Chief Inspector Schluter had not been advised on the Monday night of anything that would have given the police cause for concern or that would have activated an enhancement of their resources for the Tuesday. Nothing said on the Tuesday morning would have had that effect either. On the contrary, the fire was declared to be controlled.
- 23.24. Later on the Tuesday morning, after the fires had broken out, a number of roadblocks were set up by the police. No doubt they had the effect of preserving the safety of a great number of Lower Eyre Peninsula citizens and visitors to the area. On the other hand, there was nothing to stop people from leaving their current locations and going out onto the roads in areas that had been segregated by roadblocks. I speak here of course of Mr Griffith and his family and Mrs Kay and her children.
- 23.25. I heard evidence from a Senior Sergeant Hank Swalue of SAPOL. Mr Swalue was the Senior Sergeant stationed at Port Lincoln. He was on duty on Tuesday, 11 January 2005. Senior Sergeant Swalue was the officer controlling the police stations at Port Lincoln, Tumby Bay and other towns on the Eyre Peninsula.
- 23.26. Senior Sergeant Swalue told me that SAPOL take an active role in endeavouring to warn members of the community of the approach of a fire. This is quite a separate exercise from the monitoring of CFS phase warnings. In this particular instance, Mr Swalue told me that a police patrol was at Edilillie. Residents were there warned of the approaching fire. Another patrol had travelled across from the Wangary area through to North Shields, warning people. In the event that patrol had to leave the North Shields area in order to preserve their own lives. I don't understand there to have been any effective liaison between SAPOL and the residents of North Shields in relation to warnings. I also do not understand there to have been a SAPOL or other emergency service presence in Poonindie at or about the time that people were

making their decisions to stay, go to the beach or head out onto the dangerous highway.

- 23.27. In addition, Senior Sergeant Swalue could recall only one CFS phase warning that he was aware of. It came through to him when he was at the police operations area. He was not aware of any system by which police could instantly be made aware of CFS phase warnings. This to my mind is rather extraordinary. The phase warning that Mr Swalue thinks he did receive was the phase 2 warning for Greenpatch, North Shields, Poonindie and Louth Bay. I asked Mr Swalue whether there was anything in place on the Tuesday by which police or other emergency services could have reinforced the advice contained within the phase 2 warning that residents choosing to leave could go to the beach, or whether there was anything that could have been done to prevent people from putting themselves in danger on the highway. Mr Swalue's answer was as follows:

'I don't think so, my understanding is that when my patrol was outrunning the fire from across country to North Shields, most of those people were already on the beach or making their way and my patrol spent very little time in North Shields, until they came back south of North Shields to set up a road block, to prevent further people from going in. It's the only patrol I had available at this stage. In an ideal world, if I had more people and they never arrived from other areas till later I should have sent another patrol down there perhaps a little bit earlier, but they weren't available at that time, so once that phase warning was received, as a forward commander you should automatically send a patrol down there and assist and perhaps get SES people in as well, who did come in at a later time.'<sup>1068</sup>

In the final analysis, the matter of police or emergency services presence in places such as North Shields involved a question of resources. Mr Swalue told me that at Tulka in 2001 people were advised to evacuate. Clearly that had been in a situation where there was time for that to occur. In this instance, the police were simply not set up for the events of that day. There was nothing imparted to the police on the Monday night or the Tuesday morning that suggested that the fire was going to pose any significant risk.

- 23.28. At about 7pm on Monday, 10 January 2005 the CFS caused a media release to be circulated to most media outlets, both paper and electronic. Both The Advertiser and the Port Lincoln Times were recipients of the media release according to Ms Krista St John, the CFS Media Officer. The media release referred to the fact that the total fire

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<sup>1068</sup> Transcript, page 13394

ban imposed for the Tuesday was the first for 18 months. The media release quoted Mr Euan Ferguson, the Chief Officer of the CFS in direct speech saying:

- Bushfires occur without warning and now is the time to make decisions that could easily save your life later.
- CFS volunteer firefighters are at a higher level of preparedness and we're asking the public to do the same.
- The community by now should have developed their bushfire action plan, and be ready to implement this tomorrow.
- There will be no margin for error, all the ingredients are there for bushfires to occur and now is the time for action.
- The CFS cannot guarantee a fire appliance will be at every doorstep, and that is why it is vital for everyone to take responsibility for their own safety and consider their plans and activities.
- If you choose to leave home then go early in the day. If you leave it too late, the risk of being caught up and potentially injured jumps significantly.
- Late evacuations are a fatal move, roads can become clogged, drivers speed in a panic through choking smoke, people run down the road with no regard to their own safety – it's a recipe for disaster.<sup>1069</sup>

Mr Ferguson's comments were not published in the State or local Lower Eyre Peninsula newspapers. The Port Lincoln Times, which is published on Tuesday and Thursday mornings, did not publish the media release in any form as the media release was created after their printing deadline. The prescience of Mr Ferguson's observations about the dangers presented by late evacuations, particularly the dangers of the road, leaps off the page when one considers Mrs Kay's situation. The statements attributed to Mr Ferguson contain very sound advice. This is precisely the kind of information that people on the Lower Eyre Peninsula needed, especially when it is considered that not only were they confronted with extreme fire danger, but had an actual fire in their midst. Of course, not everybody necessarily reads everything in a newspaper. That is not the point. These announcements are designed to save lives and from now on they should be published in full. There is a need for an understanding between the CFS and the media in this regard.

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<sup>1069</sup> Exhibit C251d

## 24. Native Vegetation

- 24.1. The Wangary fire destroyed over 77,000 hectares of land, 50 hectares (0.6 percent) of that was roadside native vegetation<sup>1070</sup>. Other native vegetation was destroyed in the fire, representing 15% of the total land destroyed. Native vegetation plays a crucial role in maintaining the local plant species and fauna. Mr Craig Whisson, Executive Officer of the Native Vegetation Council states that in relation to the area affected by this fire:

'The flora and fauna of Eyre Peninsula is recognised as being biogeographically isolated from other areas of the state, by the sea on the western and eastern sides and the more arid zones along the northern fringe. That isolation is equally pronounced for the higher rainfall areas of the Lower Eyre Peninsula.

Eyre Peninsula supports populations of 40 endemic native plant species. These species are not found anywhere else in the world and, in part, reflect that biogeographic isolation of the peninsula. Nineteen of these endemic species (47%) are confined to the Eyre Hills.

Within this highly fragmented landscape, the value of roadside vegetation as a connecting corridor between blocks of native vegetation, and as refuges for populations of threatened species becomes critical.'<sup>1071</sup>

- 24.2. During his opening address, Counsel Assisting, Mr Boucaut commented that roadside vegetation was perceived by some people to be a problem in fires and that it may be an issue that this Inquest would need to consider<sup>1072</sup>.
- 24.3. This observation was supported by several witnesses throughout the Inquest who stated that roadside vegetation can often act as a wick during fires, enabling the fire to spread more quickly along it<sup>1073</sup>
- 24.4. Other witnesses disagreed with this suggestion and indeed suggested that roadside vegetation can actually slow down the spread of a fire compared to its speed through crops or grasslands<sup>1074</sup>.
- 24.5. Mr George Hull told the Inquest that at 4pm on Monday afternoon the roadside vegetation on Duck Lake Road presented a major problem, as they did not have the

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<sup>1070</sup> Transcript, page 14477

<sup>1071</sup> Exhibit C167a, page 5

<sup>1072</sup> Transcript, page 114

<sup>1073</sup> P Puckridge at Transcript, page 857, D Puckridge at Transcript, page 1150 and G Hull at Transcript, page 2842

<sup>1074</sup> Maddern at Transcript, page 9168, Tilley at Transcript, page 14344 and Gould at Transcript, page 17303

machinery available to control it<sup>1075</sup>. Mr Hull was indicating that fire will burn for longer in the roadside vegetation due to the increased fuel loading.

24.6. This principle is supported by Mr Ferguson who stated that fires on roadsides burn more intensely, require more attention and are more difficult to put out<sup>1076</sup>. Mr Gould commented that the amount of fuel contained in roadside vegetation can make it difficult to contain fires<sup>1077</sup>.

24.7. When asked about whether any land management practices could have prevented this fire from occurring Mr Gould said:

'... that maybe breaking up some of the roadside verges, vegetation management may or may not have helped some of the things.'<sup>1078</sup>

24.8. Environment, Resources and Development Committee Report

The Environment, Resources and Development Committee is a South Australian Parliamentary Standing Committee. The Committee resolved to investigate the impact on native vegetation of the Wangary fire in June 2005.

24.9. The Committee heard evidence from a number of witnesses, including the Chief Officer of the CFS, Euan Ferguson, members of the Native Vegetation Council, members of Local Council's and other interested persons. The Committee also toured the area affected by the fire during their examination. The Committee tabled its report in the House of Assembly on 28 November 2005, entitled 'Eyre Peninsula Bushfire and Native Vegetation'<sup>1079</sup>.

24.10. The Committee made the following recommendations:

*'The recovery of native vegetation*

1. The Committee recommends that native vegetation, excluding road reserves be fenced.
2. The Committee recommends that government consider options for assistance (including cost sharing) for farmers to fence native vegetation areas on private property affected by the Wangary fire.
3. The Committee recommends that relevant government departments implement an ongoing management program for the eradication of feral pests and weeds.

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<sup>1075</sup> Transcript, page 2850

<sup>1076</sup> Transcript, page 18648

<sup>1077</sup> Transcript, page 17301

<sup>1078</sup> Transcript, page 20777

<sup>1079</sup> Exhibit C167d

*The role of fire access tracks*

4. The Committee recommends that the government in cooperation with local authorities identify if: sufficient firebreaks and access track exist; they are strategically located; and they are being managed.
5. The Committee recommends that the government in cooperation with local authorities assess fire tracks and breaks to determine if firebreaks and access tracks need to be wider and/or native vegetation removed so that it does not impinge on firebreaks or tracks.
6. The Committee recommends that the government in cooperation with local authorities prepare a management plan that includes firebreaks and access tracks in the region, including the location of current breaks and access tracks and where breaks and tracks need to be established.
7. The Committee recommends that the government establish designated fire safety areas within native vegetation and at road intersections.
8. The Committee recommends that the government provide authority to a single community representative body to authorise clearing of native vegetation for fire management. (The community representative body must incorporate the CFS, DEH, Native Vegetation Council and local council)

*Cold burning regimes*

9. The Committee recommends that the government, via the CFS, coordinate the preparation and implementation of native vegetation management plans that incorporate management of fuel loads and includes a prescribed burning regime for the area.
10. The Committee recommends that the Native Vegetation Act be amended to allow for prescribed burning.
11. The Committee recommends that the Native Vegetation Council provide landowners with assistance for applications for prescribed burning (via a guide, a proforma or staff).
12. The Committee recommends that the Native Vegetation Council have a consistent approach to prescribed burning on both public and private lands.
13. The Committee recommends that the native vegetation planning and approval process for prescribed burning be amended to allow flexibility for burning on optimum days.
14. The Committee recommends that prescribed burning should only be undertaken by professionally trained personnel.
15. The Committee recommends that training be provided to landholders to enable them to assist with prescribed burns.

*Soil degradation*

16. The Committee recommends that, after a fire, as much vegetation as feasible be retained to minimise soil erosion from wind and first rains.

*Native vegetation management*

17. The Committee recommends that the government actively manage native vegetation for fuel loads, weeds and pests.

*Fauna*

18. The Committee recommends that when preparing the plan for fire management (including identifying where and when to undertake prescribed burning, firebreaks and fire access tracks) consideration must be given to the impact on local fauna.
19. The Committee recommends that the government assess the impact on fauna movement prior to managing native vegetation.

*Education*

20. The Committee recommends that the government undertake public education programs to increase the awareness of the community to bushfires, the role fire plays in ecosystems and what steps they should take to minimise the impact of a fire.
21. The Committee recommends that the Native Vegetation Council continue to seek mechanisms to interact with, and educate the individual farmer and landholder with respect to the Native Vegetation Act, its regulations and exemptions.<sup>1080</sup>

24.11. The Government provided a written response to the report in January 2006<sup>1081</sup>. The Government supported all of the Committees recommendations with the exception of recommendation 7, the development of designated safety areas. The Government did not support this recommendation as the CFS considered it unsafe because changing weather conditions could adversely affect an area's safety.

24.12. One important change that has been implemented since the tabling of this report, is in response to recommendation 8. The Native Vegetation Council has established a sub-committee to approve applications for native vegetation clearance in relation to fire prevention. I discuss this new committee in more detail later.

24.13. The Native Vegetation Council

The Native Vegetation Council (NVC) is an independent body established under the *Native Vegetation Act 1991*. The Council consists of seven members, all of whom must have experience in the preservation and management of native vegetation and includes nominees from the Local Government Association, Conservation Council of South Australia, South Australian Farmers Federation and the Natural Resources Management Council. The NVC is the body responsible for approving the clearance of native vegetation in South Australia, including roadside vegetation.



24.14. The Inquest heard evidence from Mr Craig Whisson, the Executive Officer of the NVC who outlined the role of the Council in relation to the clearance of native vegetation on roadsides for firebreaks:

'There is a process. The guidelines document that I have said that I will provide to the court does recognise that there will be need for fuel breaks on roadsides. It, if you like, establishes almost a three-tiered approach to an approval process. Sorry, I will come back a step. If clearance of native vegetation is involved in that process then the Native Vegetation Act is triggered. There is a regulation which allows the Native Vegetation Council, through the development of guidelines, and that is the document that I will provide to the court, allows some level of clearance, and it is a three-tiered approach at a very minor level, so district councils need to be able to lop limbs off a tree, for instance, to enable safe passages of vehicles up and down a formed road surface. It is something that district councils can do on an ongoing basis without needing to refer back to the native vegetable council. At a higher level of clearance, they may be looking to clear a number of trees along a roadside because the road needs widening or whatever, and there is the next level of delegation which involves ourselves as an agency going out there and consulting with the couple and we have got some level of delegation to be able to say 'That's fine go and do it' on the spot. At the third level, where the level of clearance might be significant, then it will involve perhaps a formal clearance application to the Native Vegetation Council. So there is a staged approach depending upon the extent and impact of the vegetation clearance that is proposed. And the firebreak issue is built into those guidelines. Alternatively, and it is something that the Native Vegetation Council is encouraging, district councils can prepare and develop their own roadside vegetation management plans and have those endorsed by the Native Vegetation Council. Again that provides them with a document that they are confident that they can go out and maintain their roads, perhaps involving some level of vegetation clearance, with, again, without having to come back on a road-by-road basis to the Native Vegetation Council. So it provides a mechanism, again, for a planned approach to roadside maintenance and development.'<sup>1082</sup>

24.15. The NVC also recognises the need for regular clearance of vegetation for bushfire prevention measures. The Regulations under the Native Vegetation Act allow for the creation of bushfire prevention plans by local bushfire prevention committees. These plans are then submitted to the Council for its approval. This then allows any native vegetation clearance outlined in the plan to be undertaken without having to return for approval on each occasion.

24.16. As mentioned earlier, as a result of the recommendations contained in the Environment, Resources and Development Parliamentary Committee's report, the Native Vegetation Council has created a sub-committee made up of members of the

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<sup>1080</sup> Exhibit C167d

<sup>1081</sup> Exhibit C167e

<sup>1082</sup> Transcript, pages 14486 and 14487

NVC, the CFS and the Local Government Association. This sub-committee will be responsible for approving bushfire prevention plans and will provide the NVC with expert advice on fire prevention matters<sup>1083</sup>. This sub-committee will also assess applications for permits to undertake cold burns or burn offs<sup>1084</sup>.

24.17. I heard evidence that procedures relating to applications to obtain burning permits have been or are to be streamlined and that is to be applauded.

24.18. Roadside Vegetation Management Plans

*The Native Vegetation Act 1991* allows for District Councils to establish their own roadside vegetation management plans, that once approved by the NVC, can be implemented by the District Council's on an ongoing basis, without having to seek further approvals from the NVC. To assist District Council's in preparing such plans, the NVC has issued guidelines entitled 'Preparing Roadside Vegetation Management Plans'<sup>1085</sup>.

24.19. The District Council of Lower Eyre Peninsula did not have a Roadside Vegetation Management Plan at the time of the fire, because according to its District Clerk, Mr Peter Aird, 'there was a lack of resources to produce one'<sup>1086</sup>. Mr Aird went on to state that the District Council of the Lower Eyre Peninsula generally followed the Tumby Bay Council's plan<sup>1087</sup>, and if the council needed to clear more roadside vegetation than was allowed for in that plan, it would apply to the NVC for clearance<sup>1088</sup>.

24.20. Breaks in roadside vegetation

The NVC currently advocates that there should be breaks in roadside vegetation of 20 metres every 500 metres, and that these breaks should preferably be located in areas which is already cleared, such as roads or gateways. Evidence was given during the Inquest that this policy was inadequate and that more frequent breaks are needed to assist in halting the spread of fire and to also allow better access for firefighters to take a stand against the fire or to create breaks.

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<sup>1083</sup> Transcript, page 15983

<sup>1084</sup> Transcript, page 18638

<sup>1085</sup> Exhibit C167i

<sup>1086</sup> Transcript, page 5804

<sup>1087</sup> Exhibit C264, attachment ER17

<sup>1088</sup> Exhibit C209

- 24.21. Dr Smith in his report, provides a summary of the comments that he received in relation to native vegetation from the community in the aftermath of the fire. He indicates that the majority of people commented that they would like to see all roadside vegetation removed, about 30% of people would like to see more frequent breaks put in roadside vegetation to reduce the spread of bushfires and allow more access points to fight a fire, and around 15% would like to see all roadside vegetation retained<sup>1089</sup>.
- 24.22. The Native Vegetation Council expressed concern about larger and more frequent breaks to both the Parliamentary Committee and the Inquest, citing concern about the removal of threatened plant species and the impact that breaks would have on allowing local smaller mammals to be able to travel along the roadsides.
- 24.23. Mr Joseph Tilley, a Fire Management Officer with the Department of Environment and Heritage stated that there was a place for breaks in roadside vegetation, but that their usefulness in a running fire was limited. He said:

'I believe there is a place for breaks and probably in terms of roadside vegetation I think it's probably a good case for bushfire prevention committees to have a look at the landscape covered by their council areas and work out strategically where those breaks may be useful. There's a lot of access to farming paddocks that already exist that might provide opportunity for appropriate measures to be taken at those places but in terms of their effectiveness for fires which exceed high, and particularly for extreme events, I see that they probably provide fairly limited usefulness until the fire conditions abate.'<sup>1090</sup>

- 24.24. Mr Ferguson, the CFS Chief Officer was of the view that there is a need for a Code of Practice for the management of roadside vegetation and the placement of breaks. He said:

'Well, I guess that is one of the things that I would be seeing what comes out of this review because I think I have mentioned that I am expecting a code of practice to come out of this. One can spend a lot of money managing roadside vegetation from a fire point of view. It can always be a little bit hit and miss because you can slash a road or you can burn a road off on a regular basis and there is never a fire there and one might then question whether it is good value for money. I think what I would be after is some discussion, some development of a code of practice for how roadside vegetation is managed. That might include prescribed burning, it might also include certain

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<sup>1089</sup> Exhibit C185, page 47

<sup>1090</sup> Transcript, page 14345

dimensional considerations, you know above a certain area or length there would be consideration to having some form of anchor point or crossing point or fuel-managed zone, and it might also consider, you know, just regular fuse breaks so just a narrow break that be can used in an advantageous way by CFS or other firefighting resources. So there is a whole range of options that are there.' <sup>1091</sup>

- 24.25. Mr Andrew Harris QC, in his written submissions on behalf of the three local District Council's, submitted that the proposition that additional and more frequent breaks in roadside vegetation should be systematically implemented on roadside verges throughout the Lower Eyre Peninsula and the State overstates the benefit of such breaks as a fire fighting tool.
- 24.26. Roadside vegetation played a role in the deaths of Mrs Griffith and the Borlase children. The vehicle was driven onto the verge and was overwhelmed by fire in the vegetation. Mr Griffith survived when his vehicle remained in the centre of the dirt road. The fire that overwhelmed them came from the north of the road across paddocks.
- 24.27. Roadside vegetation also very likely played a part in the deaths of Messrs Murnane and Richardson. It will be remembered that the Tumby Bay appliance crew members witnessed very intense fire on Settlers Road south of the fatal location that came across the stubble and then through the roadside vegetation. The flames were several feet higher than the power lines.
- 24.28. However, there is no evidence to suggest that their deaths would have been avoided if strategic breaks had been placed in the roadside vegetation. It would have merely been fortuitous if there just happened to have been bare earth breaks rather than vegetation at the precise locations where their deaths occurred. The position regarding their deaths may have been different if there was no roadside vegetation at all, but on the evidence that I have heard there is no basis for concluding that roadside vegetation should be removed in its entirety.

24.29. The proliferation of roadside vegetation, like any other flammable vegetation, has to be managed in a sensible way. I do not possess the solution as to how that should occur. This Court is not a think tank about the merits and demerits of native vegetation. Mr Ferguson's suggestion of the development of a Code of Practice is clearly a sound idea and I will at the conclusion of this report recommend accordingly.

## 25. **Retention of stubble and farming practices**

- 25.1. In the fires that commenced on Monday, 10 January 2005 on the Lower Eyre Peninsula there was in my view a far more significant factor at work than native vegetation. I speak here of the retention of flammable cropping stubble across the length and breadth of the Lower Eyre Peninsula.
- 25.2. It will be remembered that only 15% of the area burnt by the Wangary fires was non-agricultural land.
- 25.3. Mr Ferguson, the Chief Officer of the CFS, explained the difficulty concerning stubble retention and farming practices generally in these terms:

### **'Changes in Land Use and Farming Techniques on the Lower Eyre Peninsula:**

Farming techniques have an impact on bushfire risk and mitigation.

Clearly there is a growing contradiction and paradox here: The landholder who strives to produce fire mass for the production of crops or pastures for stock is at the same time introducing a bio mass that at a later time is fuel for the fire. In adopting land management strategies that increase the risk or intensity of a fire, the prudent landowner should also introduce strategies that allow for more effective and sufficient suppression that mitigate and match that increased risk.

One can take as an example the impact of plantations where a plantation is established. Significant activity must be undertaken to increase access, water points and firebreaks, both at the perimeter and throughout the plantation.

In a discussion that I had with Peter Doudle at Tumby Bay at the "Thankyou Barbeque" some ten days after the fire, Peter was quite emotional about the changes in land use on the Lower Eyre Peninsula and the impact they may have had on the progression of the fire. I believe he said words to the effect, "We should have seen this happening". He then went on to describe the changes in land use over the last ten years. Not all of the following were discussed at that meeting, but that conversation initiated my inquiries and I believe the following changes have occurred in farming and land use techniques on the Lower Eyre Peninsula over the last 20-30 years which have impacted on fire management.

- **Reduction of the sheep population**, this has had the consequences of a reduced area of close grazing, a reduction of the amount of the surface water available and, to a lesser degree, a reduction in the intensity of people required to farm the land. There may have been some substitution of cropping for grazing.
- **The nature of cropping has changed**. Over ten years ago rotational cropping was common where one would see a series of paddocks in crop (perhaps for 3 years), a series of paddocks being prepared for crop and a series of paddocks being fallowed (perhaps for 3-5 years).

- In some areas stubble burning to remove stubble and trash is no longer favoured. The consequence of this is that instead of there being a complete removal of above-surface stubble following the crop, that is now retained into the following season.
- **Larger equipment** has had the consequence of larger areas being sown and paddock sizes increasing.
- **Maximised area sown.** Every acre is worth money for the farmer and, as a result, many farmers are sowing from fence line to fence line and are reluctant to forsake production, even for the production of straw for the creation of firebreaks. The aim is to maximise grain production (both in total area and productivity on that area).

Over a period of twenty to thirty years, the risk has changed throughout many parts of South Australia, including, on the Eyre Peninsula. In association with that, there has been a reduction in the amount of fire prevention work undertaken by farmers. I believe the production of fire breaks by farmers is less common and awareness of bushfire risk may have reduced. This was most apparent to me in a visit that I made to the Lower Eyre Peninsula in late November 2005. It has also been reinforced in a subsequent meeting I had with Local Government by the Mayor of the District Council of the Lower Eyre Peninsula, Mr Brian Treloar.

The final factor that needs to be considered here is the generational change. Many older farmers who were used to, and accepted their obligation for fire prevention, have now either left the land or are taking a less direct involvement in the strategies and business plans of a particular farm. As a result, younger farmers who are more motivated, (quite correctly in some respects), to turn a profit and look after the environmental aspects of their land, are doing so without necessarily having the historical knowledge and memory of significant bushfires.

This matter has not been directly identified and addressed by District, Regional and State Bushfire Prevention Committees or by the Farmers Federation or by Primary Industries of South Australia. This may be because the changes in themselves have been incremental over a relatively long period of time, spanning a generation. It is proposed that there be a substantial review of the appropriateness of the current legislative arrangements for State, regional and district bushfire prevention and mitigation.

A Terms of Reference has been prepared for the consideration of the Minister for Emergency Services (see recommendation "1"). Included in this Terms of Reference is the consideration of new Codes of Practice for land managers, including farmers.' <sup>1092</sup>

25.4. In his evidence Mr Ferguson elaborated on this issue. He also referred to the practice of minimum tillage and direct drilling that does not require ploughing of the soil or the removal of stubble from previous crops. This gives rise to a scenario that he further explained thus:

'Well stubble is an annual fuel, and if you have a cereal plant which grows, it will germinate, it will have a green shoot, and then the plant will ripen and produce cereal head which is what the farmers want to take off. It will then ripen and cure off. That is an annual process. The curing process is something which is triggered by the season, but

<sup>1092</sup> Exhibit C280b, pages 170 to 172

it is also influenced by the moisture content in the soil, by the temperature, the relative humidity, and the length of the day. So once the curing process commences, and its rate of curing will depend on the things I have just mentioned. At some point in time, the moisture content will be low enough that the crop, the cereal head can be taken off, and what remains is the stalk, but there might also be other residue in the harvest, which is chaff. So the stubble and the chaff remains on the ground. With a trash retention policy, it simply stays there. My understanding of the current advice, or best practice advice for these areas, is that the next crop is then direct drilled without any further modification, either of the soil, or the stubble, or the chaff. So the cycle then recommences and over a period of time the stubble and the chaff then break down. Obviously this needs to be validated by some research. It's my suspicion that that could take 18 months to two years, so that as well as having the current year's stubble and chaff, there is some residue. Now that is fine fuel. It's light. It can be easily blown if it's not rooted into the ground, and it's very easily ignited, and in terms of fire behaviour, very subject to the ambient wind and also very much influenced by changes in wind direction. If there is a change in wind direction, the fire burning in that field will change direction very quickly and significantly, very sensitive to changes in the relative humidity in the air. So that because the fuel is so fine, if all of a sudden the relative humidity drops from say an overnight relative humidity of maybe 40 or 50%, it would be quite difficult to burn under those conditions, and then with a little bit of breeze and some sunshine, perhaps two hours after sunrise, the moisture content of that fuel might have decreased from a point where it was difficult to ignite, to one where it's relatively easy to ignite.'<sup>1093</sup>

- 25.5. Mr Ferguson also referred to the fact that stubble fuel loads are less discontinuous than what they were 10 or 15 years ago and that in terms of its impact on fire and firefighting, it means that there are reduced opportunities to establish cultivated breaks that can be 'very, very important in fighting a fire'<sup>1094</sup>. The breaks that would normally present an opportunity that firefighters and farmers can use to take advantage of low fuel areas are significantly diminished.
- 25.6. As to what needs to be done about this, Mr Ferguson referred to the existence of a South Australian Farmers' Federation Code of Practice relating to safe farming operations such as grain harvesting, stubble slashing during the fire danger season and burning off outside of the fire danger season, all of which carry their own inherent dangers. The Code of Practice that relates to these farming practices only relates to the methods by which these operations are carried out and their intrinsic dangers. It does not address the danger presented simply by virtue of the fact that harvested stubble just sits there for the entirety of a fire danger season waiting to catch alight.

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<sup>1093</sup> Transcript, pages 17811 and 17812

<sup>1094</sup> Transcript, page 17815



- 25.7. Mr Ferguson suggested that further research needs to be undertaken in order to confirm or otherwise his hypothesis concerning flammable build up of the residue of previous' crops stubble and its effect on the intensity of a conflagration in a stubble fire across the landscape. That such research is desirable cannot be denied, but the point is that the flammability of harvested stubble in extreme weather conditions was plain for all to see during the Wangary fires.
- 25.8. Other methods of management and enforcement suggested by Mr Ferguson include:
- The farming industry taking steps to introduce discontinuity into the increasing continuity of fuel;
  - Perimeter firebreaks consisting of grazed, ploughed or a sprayed break, with minimum breaks proportionate to property size;
  - Although the landholder has the primary responsibility for the management of a fuel load, there needs to be a Code of Practice with sanctions developed in order to reinforce that responsibility.
- 25.9. The question of enforcement by legislation is another matter for consideration. Elsewhere in this report I have referred to Section 40 of the Country Fires Act 1989 (now the Fire and Emergency Services Act 2005) that enables Local Government to require landowners to take steps to eliminate or reduce '*an unreasonable risk of the outbreak of fire on the land, or the spread of fire through the land*'<sup>1095</sup>. The legislation permits Local Government to enforce the requirement in two ways, either by conducting the necessary work itself and recovering the expenses incurred, or by prosecuting the owner for failing to comply with the notice. Neither action appears to have been undertaken on the Lower Eyre Peninsula in relation to farm land. Resource implications have hindered the first option.
- 25.10. The trigger for this legislation is the perception of an unreasonable risk of the outbreak or spread of fire. The power contained within the new Section 83(4) of the Fire and Emergency Services Act 2005 would probably allow for Council to impose an obligation on a rural landowner to create fire breaks in stubble paddocks. However, the power is only enlivened by what is perceived to be an 'unreasonable' risk, an objective standard that would, in the nature of things, draw protracted debate. It would be much more sensible if the Local Government could impose the obligation

to create fire breaks without recourse to either objective or subjective assessment of the risk presented by any particular piece of land. Western Australia has legislation that permits Local Government to impose an absolute obligation to create such breaks<sup>1096</sup>.

- 25.11. A number of recommendations are made in relation to this entire issue at the conclusion of this report.

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<sup>1095</sup> Section 40(4) of the Country Fires Act, Section 83(4) of the Fire and Emergency Services Act 2005

<sup>1096</sup> Section 33 Bush Fires Act 1954 (WA)

## 26. The Wanilla Forest

- 26.1. The Wanilla Forest is a hardwood forest of some 700 hectares. The Forest is approximately 25 kilometres north-west of Port Lincoln and 8 kilometres south of Wanilla. The Flinders Highway runs along its south-western boundary and the Tod Highway forms its eastern boundary.
- 26.2. At the time of the fire the Wanilla Forest was managed by the Port Lincoln Aboriginal Community Council (PLACC). There was no firefighting equipment kept at the forest for the use of the local Aboriginal community. The forest is within the District Council of the Lower Eyre Peninsula and is specifically referred to in the Council's Bushfire Prevention Plan<sup>1097</sup>.
- 26.3. The Plan requires that the major boundary of the forest is annually graded to create a track of at least 6m but preferably up to 10m wide. The Plan also requires that within the forest itself all grasses are cleared and consideration given to removing overhanging timber prior to summer commencing. It was the responsibility of the PLACC to undertake the requirements of the Bushfire Prevention Plan.
- 26.4. I received a statement in evidence from Ms Heather Cox, the Vice Chair of the PLACC who advised that in October/November 2004 the organisation had created a fire break around the perimeter of the forest and also the main access roads within it<sup>1098</sup>. She does not say in her statement whether the grasses within the forest itself were cleared.
- 26.5. Mr Ross Pope, the captain of the Wanilla CFS Brigade which covered the Wanilla Forest area told me that he considered the fuel load to be high in the forest but had never really analysed the risk that this posed to his brigade area<sup>1099</sup>. Mr Pope and his brigade had not meant with either the District Council or the PLACC to discuss fire prevention plans for the forest, indeed he said he was not even aware that a Bushfire Prevention Plan existed for the forest<sup>1100</sup>. The following exchange occurred during his evidence:

'Q. As at January 2005 name one area which would be as prolific a source in terms of fuel load as Wanilla Forest at the time of this bushfire, can you tell us one.

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<sup>1097</sup> Exhibit C208c

<sup>1098</sup> Exhibit C272, page 2

<sup>1099</sup> Transcript, page 4737

<sup>1100</sup> Transcript, page 4739

A. No.

Q. Because there are no such -

A. Not to my knowledge.

Q. And if there were you would know about it.

A. Not necessarily.

Q. You haven't seen the Bushfire Prevention Plan.

A. No.

Q. Do you know whether or not your person on the Bushfire Prevention Committee had seen it.

A. I don't know.

Q. Had you yourself ever formed a view from the brigade captain perspective of Wanilla Forest just as a result of being aware that here was a large area of forest - you must have been aware of it.

A. Yes.

Q. You must have been aware of its potential as a risk in the event of a fire getting in there.

A. Yes.

Q. How long had you been aware of that risk.

A. Probably most of my life.

Q. Was it the subject of discussion amongst community members as far as you are aware.

A. No.

Q. Was it ever the subject of discussion at a brigade level.

A. Not while I've been captain.

Q. Was it ever the type of area where you, as brigade captain, would have expected some reduction in fuel load as part of some plan.

A. No.

Q. What, you just leave it there.

A. Yes.<sup>1101</sup>

26.6. Mr Peter Aird, the District Clerk for the District Council of Lower Eyre Peninsula told me that the PLACC were invited to the Council's fire prevention meetings but that a representative never attended. He admitted that whilst the Council did not have responsibility for any bushfire prevention clearance works that needed to be done at

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<sup>1101</sup> Transcript, pages 4742 - 4743

Wanilla Forest, he was not aware of the Council ever checking to ensure that the work dictated in the Bushfire Prevention Plan had been undertaken by the PLACC<sup>1102</sup>.

- 26.7. Mr Branco Milic gave evidence to the Inquest. At the time of the fire Mr Milic was the District Council's Fire Prevention Officer. Mr Milic said that it would have been his responsibility to follow up on the requirements of the Council's bushfire prevention plan in relation to the forest. When asked if he had done this:

'Q. So that if the plan identifies a particular hazard and, for example, dead timber lying all around the boundary tracks, and there is a recommendation as a priority to remove that, surely it is somebody's function to just keep an eye on that to see if it is being done.

A. Yes.

Q. Whose responsibility.

A. I would say the fire prevention officer.

Q. Of the Wanilla Forest, or of the council.

A. Of the council.

Q. Was that done in respect of Wanilla Forest.

A. As I said earlier, from my observation driving along there, I was satisfied I felt that it was being done.

Q. But if you read the entire Wanilla Forest management plan, the impression seems to jump out and suggest there is a fair bit that needs doing.

A. Yes, I agree with that, but as you've got to understand, my role was not duly 100% fire prevention. I had a number of other duties and given those other duties, which were equally important, or perhaps even more important, I felt satisfied, from what I saw of the road, that they were complying with the intent of the information they provided.<sup>1103</sup>

- 26.8. Mr Tilley, the Fire Management Officer for the Department of Environment and Heritage in Port Lincoln said that his personal observations when driving past the Wanilla Forest were that the outside tracks were not being regularly maintained. He said that he had not had any involvement with the PLACC in assisting them with fire management issues<sup>1104</sup>.

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<sup>1102</sup> Transcript, page 5877

<sup>1103</sup> Transcript, page 15814

<sup>1104</sup> Transcript, page 15857

- 26.9. Mr Grant Shepperd who followed the fire breakouts on the Tuesday morning observed the fire enter the Wanilla Forest at its westernmost part at around 11:40am. He described what happened as:

'Q. When it entered the forest did you see how it took hold in the forest, whether it burnt the understorey or got up into the crowns.

A. No, it hit the first tree and the crown and then kept - the flames were probably twice the height of the forest coming in at the top.

Q. So it crowned more or less immediately, did it.

A. Yes.'<sup>1105</sup>

- 26.10. Mr Shepperd called back to the Wangary Incident Control Centre advising them that the fire had gone through the Forest in '*just a couple of minutes*'<sup>1106</sup>.

- 26.11. Another person who witnessed the fires progression through the forest was Constable Jarrad Ayres. Constable Ayres said that the fire was burning at an alarming speed, which he estimated to be at least 40 kilometres per hour. Mr Gould estimated in his report that the fire travelled through the Wanilla Forest at 18.7 kilometres per hour.

- 26.12. The Wanilla Forest presents as a fire hazard simply by virtue of the fact that it constitutes a very large area of flammable vegetation. There is no evidence, however, from which a conclusion could be drawn that it had not been maintained sufficiently or that it presented as an unusual or extraordinary danger. Once the fire reached it in those conditions, it was always going to burn and burn fiercely. There is little evidence that the rate at which it burned, or the intensity with which it burned, was the result of the presence of ground litter. In addition, Mr Gould said that the Forest spotted some 7.5 kilometres. Mr Shepperd, it will be recalled, said that the forest crowned as soon as the fire entered it. As to the immediate environs of the forest to the east, it has to be recognised that in addition to a firebreak at the forest, there was the Tod Highway and the evidence would suggest that it was an ineffective break in any event.

- 26.13. In short, there is no evidence that the Wanilla Forest posed a risk over and above the fact that it was a forest with an intrinsically high fuel load.

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<sup>1105</sup> Transcript, page 7789

<sup>1106</sup> Exhibit C223a, page 16

## 27. **The Government Radio Network (GRN)**

- 27.1. In 1999 the State Government began the development of a whole of government trunked radio network called the Government Radio Network (GRN). Superintendent Colin Cornish, the Officer-in-Charge of the Communications Branch of South Australia Police told me in his statement presented to the Inquest:

'The SA-GRN is a single, integrated voice network incorporating the sub-networks of Paging and Mobile Data. It is based on Motorola SmartZone technology and provides mobile radio and paging services to as many as 50,000 users across approximately 226,000 square kilometres of the State covering over 95% of the populated areas of South Australia. The SA-GRN relies on a Network Operations Control Centre (NOCC), managed by Telstra to provide radio services to about 17 different agencies.'<sup>1107</sup>

The CFS is one of those 17 agencies.

- 27.2. The CFS had previously relied on VHF and UHF radios for all radio communication. The CFS made the transition to the GRN in 2000 and 2001, but still utilise the VHF for fireground short distance communication.
- 27.3. In the weeks following the fire there was some criticism levelled by those involved in the fire and the general public that the GRN did not work properly during the fire, particularly on the Tuesday.
- 27.4. Several witnesses told the Inquest that the GRN was constantly busy on the Tuesday and that they were unable to use it to make communications<sup>1108</sup>.
- 27.5. Superintendent Cornish demonstrated, via a PowerPoint presentation to the Inquest, the number of communications that were made through the GRN on Tuesday, 11 January 2005. Mr Cornish advised that of the 42,683 calls that went through the GRN receptor sites on the Lower Eyre Peninsula in the 24 hour period of 11 January, only 500 calls were queued<sup>1109</sup>. A queued calls means that the person making the call would have received a network busy signal and had to wait until there was room on the network to make their communication.

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<sup>1107</sup> Exhibit C246, page 1

<sup>1108</sup> Poole Transcript, page 260, Dennis Transcript, page 3317 and Joyce Transcript, page 3424

<sup>1109</sup> Exhibit C246a

- 27.6. Of these 500 calls that were queued, the longest time a call had to wait was 43 seconds. The majority of these calls, nearly 90%, were only required to queue or wait for under four seconds<sup>1110</sup>.
- 27.7. It is clear from the evidence of Mr Cornish that there was no significant failure of the GRN on Tuesday 11 January 2005. Much of the difficulty with the use of the GRN stemmed from the fact that operators were not using it correctly, a matter that can be easily rectified. In any case, there is no evidence that any difficulty with the use of the GRN contributed to the fatal outcomes with which this Inquest was concerned.
- 27.8. Council communication with CFS  
Another issue that was identified during the Inquest in relation to the GRN was that Council machinery operators are unable to communicate with the CFS at a fireground as they do not have access to the GRN. Mr Hall, the Works Manager for the District Council of the Lower Eyre Peninsula advised that all Council equipment is fitted with a VHF radio and only some have access to UHF.
- 27.9. Mr Harris, counsel for the relevant Local Government authorities, submitted to me that whilst there was no evidence that any difficulty with communication between the CFS and Council plant affected the fire, it would be desirable from an efficiency and safety point of view if Council and CFS could communicate during a fire.

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<sup>1110</sup> Transcript, page 13620



## 28. Recommendations from other investigations into the Wangary Bushfire

### 28.1. Phoenix Report

Following the Wangary fire, the CFS Chief Officer, Mr Euan Ferguson, initiated an independent investigation which was designated Project Phoenix. Mr Ferguson told me that he was aware that the CFS were being criticised by the public for their role in the fire and *'believed that he needed to set out pertinent facts and criticisms and develop strategies to make possible improvements to CFS's systems of work'*<sup>1111</sup>.

28.2. Mr Ferguson employed Noetic Solutions to undertake the investigation with the assistance of two senior CFS personnel. The following Terms of Reference were chosen:

'Project PHOENIX will require the following steps to be undertaken:

- 6.1 **Gather issues:** Project PHOENIX will gather information and issues from all available sources. This will include debriefs, issues raised by the media, and various individuals and interest groups and organisations. Documents to be reviewed include existing plans, letters, newspaper cuttings and recent reports. The Council of Australian Government's Inquiry into Bushfire mitigation and Management should be included in the scope of documents reviewed.
- 6.2 **Identify stakeholders:** Identify particular individuals and organisations who should be consulted or have an ongoing involvement during the life of Operation PHOENIX.
- 6.3 **Confirm issues:** Issues will be clearly articulated. If there is another party who may have an interest in the issue, they will be consulted to ensure the issue is written so they agree with the issue.
- 6.4 **Identify quick actions:** There may be issues that have been identified that need no further discussion. That is the issues is agreed, and may be urgent; the solution is clear and unambiguous. In this situation, an immediate recommendation of action should be made.
- 6.5 **Sift and sort issues:** Issues will be analysed, grouped and prioritised. The issues will be reviewed to ensure that the cause is properly identified (not just a symptom of the cause).
- 6.6 **Develop action plan:** Including resources required for implementation, the recommended person who is responsible for implementing the action, and the timetable for implementation. The action plan should be confirmed with relevant stakeholders.

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<sup>1111</sup> Exhibit C280b, page 74

6.7 **Implementation review:** Advise what processes may be required to ensure that actions are implemented and that appropriate resources are applied to implement each action.'<sup>1112</sup>

- 28.3. The Project Team met with various members of the CFS and the public during their investigations. They undertook a visit to the fireground and examined a wide range of CFS documentation relating to the fire and to general CFS procedures. The project team also held a workshop in Adelaide in May 2005 which included a number of stakeholder agencies and organisations which examined lessons learnt from the fire and developed plans for the future.
- 28.4. A report entitled 'Outcomes from the South Australian Country Fire Service Project Phoenix Lessons Learnt Activity From the January 2005 Bushfires' was produced by Noetic Solutions in May 2005<sup>1113</sup>.
- 28.5. The Phoenix Report made numerous recommendations, some very general in nature. During the course of Mr Ferguson's evidence he produced to me a very useful document that illustrates the action taken by CFS to implement those recommendations.
- 28.6. The Phoenix Report articulated a number of conclusions about the manner in which the CFS managed this fire. I have read those conclusions. The recommendations made by Noetic Solutions are based on those conclusions. The conclusions that I have expressed in these findings are my own conclusions, based upon the evidence that was adduced during the course of the Inquest and have not been influenced by the conclusions set out in the Phoenix Report. If my own conclusions coincide with those of Noetic, so be it, and as far as their recommendations are concerned, I agree with them.
- 28.7. Report of Dr Smith  
 Dr Robert (Bob) Smith is a self-employed consultant with a background in forestry and risk assessment. He has a Master of Business Administration, Doctorate of Philosophy, Master of Science (Resource Economics) and a Bachelor of Science in Forestry. Dr Smith is a Director on the VicForests Board in Victoria and has previously worked as the Director General of the NSW Department of Land and Water Conservation.

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<sup>1112</sup> Exhibit C280b, EF21

- 28.8. Dr Smith was commissioned by the South Australian Minister for Emergency Services in May 2005 to provide a report into the management of the Wangary fire. Dr Smith undertook tours of the fireground, had access to CFS documentation and interviewed many people involved in the fire. A report entitled 'Report of Independent Review of Circumstances Surrounding Eyre Peninsula Bushfire of 10<sup>th</sup> and 11<sup>th</sup> January 2005 (Wangary Bushfire)' was produced by Dr Smith in September 2005<sup>1114</sup>. I have dealt elsewhere in these findings with the use to which I have put Dr Smith's report and evidence.
- 28.9. Dr Smith's recommendations and the CFS response to these recommendations are outlined in the document produced below. This document was presented by Mr Ferguson and is part of Exhibit C280f, attachment EF116. As far as Dr Smith's recommendations are concerned, I agree with them.

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<sup>1113</sup> Exhibit C197

<sup>1114</sup> Exhibit C185

## **29. Recommendations**

29.1. Pursuant to section 25(2) of the Coroner's Act 2003 I am empowered to make recommendations that in the opinion of the Court might prevent, or reduce the likelihood of, a recurrence of an event similar to the event that was the subject of the Inquest.

29.2. It is inevitable that in the aftermath of an event of this nature that the need for positive change will be identified and change implemented. The coronial Inquest is not the only means by which change can be effected. Some might argue that in a matter of this nature, a coronial Inquest is not the most suitable vehicle for affecting change. The National Inquiry on Bushfire Mitigation and Management, conducted under the auspices of the Council of Australian Governments (COAG), produced a report dated 31 March 2004. The report contains the following observation in relation to coronial inquiries as they relate to deaths in bushfires:

'Due to the legalistic and potentially adversarial approach that can develop during coronial inquiries into bushfire events, significant periods of time are involved in the establishment, conduct and finalisation of coronial inquiries. Such complexity and delay is problematic for several reasons:

- Operational issues that require rectification may not be identified prior to the next fire season.
- Individuals involved in decision making during a bushfire event are placed under enormous stress for an extended period, often including the following bushfire season, until the coronial process is complete.
- Those that have suffered during the fire event fail to benefit from a timely resolution.
- The public and media are involved in considerable speculation during an extended period of uncertainty.
- The 'value for money' from a public perspective is open to question.'

29.3. The COAG Inquiry questioned whether coronial inquiries were the best option for investigating operational issues not directly related to bushfire deaths and suggested that the extent to which coronial inquiries should investigate the operational issues of a major bushfire – other than those concerned directly with the fire deaths – needs to be critically reviewed.

29.4. There is some validity in the assertions made in the COAG report. However, the focus of this particular coronial Inquest is not just about operational issues connected with this bushfire, nor is it the performance of the CFS. The focus of this Inquest was

the cause and circumstances of the deaths of the nine deceased as well as the cause and circumstances of the fire. The issues concerning the operational performance of the authorities in the management of the Wangary bushfire to my mind was only relevant insofar as they formed part of the circumstances of the spread of the bushfire the circumstances of the nine deaths that resulted from it. My view is that a number of operational issues surrounding the management of this fire by CFS personnel have been shown to be relevant to the circumstances of what transpired on the Tuesday morning. However, this report is not intended to be, and should not be viewed as, any sort of benchmark for future bushfire prevention or bushfire operational management. As I stated in open Court during the course of this Inquest, I cannot possibly be expected to reinvent every wheel that relates to bushfires<sup>1115</sup>. This is especially so given the fact that I have been satisfied that a large measure of change, based on an obviously perceived need for it, particularly in relation to CFS practices, has been effected. Much of that change has been based upon the conclusions reached after two separate and independent inquiries conducted within the first year following the Wangary fires. I refer here to the Phoenix Report and that of Dr Bob Smith. The Chief Officer of the CFS, Mr Ferguson, produced evidence to the Inquest that suggests very strongly that the recommendations that were made consequent upon the findings made in the Phoenix and Smith inquiries have been fully embraced by the CFS. Those recommendations were in the main based upon the factual conclusions reached in those inquiries about the operational performance of the CFS during the Wangary fires. Many of the conclusions reached by both inquiries coincide with my own conclusions. I make the observation here that the CFS embracing of the conclusions and recommendations reached by Dr Smith is somewhat ironic when it is remembered that counsel for the CFS, Mr Cuthbertson QC, referred to Dr Smith's inquiry as '*essentially a complaint box*' that recorded and perpetuated the complaints that were being made by disaffected citizens after the Wangary fire, complaints which he said had been based on less than full information. Mr Cuthbertson also referred to the Smith Report as '*the Bible of those complaining*' and '*the Bible for counsel assisting*'<sup>1116</sup>. However, it would be as well to remember when those sorts of comments are to be evaluated that the Smith Report seems to have been at least one of the Bibles that the CFS have used to embrace positive change.

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<sup>1115</sup> Transcript, page 21161

<sup>1116</sup> Transcript, page 22737

- 29.5. It is also worth observing that the conclusions and recommendations reached and made by Dr Smith were closely aligned to those conclusions and recommendations expressed in the Phoenix Report, which also seems to have been embraced as a template for change.
- 29.6. Thus it is that much of the work that I might have otherwise had to perform as far as recommendations for change are concerned, has been done. Attached to this report is a schedule that was current as at January 2007 that outlines the actions taken by the CFS as against the recommendations from the Phoenix Report and the Smith Report. As it happens, I agree with all of those recommendations and applaud the SACFS hierarchy and its Chief Officer Mr Euan Ferguson in particular for having quickly implemented those recommendations. In fact, it would be remiss of me not to say that in my opinion the performance of the CFS since the Wangary incident in terms of its recognition of the need for change and the implementation of that change has been exemplary.
- 29.7. During the course of this Inquest I was shown an impressive array of innovation that the CFS have implemented since the Wangary fire that have been designed to improve the flow of information from one level of the CFS to another. I speak here of the CRIIMSON system, the operation of which was demonstrated to me at Region 1 Headquarters in Mount Barker. Essentially it involves a computerised system for the transfer and viewing of information including that which relates to key risk exposures. Inter alia it ensures that situation reports and reports as to the fires status and other crucial and relevant instruction is conveyed to senior CFS personnel so that it is available online for their evaluation. I also heard something about SITCHECKS which is a system designed to ensure among other things that risk and fire containment strategies are properly considered.
- 29.8. The utility of the so-called Elvis Aircrane helicopter, and the desirability of having one situated in South Australia is a complicated matter. The Government have resisted the idea of acquiring one. There are obviously significant cost implications involved in this. As Mr Ferguson told me, if the money is to be spent on firefighting resources, consideration would have to be given to allocating the funds to resources that may have a greater priority. All I can say about the desirability of having a Aircrane helicopter stationed permanently or even primarily in South Australia is that the evidence revealed that it would have been useful in the sugar gum area and that it

has a greater capability to extinguish fires at a higher fire danger index because of its ability to hover and its greater capacity. I intend to recommend that further consideration is given to acquiring the Aircrane helicopter.

29.9. I make the following recommendations:

- 1) I recommend that the Minister for Emergency Services, the Chief Officer of the South Australian Country Fire Service, the President of the Farmers' Federation of South Australia and the Minister for Local Government, with a view to developing a Code of Practice, establish a body to investigate the impact of existing farming practices on bushfire risk and prevention.
- 2) I recommend that the Minister for Emergency Services cause independent scientific or other research to be undertaken to identify the effects of continuous cropping, minimum tillage, direct drilling seeding practices and of the retention of cropping stubble, in respect of bushfire risk and prevention.
- 3) I recommend that the Minister for Emergency Services cause independent scientific or other research to be undertaken to establish means by which risk of bushfires, as created by continuous cropping, minimum tillage, direct drilling seeding practices and the retention of cropping stubble across the landscape, can be minimised.
- 4) I recommend that the Minister for Emergency Services and the Minister for Local Government consider the enactment of legislation that would empower Local Government to require the owners or occupiers of rural land to create fire breaks on the land of a kind that Local Government may determine and/or to require the removal of flammable materials from the land, as measures for preventing the outbreak of a bushfire, or for preventing the spread or extension of a bushfire.
- 5) I recommend that the President of the South Australian Farmers' Federation of South Australia draws these recommendations and findings to the attention of its members and constituents.
- 6) I recommend that the South Australian Farmers' Federation encourage its members and constituents to keep and maintain on rural land in proper working

order machinery that is capable of removing, modifying or reducing cropping stubble at short notice in order to minimise or mitigate bushfire risk.

- 7) I recommend that the Minister for Local Government cause rural councils to appoint an Officer whose duties consist entirely of bushfire prevention, such Officer being required to become a trained, operative member of the South Australian Country Fire Service during the currency of his or her appointment.
- 8) I recommend that the Minister for Emergency Services in conjunction with the Chief Officer of the South Australian Country Fire Service, the Chief Officer of the South Australian State Emergency Services and the Commissioner of South Australia Police develop policies and practices regarding the issuing of public warnings that address the risk posed to the public by an existing fire incident with a view to disseminating such warnings to the public at a time before the escalation of an existing fire incident occurs.
- 9) I recommend that the Minister for Emergency Services, the Chief Officer of the South Australian Country Fire Service, the Chief Officer of the South Australian State Emergency Services and the Commissioner of Police establish a panel to develop policies and practices to ensure that at the time bushfire warnings are created and delivered, all such warnings are made known to all emergency service entities, and to ensure that warnings of an approaching fire are delivered in a timely manner with detailed and specific information relevant to the circumstances of the section of the public to whom they are directed.
- 10) I recommend that South Australian Country Fire Service create and develop the role of a Regional Public Warnings Officer as a member of the paid staff of the SACFS whose role it would be to identify the need for, and to deliver, timely bushfire warnings to the public during the course of a bushfire incident.
- 11) I recommend that the South Australian Country Fire Service empower the Regional Public Warnings Officer to create and deliver public warnings on that Officer's initiative without the necessity of seeking the approval of personnel at State Headquarters.
- 12) I recommend that the Minister for Emergency Services in conjunction with the South Australian Country Fire Service conduct tuition courses to be made



available to the general public to enable members of the public to acquire the necessary knowledge and skills to implement their preparation and planning for bushfires.

- 13) I recommend that the Minister for Emergency Services and the South Australian Country Fire Service implement programs to develop in the minds of citizens a heightened awareness of bushfire risk, and in particular to encourage citizens to listen for radio announcements relating to the progression of a fire during the course of a bushfire incident.
- 14) I recommend that the Minister for Emergency Services, the South Australian Country Fire Service, the South Australia Police and the South Australian Farmers' Federation together continue to develop strategies to reduce the risk of harm to private firefighters and in particular:
  - a) Formulate a code of practice to ensure that the South Australian Country Fire Service and the South Australia Police are aware of the presence of private firefighters and private fire appliances at a fireground so as to discourage the ad hoc deployment of private firefighters and private farm appliances;
  - b) Develop an education program for private firefighters dealing with implementation of safe practices for private firefighters, with emphasis on but not limited to, consideration of the effect of wind changes and the dangers associated with proceeding into a fireground with lack of information about the existing circumstances pertaining to that fireground.
  - c) Formulate a structure whereby private firefighters at a fireground act in conjunction with, and not separately from, South Australian Country Fire Service resources;
  - d) Develop protocols relating to minimum requirements in respect of reliability of private firefighting units, dress for private firefighters, the need for appropriate radio communication, but not limited to those issues;
  - e) Develop a position within the structure of Level 2 and Level 3 Incident Management Teams of a Private Firefighting Liaison Officer.

- 15) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service cause to be included among the SACFS' Standard Operating Procedures (SOPs) a requirement that Incident Management Teams responsible for the management of bushfire incidents make all reasonable attempts to contact and maintain contact with the owners and/or occupiers of rural land on which a fire is situated.
- 16) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service cause to be included among the SACFS' Standard Operating Procedures (SOPs) a requirement that Incident Management Teams responsible for the management of bushfire incidents seek information from the owners and/or occupiers of rural land on which a fire is situated as to the topography, vegetation, existing fire breaks, accessibility and local weather conditions pertinent to that land.
- 17) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service cause to be included among the SACFS' Standard Operating Procedures (SOPs) a requirement that Incident Management Teams responsible for a bushfire incident seek advice from the owners and/or occupiers of rural land on which a fire is situated as to the possible firefighting strategies and possible containment measures that might be implemented in order to bring a fire on the land under control, and to take such advice into consideration in the management of the incident.
- 18) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service consider the creation of a position within an Incident Management Team of a Landowner Liaison Officer the duties and responsibilities of whom is to establish contact with and liaise with the owner and/or occupiers of rural land on which a fire is situated.
- 19) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service reinforce in the minds of those Officers who perform the role of Regional Duty Officer the duties and responsibilities attaching to that position insofar as they apply to an ongoing fire incident, and in particular to recognise the need to conduct a risk assessment in

relation to an incident and the need to scrutinise, evaluate and validate the strategies and Incident Action Plans of Incident Management Teams.

- 20) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service reinforce in the minds of those Officers who perform the role of Regional Duty Officer the need to deliver to the Deputy State Coordinator timely, accurate and relevant information pertaining to an ongoing fire incident.
- 21) I recommend that the Minister for Emergency Services and the Chief Officer of the South Australian Country Fire Service reinforce in the minds of all Incident Management Team members, in particular but not limited to the Incident Controller and Planning Officer, of the need to conduct a full risk assessment that not only addresses operational risk, but the risk posed to the general public by an existing incident and at all times to consider and identify the 'worst case scenario' outcome.
- 22) I recommend that the South Australian Country Fire Service develop as part of competency for inclusion on a Level 2 or Level 3 Incident Management Team a minimum requirement of demonstrated skill and competency in risk assessment.
- 23) I recommend that the South Australian Country Fire Service design tuition courses aimed specifically at developing among its members skill and competency in risk assessment.
- 24) I recommend that the South Australian Country Fire Service develop as part of competency for inclusion on a Level 2 or Level 3 Incident Management Team a minimum requirement of demonstrated skill and competency in identifying and implementing feasible and appropriate containment measures designed to bring control to a fire incident so as to minimise the risk posed to the general public.
- 25) I recommend that the South Australian Country Fire Service design tuition courses aimed specifically at developing among its members skill and competency in identifying and implementing feasible and appropriate containment measures designed to bring control to a fire incident so as to minimise the risk posed to the general public.

- 26) I recommend that the South Australian Country Fire Service establish pre-planned Level 2 Incident Management Teams in each Region for deployment to Level 2 incidents.
- 27) I recommend that the South Australian Country Fire Service utilise wherever possible the skills of paid, professional staff to perform the roles of Incident Controller and/or Planning Officer in Level 2 Incident Management Teams.
- 28) I recommend that the South Australian Country Fire Service identify and impart minimum skills and competencies to members who fulfil the roles of the four core AIIMS functionaries of a Level 2 Incident Management Team.
- 29) I recommend that the South Australian Country Fire Service create as part of a Level 2 and 3 Incident Management Team Logistics Division an Officer whose function it is to seek out, locate and identify sources of water, be they on land or provided by carrier.
- 30) I recommend that the Minister for Emergency Services give further consideration to acquiring a firefighting helicopter to be permanently or primarily stationed in South Australia.
- 31) I recommend that the Chief Officer and the Editors of all newspapers and other media outlets develop a Memorandum of Understanding that ensures that all CFS press releases concerning total fire ban days and ongoing bushfire incidents are published in full.
- 32) I recommend that the Minister for Transport, in conjunction with any other relevant authority, conduct research in relation to the question as to whether or not after-market, non-standard mufflers are suitable devices to be fitted to vehicles that are used in rural environments.
- 33) I recommend that the Minister for Emergency Services, the Minister for Environment, the Chief Officer of the CFS and the Native Vegetation Council, together develop a Code of Practice relating to the management of native vegetation as it affects bushfire prevention.

- 34) I recommend that the Minister for Emergency Services and the Minister for Local Government cause local council plant and equipment that is suitable for use in bushfire fighting be fitted with radios connected to the Government Radio Network.

*Key Words: Fire; Burns (Incineration); Combustion - Inhalation of Products of; Motor Vehicle Accident; Causation; Farming; Heavy Vehicle, Machinery; Management and Accountability; Inexperience; Publicity and Public Warnings; Risk Assessment; Training; Weather Forecasts; Stubble Retention; Vegetation; Water Bombing.*

*In witness whereof the said Coroner has hereunto set and subscribed his hand and*

*Seal the 18<sup>th</sup> day of December, 2007.*

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*Deputy State Coroner*

**INQUEST INTO THE DEATHS OF**  
**STAR ELLEN BORLASE, JACK MORLEY BORLASE, HELEN KALD CASTLE,**  
**JUDITH MAUD GRIFFITH, JODY MARIA KAY, GRAHAM JOSEPH RUSSELL,**  
**ZOE RUSSELL-KAY, TRENT ALAN MURNANE AND NEIL GEORGE RICHARDSON**

**ANNEXURES**



## ANNEXURE A – CFS Progress Against Project Phoenix Recommendations

### Progress Against Project Phoenix Recommendations - Updated 10 January 2007

Number	Recommendation	Progress	Comment Target date
PP 1	The CFS intends to develop a Terms of Reference for a review of the prevention sections of the Fire and Emergency Services Act 2005.	Linked to Dr Bob Smith's Independent Review recommendation. A Draft Terms of Reference has been developed in consultation with staff from the Office of the Minister for Emergency Services. On 26 June, the Minister endorsed the review.  The Draft Terms of Reference are being circulated to other relevant Ministers and Departments for comment. Following this it is expected that the Minister will establish the Reference Group and announce the review.	<b>Partially Complete</b> Quarterly reporting to SAFECOM Board and Minister.  Recommendations to the Minister by April 2007.
PP 2	The CFS and Planning SA are in the final stage of consultation for a review of Bushfire Planning Amendment Report (PAR). This PAR will extend the number of "bushfire prone" areas to include parts of the West Coast, Yorke Peninsula, Mid North, Kangaroo Island and the South East.	Consultation on Part 1 (KI, SE, Eyre Peninsula, Yorke Peninsula), Part 2 (Mid North, Riverland, Adelaide Metro), and Part 3 (Mount Lofty Ranges) is complete.  Ministerial Planning Amendment Report – Bushfire Management has extended Bushfire Prone Areas to West Coast, Eyre Peninsula, Yorke Peninsula, Mid North, Riverland, Kangaroo Island and South East. Development policy for building in bushfire prone areas updated (Development Act)  Powers of direction for SACFS inserted into Development Act.	<b>Partially Complete</b> Review progress 31 August 2006
PP 3	The CFS, in conjunction with the Bushfire Cooperative Research Centre, intends to analyse community behaviours and needs during a bushfire.	Report by Allan Rhodes (Bushfire CRC) was commissioned by CFS immediately following the fire. This report has been completed and submitted to the Deputy Coroner.  This area continues to be a strong focus for new research under the Bushfire CRC.  Paper by John Handmer and Amalie Tibbits (RMIT and Bushfire CRC) "Is staying at home the best option during bushfires? -Historical evidence for an Australian approach". In Environmental Hazards 6 (2005) 81-91.  Bushfire CRC Project 6.1 is focussed on an evaluation of the "stay or go" policy.	<b>Partially Complete</b> Ongoing research occurring by Bushfire CRC.  Review at Bushfire CRC annual workshop (3-7 June 2006) and at Bushfire CRC Stakeholder Council meetings.

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		<p>Mae Proudley (Bushfire CRC / RMIT) is scoping research of the decision making by women involved in the Wangary fire.</p> <p><b>Program C - Community Self Sufficiency for Fire Safety</b></p> <p>The CRC's research program has started to address these issues through projects on:</p> <ul style="list-style-type: none"> <li>• understanding communities</li> <li>• risk communication</li> <li>• negligent and deliberate fire lighting</li> <li>• the economics of bushfire</li> <li>• the "stay-or-go" policy</li> <li>• the evaluation of community safety policies and programs</li> </ul> <p>Projects in this program draw primarily on social science and economics.</p> <p>Each project or project area is working towards two basic aims:</p> <ol style="list-style-type: none"> <li>1. A state of the art methodology, or guidelines for the specific topic, and</li> <li>2. The evaluation of selected existing practices through case studies.</li> </ol> <p><b>Program C 1.1 - Understanding Communities</b></p> <p>The Understanding Communities project addresses the need for increased community resilience to bushfires. This means building a better understanding of how government policy and public perceptions interact. It also aims to understand how the expectations of service providers, communities and agencies agree and differ.</p> <p>The results will be a policy-influencing framework - a model of expectations on a national level. The project will improve the efficiency of planning and decision-making by bushfire management agencies. It will draft a framework and methodology for defining community attitudes, needs and expectations and will identify the nature and estimated value of community benefits possible from the overall CRC research.</p> <p><b>Program C 4.1 - Effective Risk Communication</b></p> <p>This project takes the view that communities need support to achieve effective risk communication networks, by working in partnership with weather, fire and emergency services - and that these services need to know how best to provide that support. The role of media in risk communication is also being investigated.</p>	
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		<p>with a literature review now being produced.</p> <p>Standard qualitative and quantitative social science research techniques being employed include a literature review in academic and industry arenas, surveys of providers of weather information and fire and emergency services, and the community.</p> <p>Outcomes will include a framework and methodology for identifying community information and risk communication needs during bushfire emergency. Documentation and assessment of current practice will also be produced.</p> <p><b>Program C 6.1 - Evaluation of stay or go policy</b></p> <p>The aim of this project is to identify impediments to full implementation of the AFAC Stay or Go policy, and to suggest improvements. In addition, it examines ways of integrating the policy with other important factors in bushfire risk management.</p> <p>Researchers will use a case study approach to assess the policy based on the extent to which it meets the requirements of emergency services while also reflecting the choices people are likely to make during a major fire. The project will include literature review, document analysis, workshops with fire and emergency agencies, interviews, surveys and focus group interviews.</p> <p><b>Program C 7.1 - Evaluating Bushfire Community Education Programs</b></p> <p>The Aim of this program is to develop a comprehensive analysis of Community Education Programs in place regarding bushfires. The effectiveness of these programs will be assessed using a number of tools.</p>	
PP 4	The CFS, in conjunction with the national review of community warning systems, intends to review, then develop and implement a revised community bushfire warning system.	<p>New bushfire information warning system has been developed and implemented in South Australia. All CFS staff have been required to undertake an assessed study unit in the system.</p> <p>MoU's established with ABC and 5AA for transmission of bushfire warnings.</p> <p>The process was adjusted in February 2006 to meet needs of ABC in respect of frequency of warnings and CFS providing a "talking head" real time.</p> <p>The State Emergency Management Committee has endorsed policies on bushfire warnings; use of the standard emergency warning signal and</p>	<p><b>Complete</b></p> <p>Quarterly review by DoTARS</p> <p>CFS formal review with ABC and 5AA in September 2006</p>

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		<p>evacuations in bushfires. Post season review with SAPOL and other services.</p> <p>Ongoing discussions, based on a paper submitted by CFS, are occurring at national and AFAC level in an effort to achieve national consistency. This is also one of the COAG Bushfire Report recommendations and is being progressed with other recommendations with AFAC and DoTARS.</p>	
PP 5	The CFS intends to review and develop a revised policy for the use of CFS sirens for community warnings during emergencies.	<p>A revised policy has been developed allowing use of sirens for community warning. It is based on the principle that the CFS brigade negotiates the use of the siren with the local community. An Operational Bulletin has been issued to advise members. Local implementation is occurring.</p> <p>Further, CFS has noted the success of convening public meetings in the area of interest of a fire or emergency <b>on the first evening of the fire / emergency</b> by the CFA in Victoria. CFS has convened 10 such meetings during fires on Kangaroo Island and the Riverland. These meetings were well received by the affected communities with approximately 450 people in attendance.</p>	<p><b>Complete</b></p> <p>Will be subject to normal annual post fire and post fire season review process</p>
PP 6	The CFS intends to, prior to the next (05/06) bushfire season, coordinate an exercise on the revised bushfire warning system.	<p>The system was successfully trialled on Friday 25 November 2005 (Ex. Team Spirit). System has been implemented and minor changes made after implementation review.</p> <p>CRIMSON, the CFS on-line forms and strategic information system also includes bushfire information and warning messages and templates.</p> <p>Ex "Team Spirit" will again be held prior to the 06/07 fire season. The focus of this year's exercise is likely to be at the Zone Emergency Centre level.</p>	<p><b>Complete</b></p> <p>Will be subject to normal annual post fire and post fire season review process</p>
PP 7	The CFS intends to, in conjunction with other agencies and jurisdictions, investigate alternative systems and technologies for delivering public warnings.	<p>CFS has always encouraged the use of "telephone trees" for disseminating local information. This is through local brigades, community fire safe, bushfire blitz and other community interest groups.</p> <p>CFS with other agencies, observed in a trial of the Telstra Community Information Warning System (CIWS). CFS has also trialed systems that use SMS technology.</p>	<p><b>Partially Complete</b></p> <p>Telstra CIWS trial to be reported to SEMC and EMC (September 2006)</p>

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		<p>The Telstra trial is being monitored by all emergency services and a number of other government agencies. On 3<sup>rd</sup> August 2006, Telstra presented the results of the trial to members of the Emergency Services Leadership Council (ESLC). Telstra are presenting the system, and a contract proposal, to each state and territory. The Emergency Services Leadership Council further considered the Telstra presentation at a meeting on 16<sup>th</sup> August. ESLC endorsed that an officer from Security and Emergency Management Office prepare a report for consideration by the State Emergency Management Committee and the Emergency Management Council (a sub committee of Cabinet).</p> <p>CFS is supportive of the concept behind the Telstra CIWS system. It is the CFS view that if the system is adopted, it should be a whole of government project, not one focussed solely on bushfire risk. It is also acknowledged that there are cost, legal and procedural considerations. Also, the concept is reliant on the Commonwealth government providing access to the national telephone number database.</p> <p>In addition, CFS undertook an active trial of SMS for warning in 2005. CFS continues to observe various SMS systems. CFS supports local introduction of these systems, but there is concern that SMS systems are based on using infrastructure that may not be reliable or may be overloaded in the event of an emergency.</p> <p>No specific evaluation of the Skunkworks system undertaken as yet.</p>	
PP 8	The CFS intends to develop a revised system for providing information to the community for all aspects of bushfire management and mitigation.	<p>A new bushfire information and warning system developed and implemented.</p> <p>The CFS website is currently being updated and upgraded. A web master has been engaged and the work is scheduled for completion by January 2007.</p> <p>As part of the refurbishment of the CFS State Coordination Centre, the facilities and Bushfire Hotline Call centre procedures have been enhanced.</p> <p>A room (with ABC equipment) has also been set aside for the ABC to "embed" one of their staff into the CFS SCC so that real time reports can be made direct from CFS.</p> <p>New approach to community engagement during a major fire is being modelled</p>	Complete

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		<p>on the Victorian approach. This involves convening a public meeting on the first evening and every subsequent evening after the start of a significant bushfire. CFS has convened 10 such meetings during fires on Kangaroo Island and the Riverland. These meetings were well received by the affected communities with approximately 450 people in attendance.</p> <p>In addition CFS Community Education Officers are currently being trained by the Victorian Department of Sustainability and Environment (DSE) in community engagement processes with the expectation that this training will be delivered to CFS staff and volunteers by these trainees.</p>	
PP 9	The CFS intends to seek to extend and expand the Community Fire Safe and Bushfire Blitz community bushfire awareness initiatives.	<p>Cabinet Submission submitted in late 2005 and funding provided for up to 4 additional community educators provided in November 2005. Expanded program implemented with particular focus in Mid North, LSE and Eyre Peninsula.</p> <p>1 FTE community education officer was appointed to CFS HQ in July 2006.</p> <p>1 part-time position (20 hours per week) located in the Reg 6 and 1 part-time position (20 hours per week) located in Reg 5 were also appointed in July 2006.</p> <p>A planning and consultation process has been undertaken by education officers to identify areas to target activities for next season. (Ref to end of season report 05/06).</p> <p>CFS will need to formally review the extended program after the 06/07 fire season and make a further bid for additional funding from government if necessary.</p>	Partially Complete Review post 2006/07 fire season
PP 10	The CFS intends to, in conjunction with the Department of Education and Children's Services (DECS), develop a bushfire education program that links with DECS curriculum.	<p>Work in progress with DECS. Project scope defined. Expressions of interest were sought for development of a package during 2006.</p> <p>A contractor was engaged in August 2006. The contractor has strong links with both State and Private schools as it is planned that an amended children's bushfire education program will be actively promoted through both State and private schools.</p>	Partially Complete Review progress quarterly

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		A draft report with recommendations was presented to CFS in December and that draft is currently under going some minor being amendment to reflect CFS needs.	
PP 11	The CFS intends to, in conjunction with DECS, assist with bushfire planning in identified high risk schools.	<p>CFS has trained DECS facilities managers in assessing bushfire risk. 19 Very High and Extreme risk schools are being visited and bushfire action plans developed for each school.</p> <p>DECS has engaged a former School Principal/CFS volunteer to develop a School Bushfire Action Plan framework with supporting policies and standards. The DECS SchoolSafe program is represented on the program steering committee and this organisation has formalised links with private school networks.</p> <p>DECS and CFS are meeting with a number of these schools to validate School Bushfire Action Plans and identify specific works that need to be undertaken to improve school safety. DECS has established a budget of \$2m for the specific purpose of upgrading these schools.</p>	<p><b>Partially Complete</b></p> <p>Review progress quarterly</p>
PP 12	The CFS intends to review and re-issue operational planning documents at all levels prior to 31 October 2005.	<p>Review and where necessary, re-issue SOP's, operations management guidelines and State plans (prevention; SOC; interstate deployment plans) have been completed prior to January 2006. Regional and Group plans are in review. Planning was audited in each Region prior to the start of the 2005/06 fire season.</p> <p>Work has now commenced on a review for the 2006/07 suite of fire season documents. In particular, the function and distribution of the Operations Management guidelines will be further enhanced. A number of selected Standing Orders and SOP's will be considered for inclusion into the enhanced Operations Management guidelines.</p> <p>A schedule of operational audit inspections has been established by the DC/O for completion prior to the 1<sup>st</sup> December 2006.</p>	<p><b>Complete</b></p> <p>Revised Operations Management Guidelines by end of October 2006.</p> <p><b>Complete: review of OMG's incorporated into annual preparedness program.</b></p> <p>Review audit outcomes in first week of December 2006.</p> <p><b>Complete: Incorporated into annual preparedness program.</b></p>
PP 13	The CFS intends to review and document the role and relationships of various incident control and	Role of various centres (relationship b/w CFS Regional Coordination centre and ICC / Operations point and the ZEC; also the CFS Regional Coordination Centre relationship to state coordination Centre and SEC) has been reinforced	<b>Substantially Complete</b>

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	coordination centres.	<p>In Operations management guidelines. Also reinforced in the operations Update program delivered to CFS officers.</p> <p>The roles and relationships were tested in Exercise TEAM SPIRIT on 13 Dec 2005.</p> <p>During 2006, the State Emergency Management Committee changed the names of State and Zone centres to State Emergency Centre (SEC) and Zone Emergency Centre (ZEC). This is also reflected in updates to the CFS Operations Management guidelines.</p>	
PP 14	The CFS intends to develop an intra-state deployment plan.	Completed. This is included in Regional Operations Management Plans. The interstate deployment plan was used successfully for significant deployments of SA and interstate firefighters in December 2005 and January 2006.	<b>Complete</b>
PP 15	The CFS intends to prepare a strategy for an aviation plan that includes the criteria for resource allocation.	<p>Aviation Manager appointed November 2005. A number of high priority aviation operational infrastructure issues have been addressed in early 2006. A draft air operations manual has been produced and is being used. An updated aviation plan, incorporating resource allocation criteria, will be worked on during 2006. Similar work is under way at a national level.</p> <p>Two additional FW firebombers have been funded as a result of a budget bid during 2004 and have been allocated to Port Lincoln, operating in the new Lower Eyre Peninsula Primary Response Zone.</p> <p>Bushfire CRC continues, as a matter of priority, to gather data on effectiveness of aerial firefighting. A recent report (provided to the NAFC Board for internal use only on 9 August 2006 titled "The Effectiveness and Efficiency of Aerial Firefighting in Australia" has been released by the Bushfire CRC (but is still subject to peer review).</p> <p>The CFS Aviation Manager will be part of an International Best Practice Study Tour from 20 August to 6 September that, amongst other things, will evaluate aircraft resource decision making processes overseas.</p> <p>The Bushfire CRC is now developing a proposal for a workshop on aircraft effectiveness on 25 September 2006. This will take into account the findings of</p>	<p><b>Complete</b></p> <p>Next version of the Air Operations Manual is planned for the last quarter of 2006.</p> <p><b>Complete: Incorporated review into annual preparedness program.</b></p> <p>Review after 25 September workshop and study tour findings.</p> <p><b>Work in progress outcomes will be incorporated into</b></p>

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		the International Best Practice Study Tour.	operational plans.
<b>PP 16</b>	The CFS intends to review and re-issue the state communications plan in light of lessons from the Wangary fire.	<p>An overview of the CFS state communications plan is included in the revised Operations Management Guidelines.</p> <p>Communications was included in Operations Update program delivered pre 2005/06 fire season. SAPOL GRN powerpoint presentation has been provided to communications personnel.</p> <p>Draft plan prepared and available for comment in March 2006.</p> <p>A plan for common agency (MFS, SES, CFS, DEH, ForestrySA) code plugs has been endorsed by the SAFECOM Board and will be developed for implementation during 2007.</p> <p>The draft report of the Independent Review of the performance of the GRN during the fires of the 11<sup>th</sup> January 2005 has been received by the Department of Justice. CFS has not sighted the report. The report will be transmitted to the sponsor (Commissioner of Police) and a government response will be developed prior to the report being tabled at the State Emergency Management Committee.</p>	<p><b>Complete</b> Review outcomes of Independent Review as part of revision of Ops Management Guidelines in September 2006</p> <p>Review of OMC's incorporated into annual preparedness program.</p> <p>State Telecommunications plan incorporated into annual preparedness program.</p> <p>Joint agency working party established for considering development of common code plug, will be progressed during 2007.</p> <p>Independent review not available for use as yet, will be reviewed once available.</p>

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<b>PP 17</b>	The CFS intends to audit the number of active firefighters against the current database.	<p>Audit at brigade level completed in mid 2005. Records duplication has been corrected.</p> <p>Annual audit of numbers occurred during 2005. Ongoing corrections to database continue as membership changes.</p>	<b>Complete</b>
<b>PP 18</b>	The CFS intends to develop draft position papers for the State Emergency Management Committee on evacuation, refuge areas and use of the standard emergency warning signal.	Completed. These papers have been endorsed as SEMC policy at the 7 October 2005 meeting.	<b>Complete</b>
<b>PP 19</b>	The CFS intends to audit training and skills deficiencies on a brigade by brigade basis.	<p>This work is in progress, but has been carried out for the last 3 years. During 2004 CFS commenced issuing certificates to Brigades who met their SFEC prescription for training.</p> <p>This may see brigade and firefighter classifications introduced that recognise only "bushfire" firefighting roles for some.</p> <p>In the mean time, brigades continue to be audited on compliance with their SFEC prescribed numbers and competencies of members.</p> <p>During the Volunteer Summit held on 1<sup>st</sup> / 2<sup>nd</sup> July 2006 there was debate on a new model for brigade and firefighter competencies. It has been proposed that the method of operation of the Basic Firefighter 1 Course be reviewed to allow for on-line learning and staged learning and assessment.</p> <p>A paper on volunteer leader competencies has been prepared by a state working party. The recommendations in this paper, that minimum competencies be introduced, is being discussed with stakeholders (Regional Volunteer Management Committees) and at the present time. It is anticipated that implementation will commence during 2007.</p> <p>Further, the DC/O has developed a timetable and schedule for brigade and</p>	<p><b>Complete</b> Review audits first week in December 2006</p> <p><b>Complete: Annual training gap analysis undertaken to form basis of annual training program.</b></p>

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		group audits prior to 1 <sup>st</sup> December 2006.	Incorporated review into annual preparedness program.
PP 20	The CFS intends to prepare and deliver an "Operations Update" program for all brigades prior to the end of 2005. The Operations Update will contain key safety and management messages to address issues identified in the Lessons Learned process.	Program developed. Delivered to 95% of CFS officers.  Further program being considered for pre-2006/07 fire season.	<b>Complete</b> New Operations Update Program being delivered up to end of Dec 2006. <b>Complete: Incorporated into annual preparedness program.</b>
PP 21	The CFS intends to implement a brigade based framework for maintaining competencies.	A framework is in place (SFEC), but is being reviewed. This is directly related to the SAFERS project that is being managed by SAFECOM as a whole of sector resource allocation policy.  The SAFECOM Board has established a "southern suburbs working party" to pilot streamlined SAFERS concepts for quick resource decision making processes.  During 2006 there will be debate on a new model for brigade competencies. This may see brigade and firefighter classifications introduced that recognise only "bushfire" firefighting roles for some.	<b>Partially Complete</b> Review progress Sept 2006. SFEC manual to be updated by 30 June 2007, prescriptions to be updated by December 2007.  Limited progress by SAFECOM on SAFERS project.  Yet to be progressed
PP 22	The CFS intends to develop a training continuum that includes an annual training cycle, based on operational needs.	A draft training continuum proposal has been prepared. In order to focus on operational issues, a further, more detailed framework for "Command and Leadership" has been developed. This will be finalised by the end of August. Three levels of command and Leadership have been identified: Tactical; Incident and Strategic. The CFS annual plan targets delivery of at least one of each of these courses during 2006/07.	<b>Substantially Complete</b> Review framework and bushfire working party recommendations in September 2006.

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		In addition, CFS has mandated the "Suppress Wildfire" for all operational staff as a professional development activity for 2006.  CFS intends to require an annual "burnover" drill be completed for every operational firefighter every year (see annual plan).  A working party is reviewing bushfire fighting methods and this is linked to the review of brigades for "bushfire" competencies. This will be completed by late 2006.	Command & Leadership program established, pilot courses to be completed by 30 June 2007.  Yet to be completed.  This has now been incorporated into annual preparedness program.  Issues identified by working party have been addressed through introduction of Suppress Wildfire Course.
PP 23	The CFS intends to reinforce the Safety First culture by including key firefighter safety messages in the Operations Update program prior to the fire season.	Program developed. Delivered to 95% of CFS officers.  "Safety First" pocket cards and posters re-issued.  Guidelines for burnover protection have also been issued.  For the 2006/07 fire season every firefighter will be required to present wearing their PPC and to participate in a burnover drill. A new pocket card is being developed for issue, along with a lapel badge for those who have taken part in the drill.  The safety message adopted by CFS for this fire season is "Safety First – Come Home Safe!"	<b>Complete</b> Burnover drills will be completed for all firefighters prior to end of December 2006  <b>Complete: Incorporated into annual preparedness program.</b>
PP 24	The CFS intends to audit the fire safety features on fire appliances and protective equipment.	During 2005 CFS audited its safety design features against the CFA "tanker of the future" program and national / international design practices.	<b>Partially Complete</b> Review safety features and standard designs following

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		<p>CFS has evaluated the use of cabin protection sprays and in-cab breathing systems to enhance safety and survival of crews. From the 2005 tanker build, all 34 rural tankers will be produced with both cabin sprays and in-cab breathable air systems. A number of these appliances are now in service. The efficacy of these systems will be reviewed after the fire season.</p> <p>CFS Vehicle design workshops have been held for the last 3 years. A further workshop is planned for 14 October 2006. This will review the design and safety features of all CFS appliances.</p> <p>CFS continues to work with AFAC, CFA, the Forest Fire Equipment Development Working Party and Bushfire CRC to introduce "best practice" into the safety design of all CFS appliances. The Bushfire CRC continues work on vehicle safety design features.</p> <p>AFAC has issued best practice for people caught in a vehicle during a bushfire.</p>	<p>14th October vehicle design workshop</p> <p>Vehicle design workshop postponed due to operational activities. Work is continuing with national partners to enhance safety design features. CFS received a Workcover Award for innovations associated with fire fighter safety on 34 type tankers.</p>
PP 25	The CFS intends to seek additional funding to retro-fit appliances with safety features such as vehicle sprays, drop down curtains and remote pump controls.	<p>Additional funding will be pursued through the budget bilateral process commencing in May 2006 for appliance safety retro-fit program.</p> <p>Review after September 2006 budget announcement, in the light of normal budget development processes.</p>	<p>Partially Complete</p> <p>Review September 2006 following state budget. Budget bilateral not supported, will be pursued as funds become available.</p>
PP 26	The CFS intends to audit current levels of protective clothing and equipment.	<p>Additional funds were sought and granted for the provision of new wildland and structural standard PPC throughout CFS.</p> <p>Purchasing will be complete by 30 June 2006. Issuing will be completed shortly thereafter.</p> <p>A draft policy on PPE has been prepared and is still in consultation with volunteers.</p> <p>CFS is pursuing, through the AFAC Collaborative Procurement Initiative, the adoption of a single PPC design standard for all wildland agencies.</p>	<p>Substantially Complete</p>
PP 27	The CFS intends to conduct	This was the objective of EX TEAM SPIRIT on 13 Dec 2005.	<p>Substantially Complete</p>

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	exercises at a number of levels up to State level to test facilities, plans and information management.	<p>Level 3 IMT members were also exercised at two level 3 IMT workshops facilitated by Stuart Ellis in late 2005.</p> <p>Role specific briefings, exercises and assessments were undertaken with a range of State functions and systems prior to January 2006. (IMT, SCC and RCC personnel from CFS and SAFECOM).</p> <p>CFS has re-developed the architecture and systems in the CFS State Coordination Centre. This includes the commissioning of CRIMSON, on-line forms system and the training and exercising of all senior staff in its use.</p> <p>For the Nov 2006 Exercise Team Spirit, it is proposed that the functions of Zone Emergency Centres will be focussed on.</p>	
PP 28	The CFS intends to investigate future Geospatial Information System (GIS) system requirements.	<p>CFS has appointed an Operations Planning Officer with specialist GIS competencies to pursue ongoing GIS and mapping matters. A number of systems and enhancements are under evaluation.</p> <p>CFS will progress these with the DEH mapping unit, the SACAD team and various whole of government committees including the Police and Emergency Services ICT Strategy.</p>	<p>Substantially Complete</p>
PP 29	The CFS intends to review current technology and report on possible systems for resource and asset tracking.	<p>This will be done in a manner that is consistent with the introduction of SACAD and the development of the Police and Emergency Services ICT Strategy. A draft CFS "needs" statement has been developed.</p> <p>CFS has employed a Project Manager to develop needs and options for future technologies. CFS future needs will need to be considered in the light of the Police and Emergency Services ICT Strategy, the Tranche 1 and Tranche 2 plans being developed by DAIS.</p> <p>The Emergency Services Leadership Council has been established to have executive oversight of ICT issues including resource tracking proposals.</p> <p>Within the Emergency Services Sector an ICT Management forum has also been established. This forum is currently (August 2006) workshopping the</p>	<p>Partially Complete</p> <p>Not totally complete: This is dependent on SACAD, will not be able to be progressed until SACAD provider known, any tracking system must integrate with SACAD.</p>

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		scope of all sector ICT projects and programs. Review progress after the adoption of PES ICT and SICTF workshops.	
PP 30	The CFS intends to document and enhance its information and intelligence capability for bushfire.	The architecture of the CFS State Coordination Centre has been modified to focus on the sharing and documentation and review of information.  CFS "On-Line Forms" system, CRIIMSON, has been implemented and used during fires of Dec 2005 – January 2006.  CFS has established an Intelligence Cell in the CFS State Coordination Centre that uses the "SITCHECK" decision assessment tool.  Both systems will be reviewed post implementation. It is anticipated that both systems will be now broadened to allow whole of ESC use and applicability.  The SITCHECK tool will probably be tabled at a national conference or published in a relevant journal.	Complete
PP 31	The CFS, in conjunction with Australasian Fire Authorities Council (AFAC), intends to review the intelligence function within Australian Inter-Service Incident Management System (AIIMS).	AFAC has established an AIIMS Standing Committee to deal with ongoing enhancements to the system (in place by May 2006).  Active discussions are in progress with SAPOL and AFAC AIIMS Steering Committee to meet Australasian Police Service needs.  SAPOL advise that NCTC has developed enhancements to AIIMS that meet police needs. The NCTC model will be recommended to SA Police Commissioner in 2006. Last discussed 28/06/06 with Commissioner and SAPOL Executive team. AFAC Council considered the NCTC ICCS model at its meeting on 10 <sup>th</sup> August and authorised negotiation with police to adopt the modifications proposed by police to meet their needs.  Last correspondence on this within SA was on 22 August with Police Commissioner.	Substantially Complete Review with Police, MFS and SES
PP 32	The CFS intends to include a	Completed. Delivered to 95% of CFS officers. Also refer to Operations	Substantially Complete

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	segment on efficient communications in the pre-fire season Operations Update program.	Management Guidelines.	
PP 33	The CFS, with key bushfire agencies, intends to implement one pre-planned Level 3 Incident Management Team for the coming bushfire season. Further teams will be developed in conjunction with other agencies.	Two level 3 Incident Management Teams have been established with other agencies and CFS and initial training conducted. Both teams have been successfully deployed at least once.  It is planned for 2006/07 that a further two level 3 Teams be developed, one in the Murray-Mallee and one in the Lower South East, during the 06/07 financial year.  Further, each CFS Region will be required to plan for and document at least two Level 2 IMT's for intra-Regional deployment prior to the end of the 06/07 financial year.	Complete Quarterly review of progress against CFS 06/07 Annual Plan.
PP 34	The CFS intends to conduct pre bushfire season exercises to test local, regional and state bushfire preparedness for the next bushfire season.	This was an objective of EX TEAM SPIRIT on 13 Dec 2005. Regions and groups have also conducted exercises. Each ZEOC has been audited and exercised through SAPOL.  Further annual testing, auditing and exercising will be programmed pre-bushfire seasons. Ex "Team Spirit" will again be held prior to the 06/07 fire season. The focus of this year's exercise is likely to be at the Zone Emergency Centre level.	Complete Operation FireSAFE completed, this included exercises for Zone Emergency Centres and the State Emergency Centre. Will be incorporated into annual preparedness program.
PP 35	The CFS intends to implement a mentor program for staff and volunteers who have specialist skill requirements.	Initial development has occurred. Mentor Guidebook has been adopted. Senior Officer mentor program (identifying about 6 senior officers) will be established during the 06/07 financial year. Depending on success, the model will be extended during 2006 / 2007.	Partially Complete Quarterly review with Director HR and MSS
PP 36	The CFS intends to introduce retrospective basic training for incident management (AIIMS).	Part of Operational Update Program. 95% of Officers have completed.  AIIMS courses continue to be delivered across the state to members of all agencies.	Complete

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		<p>AIIMS will continue to be reinforced at all levels in future training updates and marketing materials.</p>	
<b>PP 37</b>	The CFS intends to train key personnel in incident management (AIIMS).	<p>AIIMS is included in the BFF1 course. AIIMS basic training courses continue through CFS and other agencies. Level 3 IMT's will be updated and refreshed in late 2006. Functional AIIMS courses are to be delivered in October 2006. AIIMS Planning Officer Course delivered by CFA to CFS and DEH in February 2006.</p> <p>Proposal that each Region establish two Level 2 IMT's for intra-Region deployments.</p> <p>Proposal for minimum skills levels to be established for Group Officers. In discussion with VFBA and State / Regional Volunteer Management Committees.</p> <p>IMT simulation and assessment through technology and Tactical Exercises Without Troops (TEWTS) will be further developed.</p>	<b>Complete</b> Review progress of Level 3 IMT's quarterly.
<b>PP 38</b>	The CFS intends to, in conjunction with the State Emergency Management Committee, develop training and exercise materials for aspects of the Emergency Management Act 2004.	SAPOL has developed a course which has been delivered to CFS State and Regional staff.	<b>Complete</b> Ongoing Process
<b>PP 39</b>	The CFS intends to initiate, via the Strategy 2020 consultation process, a review of volunteer leaders and the operational chain of command.	<p>2020 Discussion paper has been developed. In discussion with VFBA and State Volunteer Management Committee. This was one of the key issues discussed at the Volunteer Summit on 1<sup>st</sup> and 2<sup>nd</sup> July 2006.</p> <p>A discussion paper, proposing competencies for volunteer leaders has been endorsed for further consultation with Regional Volunteer Committees (this is occurring in August and September 2006). In the mean time a draft Command and Leadership course framework is in development.</p> <p>Part of the development of the Command and Leadership framework will allow</p>	<b>Partially Complete</b> Quarterly review

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		<p>CFS to clearly delineate the 4 or 5 key levels of functions within the service. Whilst not proposed, it is envisaged that this may lead to a revision of the traditional rank structure to a new structure based on operational competence at a functional level.</p> <p>Unisa have also commenced a research project to identify contemporary issues facing volunteer leaders.</p>	
<b>PP 40</b>	The CFS intends to develop a comprehensive capability for assurance for the Chief Officer.	<p>Interim audit process developed. DC/O has developed a process and timeline for audits prior to the 06/07 fire season. These will be completed and reviewed in the first week of December.</p> <p>Copy of audit process attached. Prevention Services is currently reviewing the audit process through Project Vulcan.</p>	<b>Complete</b> Incorporated into annual preparedness program.
<b>PP 41</b>	The CFS intends to initiate an independent audit and report on the preparedness of Regional Coordination and Incident Control Centres prior to the 2005/06 fire season.	<p>Level 3 ICC's identified and standards set. Interim audit completed by end December 2005.</p> <p>DC/O has developed a process and timeline for audits prior to the 06/07 fire season.</p>	<b>Complete</b>
<b>PP 42</b>	The CFS intends to investigate systems to assist in assessing the operational competence of volunteer leaders.	<p>CFS routinely uses competency based assessment in most courses delivered.</p> <p>Proposal for minimum skills levels to be established for Group Officers. In discussion with VFBA and State Volunteer Management Committee. Committee established and preliminary scoping work being undertaken. Matter has been referred to Regional Committees from SVMC. Issue was discussed at the July 2006 Volunteer Summit.</p> <p>Command and Leadership Framework proposes that TEWTS and Discussion Exercises be used for assessment at various levels of command.</p> <p>Vector Command is also being investigated.</p>	<b>Partially Complete</b> Monitor progress of Command and Leadership Framework quarterly Command & Leadership program established, pilot courses to be completed by 30 June 2007.

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<b>PP 43</b>	The CFS intends to, in conjunction with SA Farmers Federation, develop best practice farmer firefighter guidelines.	Working party established. Guidelines have been developed along with a training package. Best practice guidelines were trialed in about 10 locations last summer (05/06). Guidelines with training notes have been refined and have been issued for delivery across CFS Regions.  Further meetings with SAFF have occurred and continue to occur during 2006 (last meeting 17 August).. SAFF have formed a Fire Prevention Task force to assist consultation within SAFF. Now working on guidelines for cessation of harvesting on severe fire weather days.	<b>Complete</b>
<b>PP 44</b>	The CFS, with the Department for Environment and Heritage and ForestrySA, intends to develop remote (dry) firefighting teams and training materials.	Project team established. Concept being developed by DEH in first instance. SA Water is now providing funds that will allow for DEH to employ additional summer crew for firefighting on all public lands. CFS is also working a concept for Corrections Firefighters.  Further work being undertaken with Salisbury CFS Brigade as a possible "pilot" reserve brigade for dry firefighting.  The Government Agencies Fire Liaison Committee (GAFLC) will coordinate aspects of these strategies.	<b>Partially Complete</b> Work in progress. Quarterly review by GAFLC
<b>PP 45</b>	The CFS intends to, as part of the extended contract with firebombing contractor Australian Maritime Resources, use additional funding from the State Government to position two fixed wing fire bombers on the Lower Eyre Peninsula for a fixed 12 week period from 05/06 fire danger season.	New funding announced in State budget. Extended contract in place. Aircraft commenced in mid December 2005 based from Port Lincoln. New bombing primary response zone established for the Lower Eyre Peninsula.	<b>Complete</b>
<b>PP 46</b>	The CFS intends to provide a resource to support the CFS Centre for Lessons Learned Steering Committee and to monitor the implementation of the post Phoenix operational aspects of the CFS Annual Plan.	Position Description prepared and applications sought. Additional funding sought via the current budget bilateral process.  In the interim, the Position Description of the Project Manager Incident Management has been expanded to include management of the Centre for Lessons Learned.	<b>Complete</b>

## **ANNEXURE B – CFS Progress Against Dr Smith's Recommendations**

### **Progress Against Dr Bob Smith Recommendations - Updated 10 January 2007**

<b>Number</b>	<b>Recommendation</b>	<b>Progress</b>	<b>Comment Target date</b>
<b>Dr S 1</b>	The CFS, in collaboration with MFS, investigate and determine the effectiveness of bushfire awareness, education and direct engagement programs in sustaining an individual commitment to "being bushfire ready",	<p>Bushfire CRC Project C 7.1 "Evaluating Bushfire Community Education Programs" is directly relevant to this recommendation. CFS is a Bushfire CRC Stakeholder and has initiated dialogue with researchers to address aspects of Dr Smith's recommendations.</p> <p>Cabinet Submission for additional funds to employ community educators was approved by Cabinet in October 2005. New facilitators commenced in November using new methods of engagement.</p> <p>CFS co-sponsored (with SEMO and EMA) a conference on community engagement in February 2006.</p> <p>Linked to recommendations Dr S 2 and Dr S 7 CFS has established definitions and systems of assessment of preparedness of communities and District Councils (Project Vulcan).</p> <p>Project Vulcan report has been completed and has been endorsed by the CFS Chief Officer. The concept for "bushfire ready" has been adopted by CFS.</p> <p>An Audit framework based on AS/NZS 19011:2003 has been adopted and is currently being developed to suit auditing of bushfire prevention processes.</p>	<b>Substantially Complete</b> Further discussion of Project Vulcan recommendations with SAMFS Chief Officer
<b>Dr S 2</b>	The CFS select and implement, on a regional basis, the most effective mix of programs to increase probability of an individual "being bushfire ready",	<p>This is also related to the Bushfire CRC research program.</p> <p>Cabinet approval was given for additional resources to be provided to CFS for community education in the Eyre Peninsula and the lower South East, amongst other rural areas. Facilitators and educators engaged across Eyre Peninsula and LSE in addition to MLR.</p> <p>Linked to recommendations Dr S 1 and Dr S 7, CFS has established definitions and systems of assessment of preparedness of communities and District Councils (Project Vulcan).</p> <p>Project Vulcan report has been completed and has been endorsed by the CFS Chief Officer. The concept for "bushfire ready" has been adopted by CFS.</p>	<b>Substantially Complete</b> Further discussion of Project Vulcan recommendations with SAMFS Chief Officer

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		An Audit framework based on AS/NZS 19011:2003 has been adopted and is currently being developed to suit auditing of bushfire prevention processes.	
<b>Dr S 3</b>	The CFS sponsor through national bushfire forums, a project to investigate and disseminate to the community, the cost/benefits of prevention and mitigation activities, covering investment and return at an individual and community level, adjusted for varying levels of risk of bushfire.	<p>Bushfire CRC Project C 7.1 "Evaluating Bushfire Community Education Programs"; and Project C 5.1 "Bushfire economic Costs" are directly relevant to this recommendation. CFS is a Bushfire CRC Stakeholder and has initiated dialogue with researchers to address aspects of Dr Smith's recommendations.</p> <p>Project Proposal has been directed to AFAC and the Bushfire CRC for consideration at a national level</p> <p>In addition the Bushfire CRC / Swinburne University has, at the instigation of CFS, completed a report (authored by Alan Rhodes) for the State Coroner that partially addresses this. The report has been released to the Coroner.</p>	<b>Partially Complete</b> Ongoing dialogue with Bushfire CRC researchers to develop a research proposal that meets the intent of Dr Smith's recommendation.
<b>Dr S 4</b>	The State Emergency Management Committee (SEMC) review the effectiveness and appropriateness of programs to sustain individual and community commitment to being "bushfire ready",	<p>SEMC has established a Mitigation sub committee that will incorporate this into its Terms of Reference and agenda.</p> <p>Bushfire CRC Project C 7.1 "Evaluating Bushfire Community Education Programs" is also directly relevant to this recommendation. CFS is a Bushfire CRC Stakeholder and has initiated dialogue with researchers to address aspects of Dr Smith's recommendations.</p> <p>Through CFS, Swinburne University and the Bushfire CRC, Mr Alan Rhodes has conducted a survey and prepared a report on individual preparedness in relation to the Wangary bushfire. This has been provided to the coroner.</p> <p>In addition, the Minister for Emergency Services has endorsed the Terms of Reference for the Ministerial Review of Bushfire prevention and Mitigation Arrangements in SA. The TOR foreshadow changes to legislation, methods of engagement of stakeholders, consultation and planning structures, and audit processes. The Review Group has met twice and has undertaken to provide a report to the Minister by the end of June 2007.</p>	<b>Partially Complete</b>
<b>Dr S 5</b>	The CFS, in partnership with Local	The Minister for Emergency Services has endorsed the Terms of Reference for	<b>Partially Complete</b>

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	Government, examine the utility of developing a code of practice for the responsibilities of individuals, community and organisations in bushfire prevention and mitigation. If the exercise proved to be of benefit, the code of practice could be inserted, with the desired local conditions, into District Bushfire Prevention Plans.	the Ministerial Review of Bushfire prevention and Mitigation Arrangements in SA. The TOR foreshadow changes to legislation, methods of engagement of stakeholders, consultation and planning structures, and audit processes. The Review Group has met twice and has undertaken to provide a report to the Minister by the end of June 2007,	
<b>Dr S 6</b>	The CFS review the effectiveness of current auditing/monitoring activities associated with District Bushfire Prevention Plans in terms of delivering their goals and programs and the effectiveness of programs in enhancing bushfire prevention.	Linked to recommendations Dr S 1 and Dr S 2, CFS proposing to establish definitions and systems of assessment of preparedness of communities and District Councils (Project Vulcan).  The current audit tool has been in place for approximately 4 years and all DDPPs have been evaluated against it. CFS identified that the audit process was in need of review to encompass the entire bushfire prevention planning process and an amended audit process, based on AS/NZS ISO 19011:2003, will be developed in June 2006 for use in the 2006/07 Financial Year.  Previous audit process will be reviewed after Coronial Inquest	<b>Substantially Complete</b> Further discussion of Project Vulcan recommendations with SAMFS Chief Officer
<b>Dr S 7</b>	The Minister for Emergency Services commission a project to examine the effectiveness and appropriateness of current institutional and program arrangements for the regional development, delivery, performance and management of bushfire prevention and mitigation activities for South Australia. It is recommended the project be conducted in two stages: Stage 1: Develop an Issues Paper to: Explore the efficacy of current	The Minister for Emergency Services has endorsed the Terms of Reference for the Ministerial Review of Bushfire prevention and Mitigation Arrangements in SA. The TOR foreshadow changes to legislation, methods of engagement of stakeholders, consultation and planning structures, and audit processes. The Review Group has met twice and has undertaken to provide a report the Minister by the end of June 2007,	<b>Partially Complete</b>

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	institutional arrangements and delivery mechanisms for bushfire prevention and mitigation activities; Explore options to deliver enhanced bushfire prevention activities, taking into account the experiences of other States to strengthen bushfire protection incorporating new developments and legacies from past developments.  Stage 2: Following extensive community consultation on options raised in Issues Paper, the Government determine an appropriate response.		
<b>Dr S 8</b>	The CFS in association with National emergency service organisations and the Australian Insurance Council, give priority to finalizing a position paper of impacts on varying property insurance premiums subject to the insurer implementing agreed bushfire prevention activities.	Proposal for a meeting has been directed to AFAC and ICA. AFAC also requested to refer to the Community Safety Working Group for consideration. Further action not possible by CFS.  ICA have indicated that premiums are based on actuarial values and discussions with them have not resulted in an enthusiastic response to the approach suggested.  CFS continues to monitor individual arrangements in place with specific insurers.	<b>Substantially Complete</b>
<b>Dr S 9</b>	The CFS (Region 6) investigate and implement effective and appropriate arrangements for ensuring strategically located water resources are available to support initial response to bushfire on LEP.	Twelve additional fixed water points have been provided through funding by community groups including the freemasons.  These will be supplemented by privately owned and local government owned mobile bulk water carriers that will be casually engaged during periods of extreme fire danger.  SA Water will be engaged to ensure that appropriate plans and mitigation activities are undertaken around vulnerable parts of their infrastructure.	<b>Complete</b>

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		The proposed Bushfire PAR will see water supplies being prescribed for high risk new developments in the Bushfire Prone Area.  CFS is also providing large (18,000 l) CFS owned BWC's in certain areas.	
Dr S 10	The CFS as a matter of priority complete and distribute new map sets to Brigades in Region 6;	Maps completed for the eastern part (majority) and issued in December 2005. Map book launched by Minister on 8 <sup>th</sup> August 2006.	Complete
Dr S 11	The CFS (Region 6) incorporate into audit and monitoring programs checks that information and comprehensive contact details of organisations (for example, local government and private contractors) able to supply resources to fight bushfire are kept up-to-date;	Standardised Templates completed for GOMPs & ROMPS include contact details for contractors and local government.  This will also be included in Operational Audit process.  Meeting between CFS, DEH and local governments held prior to the 2006/07 fire season discussed liaison and resource sharing arrangements.	Complete
Dr S 12	The CFS (Region 6) enter into memorandum of understanding with local government for the use and conditions of use of their plant and equipment	A generic MOU has been developed between CFS and Local Government.  Letter from CO to RCs and to OLG and LGA sent out in October 2005 seeking revision of arrangements for Local Government plant and equipment.  Prior to the 2005/06 fire season, most Regions advised that this matter was covered by resource plans and local government plans.  CFS use the Department for Environment & Heritage (DEH) arrangements for the calling of expressions of interest for inclusion on a 'call when needed' list of plant including hire rates. The list of "approved" plant will be reviewed with DEH and information on local contractors exchanged at Regional level. If required, a further advertisement, calling for registration, will be done prior to Christmas.	<b>Partially Complete</b> Region 6 has liaised with all Councils across the Region; a 'in-principle' agreement has been reached with all Councils regarding the use of Council Plant. Some Council have indicated they wish to hold-off signing an MOU pending the outcomes of the Wangary Inquest.
Dr S 13	The CFS supplement current AIMS	Included in the 2006 (5 <sup>th</sup> edition) update of Operations management guidelines	Complete

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	Guidelines with the actions the IC should take to ensure that IMT is resourced not only to manage current bushfire but resourced to undertake the comprehensive assessment of known future risks which, if not addressed, could increase the unintended consequences through continuance of bushfire.	(refer to the planning officer checklist). Also included in the MIDAS decision-making process, which is also in the OMG's 5 <sup>th</sup> Edition.  In addition, substantial development work has occurred on a "Situation Analysis" process as recommended by Dr Smith. The process was trialed during the counter terrorism exercise Mercury 05. The new SITCHECK Situation Analysis process has been used on a number of occasions during the 2005/06 and the 2006/07 Fire Season.	SITCHECK is now part of our normal systems of work.
Dr S 14	The IMT should be continually reminded by prompts in the system to plan and resource for 'worst case scenario', not to assume the most likely outcome based on their experience of past outcomes in managing bushfire. It is expected that addressing the prompts will generate more appropriate and effective resourcing of IMT.	The SITCHECK situation analysis process has been developed to address this recommendation.  SITCHECK lesson has been delivered to all Regional Duty Officers and State Duty Officers.	<b>Complete</b> SITCHECK is now part of our normal systems of work.
Dr S 15	The CFS to assist the IMT develop a culture of comprehensive and unbiased risk assessment, build in authoritative 'devil's advocate' processes by RCC and SCC to ask the 'what if' questions for bushfire which have the potential to expand outside acceptable outcomes.	The SITCHECK situation analysis process has been developed to address this recommendation.	<b>Complete</b> SITCHECK is now part of our normal systems of work.
Dr S 16	The CFS implement a program for potential members of IMT's, from area where opportunities to obtain experience in fully functional IMT is limited, to gain experience in observing fully functioning IMT's. For	Two pre-planned Level 3 IMT's have been in place by mid November 2005.  Mentoring and "observing" opportunities will be explored as resources permit.  CFS is planning to adopt mentor guidelines produced by Dr Ann Darwin.	<b>Substantially Complete</b> Command & Leadership program established, pilot courses to be completed by 30 June 2007,

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	Illustration purposes volunteers willing to undertake IMT duties in LEP could be offered opportunities to observe/ participate on IMT's for major bushfire incidents in Adelaide Hills. Individual Certification in ICS needs to be supplemented by practice and application of the skills learnt.	ICS training has been facilitated through WA logistics and advanced incident management course; QFRS Command and Leadership course; CFS Eagle's Vision, and the CFS Level 3 Incident Management Team training.	
Dr S 17	The CFS review the criteria and timing of the parameters to be considered in setting and adjusting the level of preparedness, with the purpose of strengthening the alignment between levels of preparedness and risk factors.	System of colour-coded levels of preparedness has been reviewed and adjusted. This is reflected in the 5 <sup>th</sup> Edition of OMG's (page 31-35). In particular, specific guidance is provided to RCC's as to the actions required at various levels of preparedness.  During the fire season levels of preparedness are formally reviewed (part of the weekly weather teleconference agenda) at least weekly. Implementation required at Regional level is now much more explicit and Regional Duty officers have been trained in the system at the pre-season Duty Officer briefings.	Complete
Dr S 18	CFS re-endorse its commitment to comprehensively and consistently apply AIIIMS (ICS) to all bushfire incidents	Policy clearly outlined in SOP's and in updated Operations Management Guidelines.  Two pre-planned Level 3 IMT's have been in place since December 2005. By next fire season, two additional Level 3 IMT's, in the Lower South East and Murray-Mallee are planned. Also, each region will be required to have at least two pre-planned Level 2 IMT's.  CFS has also led discussions with SAPOL in an effort to have Police adopt an incident management system that is consistent with AIIIMS. Recent discussions at the AFAC Council meeting in August indicate that significant progress is occurring in this area.	Complete
Dr S 19	CFS, in addition to certifying competencies for personnel to apply the ICS, undertake large scale exercises, involving the three levels	In the last 4 years there has always been some form of pre-bushfire season exercise. This is normally sponsored by the State Emergency Management Committee and involves a variety of other agencies.	Complete Operation FireSAFE completed, this included exercises for Zone Emergency

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	of control and coordination to give personnel practice in applying a fully operational ICS.	Exercise "Operation Fire Safe 2006" was conducted in October and November 2006.  Ongoing annual State exercises will continue involve all three levels and other agencies in the future.  In the lead up to the 06/07 fire season, the focus was on exercising Zone Level operations through "Operation Fire Safe 2006".	Centres and the State Emergency Centre. Will be incorporated into annual preparedness program.
Dr S 20	The CFS clarify the chain of command, control and coordination functions and responsibilities which operate under ICS and for routine activities; in particular the roles, inter-relationships, responsibilities, and authorities of IMT, RCC and SCC.	Paper on Command, Control and Coordination (C3) has been prepared and disseminated to all CFS staff, and Regional Operations Planning Committees as well as other emergency services and the Dept of Justice. This is included in summary form in the Operations Management Guidelines. C3 was also included in the Operations update program.  Allan Hinge (from ADFA) was also engaged to address key CFS and SAFECOM staff about the history of Command and Control.	Complete
Dr S 21	The CFS adjust the duty statements of regional staff to reflect the actual roles and responsibilities of staff in chain of command and control and coordination functions in the discharge of routine functions (prevention, mitigation, preparedness and response) and when working under ICS.	PID Review is being negotiated with relevant staff through the employee consultative forum and SAFECOM HR.  Operational roles have been redefined and are included in the new PID's for Regional Commanders.	Substantially Complete Quarterly review with Director HR
Dr S 22	Please refer to the earlier recommendation on strengthening information sharing between decision makers and reliability of information and testing of the strategic awareness of IMT.	The SITCHECK process also allows for the IMT assumptions to be tested by the Region, and for the Region's assumptions to be tested by HQ's planning staff.  Information flow was also included in the pre fire season Operational Updates (including info on SITREPS and SIMEACS).  CFS CRIIMSON has resulted in a common information transfer platform	Complete

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		between key CFS locations and HQ's.	
<b>Dr S 23</b>	The CFS, through SEMC, continue to support the "Stay and Defend or Leave Early" policy and work with all emergency agencies to ensure consistent application.	SEMC adopted "Stay or Go" as part of a SEMC policy on evacuation at the 7 October 2005 meeting.  CFS with other SEMC agencies, re-issued a pocket guide for Police and Emergency Services in November 2005 and 2006. This has had wide distribution (over 20,000 copies) to all CFS officers and to operational Police and other agencies.  AFAC has recently revised its presentation of the policy. This revised wording (there is no change to the policy – it is just set out more clearly) has been endorsed by the SAFECOM Board.	<b>Complete</b>
<b>Dr S 24</b>	The State Emergency Management Committee continue to give high priority to completing and implementing an effective bushfire warning system for SA which is consistent with National Standards.	SEMC noted and endorsed a revised SA Bushfire Information and Warning System tabled by CFS at the 7 October 2005 meeting.  CFS has, on behalf of AFAC (Australasian Fire Authorities Council), prepared a discussion paper, with recommendations based on the South Australian system, for a national system of bushfire warnings. This is being considered by AFAC member agencies and stakeholders in the COAG Bushfire Inquiry. This paper will be considered at the May 2006 meeting of AFAC Council.  SA agencies are also considering a proposal by Telstra for a Community Information and Warning System.	<b>Substantially Complete</b>
<b>Dr S 25</b>	The CFS develop contractual frameworks which could be used to engage regionally based aerial services, with the requirement for extensive local knowledge, to provide bushfire surveillance/intelligence services during the bushfire season	Call when needed contract has been developed for negotiation with private aircraft owners. Regional Commanders and the Aviation Manager will be responsible for identifying such owners and initiating contract negotiations.  Extensive discussions have been conducted with Kevin Warren who has had the contract discussed with him. Mr Warren has chosen not to enter into a contract but continues to offer his services as a "volunteer" and to self-respond.  Complete agreements and incorporate list of CWN operators into Regional Operations Management Plans by November 2006.	<b>Partially Complete</b> Ongoing process.

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<b>Dr S 26</b>	The CFS review the utility and efficacy of contracting the use of locally based aircraft capable of undertaking water bombing, benchmarked against current centrally located water bombing services, particularly to cover initial response.	Extended contract arrangements with AMR (which have been made possible due to additional government funding) has resulted in two fixed wing AMR contract fire bombers being allocated to the Lower Eyre Peninsula. As part of his arrangement a primary bomber response zone has been delineated on the Eyre Peninsula.  Research and analyse use of locally based aircraft against AMR contracted aircraft will be investigated with Bushfire CRC and the National Aerial Firefighting Centre.  Comparative firebombing drop trial to be undertaken in mid-2006. Basic measurement criteria will be developed with Bushfire CRC. Post trial evaluation will be taken into consideration in future contract and CWN considerations.  Draft report has been circulated by Bushfire CRC in August 2006. This report needs to be analysed in comparison with this recommendation.	<b>Partially Complete</b> Ongoing process.
<b>Dr S 27</b>	The CFS, subject to positive assessment of work in Recommendation (ii), trial the implementation of these contracts for the provision of aerial surveillance services during the 2005/6 Bushfire Season for the Eyre Peninsula.	Casual arrangements for aerial observation will be used for the 06/07 fire season. It is intended to go to Regional tenders for this service prior to the 07/08 fire season.  A trial using Kevin Warren's aircraft for initial attack aerial observation was implemented for 2005/06. Mr Warren has been provided with a portable GRN radio to facilitate communication with CFS crews. Mr Warren's aircraft were used on a number of occasions in 05/06.  Mr Warren is reluctant to make any formal arrangement for this service.  Elsewhere, existing arrangements of a Regional register of pilots and aircraft companies who offer this service will be ratified.  Also refer to extended AMR contract as per item Dr S 26 (above).	<b>Substantially Complete</b>
<b>Dr S 28</b>	The CFS examine and communicate	There was extensive dialogue and negotiation with community representatives	<b>Partially Complete</b>

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	to the community the utility/practicality (eg in terms of benefits, liability, operational aspects) of entering into contracts for the provision of aerial bushfire surveillance and intelligence, with the aircraft concurrently performing water bombing activities as a private fighting unit.	during 2005. This included a proposal that the community purchase firebombing aircraft. The conclusion of these negotiations has been to support the extension of the AMR fixed wing firebombing contract to the Lower Eyre Peninsula.  Further communication with the community will depend on the outcome of various trials and demonstrations referred to above (see Dr S 26) and feedback post fire season.  CFS continues to engage with NAFC and the Bushfire CRC on these issues.	Ongoing review
<b>Dr S 29</b>	The CFS, with the purpose of strengthening the community's uptake of the "Stay and Defend or Leave Early" evacuation, utilize case studies on how to avoid having to use roads with burning vegetation for evacuation.	A specific part of the 2006/07 fire season communication strategy will highlight the risks and recommended actions in relation to use of roads during a bushfire.  Case studies, in respect of the risks of late evacuation (including the risks associated with use of roads in bushfires) will be developed following the completion of the Coronial Inquest. In the mean time during mid 2006 anecdotal evidence of road fire fatalities from Ash Wednesday, the 2003 Canberra fires, the 2005 Wangary fire and the 2006 Grampians fire will be communicated to Volunteers and general public via CFS media campaign.	<b>Substantially Complete</b> Review following completion of the Coronial
<b>Dr S 30</b>	Evacuation. No recommendations are made on the basis that an appropriate policy position is well advanced and is expected to be implemented in the near future.	Approved by SEMC on 7/10/2005.	<b>Complete</b>
<b>Dr S 31</b>	The State Emergency Management Committee review the performance of whole of government model, with leadership by SA Minister acting as Cabinet, with the view of incorporating the disaster recovery model into disaster recovery systems for South Australia.	Recovery report tabled at October SEMC meeting. SEMC to consider this recommendation at November meeting.  The decision as to a Minister acting for Cabinet in such situations has been recognised by the Emergency Management Council.  Ultimately this is a decision for Cabinet or the Premier.	<b>Complete</b>

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<b>Dr S 32</b>	The CFS incorporate into performance management system, criteria to measure the effectiveness of training and on-ground performance of required competencies during major bushfire events.	This is one of the functions of a Regional Duty Officer when they go forward to an incident (but not as a member of an IMT).  CFS is in the process of changing the duties of a State training Officer to have primary responsibility for training in bushfires suppression management.  Proposal under consideration, subject to resourcing available.  "Expert" working group Terms of Reference formed and bushfire fighting methods to be reinforced.  It is also being proposed that a series of basic "drills" be developed that reinforce good basic firefighting practice. These drills may evolve into a new series of activities for the CFS Competitions.	<b>Substantially Complete</b> Ongoing process. Issues identified by working party have been addressed through introduction of Suppress Wildfire Course.
<b>Dr S 33</b>	The CFS review the effectiveness of current training and on-ground practice systems, in particular the basic fire fighting skills training, to more effectively meet the diversity of cultural dimensions of volunteers.	"Expert" working group Terms of Reference formed and bushfire fighting methods and supervision techniques to be reinforced.  Once a CFS wide "standard" is developed CFS will undertake a gap analysis of Natural Environments training and then develop a plan to meet those needs.  It is also being proposed that a series of basic "drills" be developed that reinforce good basic firefighting practice. These drills may evolve into a new series of activities for the CFS Competitions.	<b>Partially Complete</b> Ongoing process Issues identified by working party have been addressed through introduction of Suppress Wildfire Course.
<b>Dr S 34</b>	The Wangary Bushfire has highlighted the importance of further developing and implementing systems for the better working of farm fire units into the community's response to bushfire mitigation management activities.	Best practice guidelines have been developed. Working party with SAFF formed and the package trialed in a number of locations over the 2005/06 fire season.  During mid 2006 the package was reviewed in conjunction with SAFF.  The amended package has now been circulated to all regions for dissemination to brigades and groups prior to the 2006/07 fire season. The package was released and publicly launched by the Minister in late 2006.	<b>Complete</b> Will undergo post implementation review.
<b>Dr S 35</b>	The CFS undertake a study to review	CFS conducted a Volunteer Recruitment and Retention Summit on 1-2 July	<b>Partially Complete</b>

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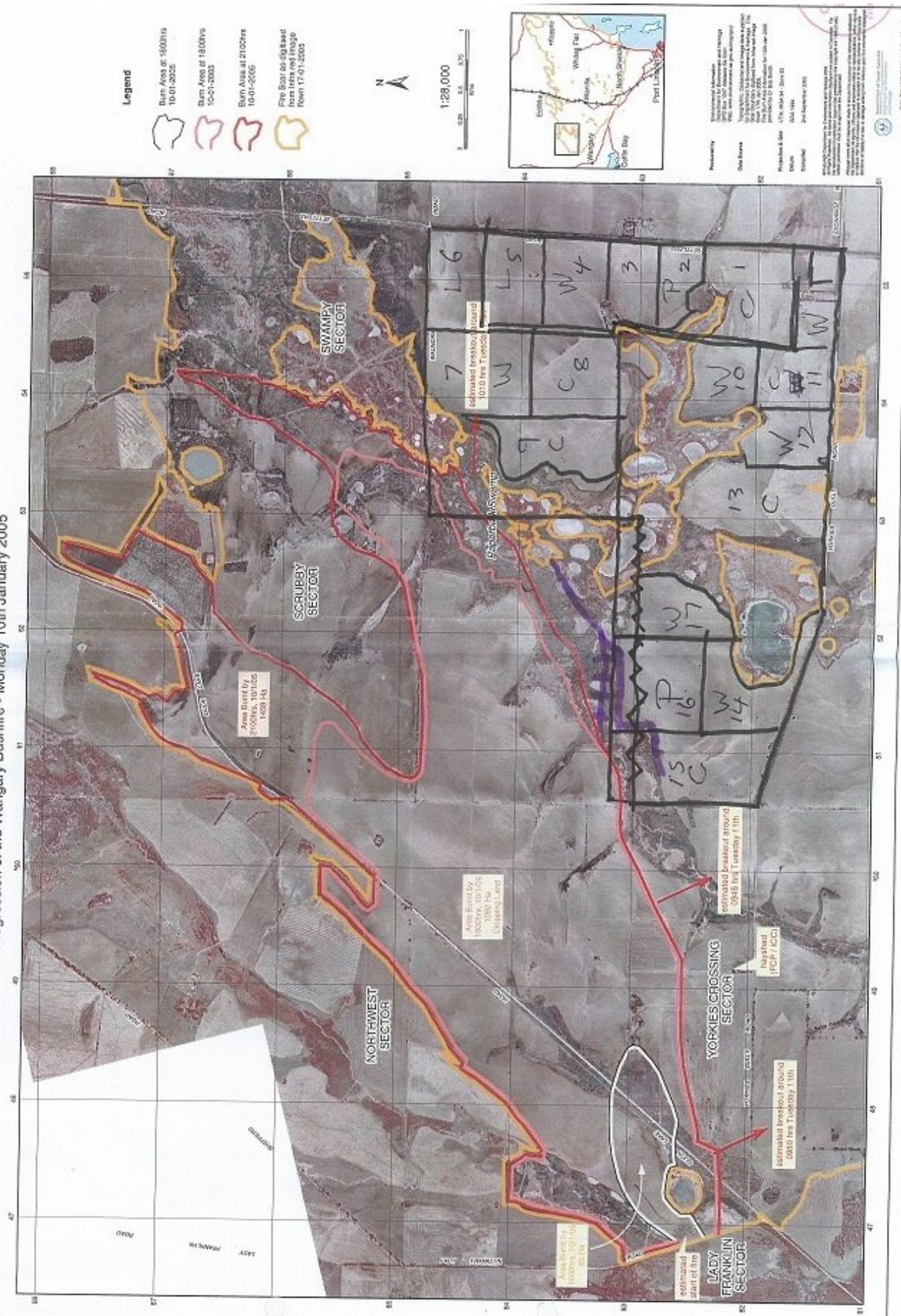
	the strategic factors which will challenge the sustainability of the CFS and recommend actions to address challenges.	<p>2006 to canvass ideas and solutions to the challenges facing CFS volunteers and volunteerism. The recommendations from this Summit will be assessed by the Chief Officer's Advisory Council for future incorporation into the CFS business plan.</p> <p>In addition, at a national level, a number of research programs, both via the Bushfire CRC and through local research institutions (UniSa — CFS research programs), are undertaking research into aspects of volunteering.</p>	Ongoing Process.
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ANNEXURE C – Exhibit C176b









## **ANNEXURE E – Sitting Dates**

### **October 2005**

5<sup>th</sup> day of October 2005

### **November 2005**

3<sup>rd</sup> day of November 2005

22<sup>nd</sup> to 25<sup>th</sup> days of November 2005

28<sup>th</sup> to 30<sup>th</sup> days of November 2005

### **December 2005**

1<sup>st</sup> and 2<sup>nd</sup> days of December 2005

5<sup>th</sup> to 9<sup>th</sup> days of December 2005

12<sup>th</sup> and 13<sup>th</sup> days of December 2005

15<sup>th</sup> and 16<sup>th</sup> days of December 2005

### **January 2006**

16<sup>th</sup> to 20<sup>th</sup> days of January 2006

23<sup>rd</sup> to 25<sup>th</sup> days of January 2006

27<sup>th</sup> day of January 2006

30<sup>th</sup> and 31<sup>st</sup> days of January 2006

### **February 2006**

1<sup>st</sup> to 3<sup>rd</sup> days of February 2006

6<sup>th</sup> to 10<sup>th</sup> days of February 2006

13<sup>th</sup> to 16<sup>th</sup> days of February 2006

20<sup>th</sup> to 24<sup>th</sup> days of February 2006

27<sup>th</sup> and 28<sup>th</sup> days of February 2006

### **March 2006**

1<sup>st</sup> and 2<sup>nd</sup> days of March 2006

14<sup>th</sup>, to 17<sup>th</sup> days of March 2006

20<sup>th</sup> to 24<sup>th</sup> days of March 2006

27<sup>th</sup> to 31<sup>st</sup> days of March 2006

### **April 2006**

3<sup>rd</sup> to 7<sup>th</sup> days of April 2006

10<sup>th</sup> to 13<sup>th</sup> days of April 2006

19<sup>th</sup> day of April 2006

24<sup>th</sup> day of April 2006

26<sup>th</sup> to 28<sup>th</sup> days of April 2006

### **May 2006**

1<sup>st</sup> to 5<sup>th</sup> days of May 2006

8<sup>th</sup> to 12<sup>th</sup> days of May 2006

15<sup>th</sup> to 19<sup>th</sup> days of May 2006

22<sup>nd</sup> to 26<sup>th</sup> days of May 2006

29<sup>th</sup> to 31<sup>st</sup> days of May 2006

### **June 2006**

1<sup>st</sup> and 2<sup>nd</sup> days of June 2006

5<sup>th</sup> to 9<sup>th</sup> days of June 2006

13<sup>th</sup> to 16<sup>th</sup> days of June 2006

19<sup>th</sup> to 23<sup>rd</sup> days of June 2006

26<sup>th</sup> to 30<sup>th</sup> days of June 2006

### **July 2006**

3<sup>rd</sup> to 5<sup>th</sup> days of July 2006

7<sup>th</sup> day of July 2006

17<sup>th</sup> to 21<sup>st</sup> days of July 2006

24<sup>th</sup> to 27<sup>th</sup> days of July 2006

31<sup>st</sup> day of July 2006

### **August 2006**

1<sup>st</sup> to 3<sup>rd</sup> days of August 2006

7<sup>th</sup> to 11<sup>th</sup> days of August 2006

14<sup>th</sup> to 17<sup>th</sup> days of August 2006

21<sup>st</sup> day of August 2006

28<sup>th</sup> day of August 2006

30<sup>th</sup> and 31<sup>st</sup> days of August 2006

**September 2006**

4<sup>th</sup> to 7<sup>th</sup> days of September 2006

18<sup>th</sup> to 22<sup>nd</sup> days of September 2006

27<sup>th</sup> to 29<sup>th</sup> days of September 2006

**October 2006**

3<sup>rd</sup> to 5<sup>th</sup> days of October 2006

12<sup>th</sup> and 13<sup>th</sup> days of October 2006

16<sup>th</sup> to 20<sup>th</sup> days of October 2006

23<sup>rd</sup> to 26<sup>th</sup> days of October 2006

30<sup>th</sup> and 31<sup>st</sup> days of October 2006

**November 2006**

1<sup>st</sup> to 3<sup>rd</sup> days of November 2006

6<sup>th</sup> to 10<sup>th</sup> days of November 2006

17<sup>th</sup> day of November 2006

20<sup>th</sup> to 24<sup>th</sup> days of November 2006

27<sup>th</sup> day of November 2006

**December 2006**

8<sup>th</sup> day of December 2006

13<sup>th</sup> day of December 2006

18<sup>th</sup> to 20<sup>th</sup> days of December 2006

**January 2007**

24<sup>th</sup> day of January 2007

29<sup>th</sup> and 30<sup>th</sup> days of January 2007

**February 2007**

1<sup>st</sup> day of February 2007

7<sup>th</sup> and 8<sup>th</sup> days of February 2007

21<sup>st</sup> day of February 2007

26<sup>th</sup> to 28<sup>th</sup> days of February 2007

**March 2007**

2<sup>nd</sup> day of March 2007

23<sup>rd</sup> day of March 2007

**April 2007**

2<sup>nd</sup> day of April 2007

10<sup>th</sup> to 12<sup>th</sup> days of April 2007

17<sup>th</sup> to 20<sup>th</sup> days of April 2007

23<sup>rd</sup> and 24<sup>th</sup> days of April 2007

26<sup>th</sup> and 27<sup>th</sup> days of April 2007

30<sup>th</sup> day of April 2007

**May 2007**

1<sup>st</sup> to 4<sup>th</sup> days of May 2007

7<sup>th</sup> and 8<sup>th</sup> days of May 2007

## **ANNEXURE F – Glossary of Terms**

<b>14 appliance</b>	A 4 wheel drive CFS fire fighting appliance which has the capacity to hold 1,000L of water. This size appliance is also used by the Department of Environment and Heritage for its appliances.
<b>24 appliance</b>	A 4 wheel drive CFS fire fighting appliance which has the capacity to hold 2,000L of water. This is the most common appliance utilised by the CFS.
<b>34 appliance</b>	A 4 wheel drive CFS fire fighting appliance which has the capacity to hold 3,000L of water.
<b>Aerial surveillance</b>	The utilisation of aircraft to provide information on the fire location and behaviour to crews fighting the fire on the ground.
<b>AIIMS</b>	Australasian Inter-service Incident Management System. This is the system utilised by the CFS for managing all incidents.
<b>Air tractor</b>	An agricultural aircraft with a turbo prop engine and bomb bay doors used for crop dusting. The CFS has a contract with Australian Maritime Resources to use these type of aircraft for water bombing during the fire danger season. The air tractor has a capacity of around 3,000L in its tank.
<b>Area A</b>	A section of Mr Peter Cabot's property immediately south of Warunda Road and east of Settlers Road. The area goes down to the isthmus of paperbark swamp which extrudes in a easterly direction into the paddocks. The area consisted of canola stubble, wheat stubble and lupin stubble paddocks <sup>1117</sup> .
<b>Area B</b>	A section of Mr Peter Cabot's property immediately south of Area A underneath the swamp isthmus. It's southern boundary is Yorkies Gully Road, the eastern boundary is Settlers Road, and its western boundary is the southerly swamp extrusion which adjoins the large lake <sup>1118</sup> .

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<sup>1117</sup> Refer to Exhibit C176b

<sup>1118</sup> Refer to Exhibit C176b

<b>Area C</b>	A section of Mr Peter Cabot's and Mr Christopher Hull's properties. It consists of the paddocks immediately south of the paperbark swamp and to the east of the swamp extrusion that is the western border of Area B. The southern boundary of the area is Yorkies Gully Road. This area was made up of wheat and canola stubble <sup>1119</sup> .
<b>Area D</b>	A section of Mr Christopher Hull's property immediately to the north of Yorkies Gully Road on the western side of the paperbark swamp. It's western boundary is Duck Lake Road and the area consisted of canola, lupin and oat paddocks <sup>1120</sup> .
<b>AWS</b>	Automatic Weather Station. An automated weather station that records weather measurements including temperature, wind speed and direction, humidity and pressure. On the Lower Eyre Peninsula there are two AWS that provided weather information for the fireground, located at Coles Point and Port Lincoln.
<b>Backburn</b>	A fire started intentionally along the inner edge of a fireline to consume the fuel in the path of a bushfire <sup>1121</sup> .
<b>Blacking out</b>	'To systematically work the entire area of a fire for a defined distance in from the edge/control line to ensure it is a safe incident', <sup>1122</sup> .
<b>Bulldozer</b>	A caterpillar tracked tractor with a one large wide blade.
<b>Canola</b>	A variant of the ancient crop rapeseed and grown for its seed which is used to for oils. Canola was grown extensively in the area of the initial bushfire. Canola is generally considered difficult to ignite but once it has successfully taken fire will burn quite fiercely.
<b>Canopy</b>	The upper foliage of trees.

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<sup>1119</sup> Refer to Exhibit C176b

<sup>1120</sup> Refer to Exhibit C176b

<sup>1121</sup> Refer to Exhibit C204, Glossary

<sup>1122</sup> Refer to Exhibit C204, Glossary



<b>Catalytic converter</b>	A device used to reduce the toxicity of exhaust emissions from vehicle engines.
<b>Cereal crops</b>	Annual plants that only yield one harvest. Most cereal crops are grasses grown for either their grain or their seed. The cereal crops predominantly grown on the Lower Eyre Peninsula include wheat, oat and barley.
<b>CFS</b>	SA Country Fire Service. This is the volunteer based fire service in South Australia.
<b>Cottage paddock</b>	A paddock on the eastern side of Duck Lake Road owned by Mr John Giddings. It has an old abandoned cottage within it <sup>1123</sup> .
<b>CRIIMSON</b>	The CFS online form system which has been created post the Wangary fire. This system allows users to view the CFS standard management forms that are utilised during an incident.
<b>Crowning</b>	A fire which is moving through the crowns (tops) of trees or shrubs. Normally a very fierce and quick moving fire and can be moving independently of the fire on the surface.
<b>Dew point temperature</b>	The measure of the moisture content of the air and is the temperature at which air must be cooled in order for dew to form <sup>1124</sup> .
<b>Disc plough</b>	A farm plough that cuts the soil by inclined discs. This machinery can be used in a fire situation to plough the soil and create breaks in paddocks.
<b>Dry Slot</b>	Columns of super dry air at high altitude that when they descend to ground level can cause a rapid loss of relative humidity and strong gusty winds.
<b>Embers</b>	Small, glowing, smouldering particles of material from a dying fire.

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<sup>1123</sup> Refer to Exhibit C176b

<sup>1124</sup> Glossary of Terms, Bureau of Meteorology Website

<b>Excavator</b>	A digging machine consisting of a backhoe atop a carriage of either tracks or wheels.
<b>Farm fire unit</b>	Equipment or machinery used by a private individual to help suppress a fire. Generally these are farm utes with a small water tank, pump and hose on the back tray.
<b>FDI</b>	Fire danger index. ‘A relative number denoting an evaluation of rate of spread, or suppression difficulty for specific combinations of fuel, fuel moisture, temperature, humidity and wind speed’ <sup>1125</sup> .
<b>Flanking fire</b>	Fire that is travelling roughly parallel to the direction of the main fire spread.
<b>Fire spread pattern</b>	An analysis of the fireground after a fire undertaken by looking at various indicators, including topography, wind and fuel loads, and then subsequently plotting the spread pattern that the fire has followed.
<b>GFDI</b>	Grassland Fire Danger Index. See definition for FDI above.
<b>Grader</b>	A piece of machinery used normally to grade roads.
<b>GRN</b>	South Australian Government Radio Network. This network is the trunk network used by all emergency service agencies in the State.
<b>Ground truthing</b>	The undertaking of a ground survey to confirm findings of an aerial survey or aerial observations.
<b>Head fire</b>	The side of a fire that has the fastest rate of spread, generally following the direction of the prevailing winds.
<b>Hundred line</b>	A strip of land used as the division between two Hundreds of land. It is normally a natural strip of land with fencing on either side. The relevant Hundred line in this fire was running generally north/south dissecting Yorkies Gully Road and was the boundary between the properties of Mr Peter Cabot and Mr Christopher Hull.

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<sup>1125</sup> Refer to Exhibit C204, Glossary

<b>ICC</b>	Incident Control Centre. The location at which the Incident Management Team are positioned and are managing the fire from.
<b>IMT</b>	Incident Management Team. ‘The group of incident management personnel comprising the Incident Controller, and the personnel he or she appoints to be responsible for the functions of Operations, Planning and Logistics’ <sup>1126</sup> .
<b>Lay flat hose</b>	A 30 metre in length canvas hose that is light to carry and can be coupled with other hoses to enable firefighters to create very long lengths of hose that they can still carry.
<b>Lupin</b>	A winter growing pulse or grain legume crop which normally grows to about 80cm high.
<b>MFS</b>	Metropolitan Fire Service. The paid fire service in South Australia.
<b>Minister, the</b>	The Minister for Emergency Services, Hon Carmel Zollo MLC. The Minister with statutory responsibility for the Country Fire Service. At the time of the fire the Minister for Emergency Services was the Hon Patrick Conlon MP.
<b>Muffler</b>	A device consisting of a series of baffles attached to the exhaust of a motor vehicle engine designed to reduce noise emissions from the vehicle.
<b>Paperbark</b>	Melaleuca viridiflora - A small scraggly tree that grows well in heavy clay in swamps. Its bark is in papery layers and generally grows to about 10 feet in height. The paperbark tree burns very hot during fires and has a tendency to throw hot embers.
<b>Rake hoe</b>	A firefighter’s hand tool. It consists of both a rake and a hoe and is used to manually turn over burning material and to clear ground to make a fire break.

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<sup>1126</sup> Refer to Exhibit C204, Glossary

<b>Rate of spread</b>	‘The progress of fire expressed as a unit of time over a distance’ <sup>1127</sup> .
<b>Relative humidity</b>	‘The amount of water vapour in a given volume of air, expressed as a percentage of the maximum amount of water vapour the air can hold at that temperature’ <sup>1128</sup> .
<b>Samphire</b>	A common name for a variety of different succulent plants that grow in coastal areas and swamps. These plants do not tend to burn readily in a fire.
<b>SAPOL</b>	South Australia Police.
<b>SES</b>	State Emergency Service. The volunteer emergency service agency in South Australia.
<b>SITREP</b>	A report provided on an incident by a CFS member. The acronym ‘SitReps’ stands for Situation, Impacts, Tactics, Resources, External Agencies, Problems and Safety. Under the Chief Officer’s Standing Orders <sup>1129</sup> , a SitRep must be provided within five minutes of arrival at an incident and every 30 minutes following.
<b>Spotting</b>	Sparks or embers from a fire that are carried by the prevailing winds and which start new fires beyond the perimeter of the main fire.
<b>Stay or Go</b>	A CFS policy in relation to whether an occupant stays and defends their property from fire, or leaves their property early and is out of the area before the fire comes through.
<b>Strike team</b>	A deployment of appliances from an area outside of their own group area. A strike team normally consists of five appliances and a command vehicle.
<b>Stubble</b>	The short stalks or remnants of a crop left in a paddock after it has been harvested.

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<sup>1127</sup> Refer to Exhibit C204, Glossary

<b>Sugar gum</b>	Eucalyptus cladocalyx – A tree with all main branches having their own canopy. The tree burns fiercely in fires and some can create a candling effect by burning from within. These trees can throw embers some considerable distance. There was a section of sugar gums that this Inquest focussed on which were at the junction of Duck Lake Road and Yorkies Gully Road.
<b>Swamp</b>	A wetland that contains areas of shallow water, many different succulent plants and trees and numerous dry land protrusions. In South Australia the swamps are often barren of water but the ground remains boggy and sinks underfoot.
<b>Swamp tea tree</b>	Another name used to describe Melaleuca shrubs during the inquest. See definition for paperbark tree above.
<b>UHF</b>	Ultra high frequency is a band of radio waves. CFS used this band for communicating from truck to base, and also for communicating with other agencies. This has been superseded by the introduction of the GRN, but it is still used by CFS in some instances. This radio band is the one generally used by farmers and community members to communicate with CFS during a fire.
<b>VHF</b>	Very high frequency is a lower band of radio waves than UHF and is utilised by the CFS for truck to truck shorter style communications.
<b>Water tanker</b>	A vehicle with a capacity to hold over 4,000L of water and which is used to refill appliances.
<b>Wind farm</b>	A collection of wind turbines that generate wind powered electricity.
<b>Windrow</b>	A row of cut crops that is normally left to dry before being baled or combined. It is also the build up of material left on the edge of a break put in by earth clearing equipment such as a bulldozer or blade tractor.

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<sup>1128</sup> Refer to Exhibit C204, Glossary

<sup>1129</sup> Exhibit C204