IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: 2009 / 1498

FINDING INTO FIRE WITHOUT INQUEST

Form 40 Rule 61(2)
Section 68 of the ***Coroners Act 2008***

I, Judge Ian L. Gray, State Coroner having investigated the fire at Murrindindi, Victoria

without holding an inquest find that the fire occurred between 7 February and 5 March 2009

and find the cause and origin of the fire was: failed electrical assets between poles 5 (11525) and 6 (11526) on Wilhelmina Falls Road, Murrindindi, Victoria

in the following circumstances:

1. The Murrindindi fire of 7 February 2009 started at about 2.45pm in extreme fire danger conditions. The Murrindindi fire started to the west of Wilhelmina Falls Road and just to the north of the old Murrindindi Sawmill (the Sawmill), in Murrindindi, approximately 100kms north-east of Melbourne.

2. On 7 February 2009, between 11:58am and 12:24pm, five customers reported power outages to AusNet. The power outages were attributed to the Murrindindi feeder. Shortly after 12.00pm, AusNet technicians received a call-out to attend the Murrindindi South Isolating Substation on the Murrindindi Spur line, located on Wilhelmina Falls Road. They were tasked to identify the reason for the power outage and to conduct maintenance works to restore power.

3. At approximately 1:45pm, the technicians, Paul Lewis and Glen Johnstone, arrived at the isolating transformer, near the intersection of Banbury Road and Wilhelmina Falls Road. They ascertained that the fault was beyond the transformer and used a telescopic high

voltage stick to isolate the line by opening the Auto Circuit Re-closer.[1] They then travelled to the Sawmill zone sub-station, further along Wilhelmina Falls Road. They also attended at pole 7A (20530), located adjacent to the sub-station, and observed that one of the Boric Acid fuses on the 22kV line (red phase) was hanging down.[2] After advising the Network Operations Centre (NOC), the technicians were advised to patrol the rest of the Single-wire Earth Return (SWER) lines to locate the fault.

4. At approximately 2.40pm, the technicians completed their patrol of the SWER lines south along Wilhelmina Falls Road, Marginal Road and the surrounding area however were unable to locate any fault. They returned to the Murrindindi zone sub-station and to pole 7A (20530), and re-instated the Boric Acid fuse on pole 7A (20530) and subsequently re-energised the line.[3] Mr Johnstone recorded the time as 2:45pm in the Actual On-time field in the FIF form.[4] They packed their equipment into their vehicle and as they were driving through the Sawmill compound, they attempted to contact the NOC again, using a combination of telephone and TMR radio.

5. At 2:45pm, local resident Dr David Ross was present at his home in Marginal Road, Murrindindi, when the power to his house returned. He noted the time on his watch and then walked from his house to the shed and turned off his generator. He then returned to the house and noticed that his power had gone off again. The resident calculated that this was approximately 37 seconds after the power had come back on. After approximately a further 30 seconds, the resident walked to his verandah and noticed smoke from the vicinity of the Sawmill.[5]

6. At approximately 2:45pm, about 15 minutes after arriving at the Murrindindi Scenic Reserve to go swimming at the river, Ian Robinson heard two bangs coming from the north-west. Mr Robinson noticed that the wind was particularly strong and was coming from the north-east. He observed that some branches had fallen from nearby tress so he decided to pack up and leave the area. A short while later he noticed smoke.[6]

7. At 2:45.06pm, Ronald Philpott, who was the Captain of the local Murrindindi CFA and was also at his house in Wilhelmina Falls Road, concluded a telephone call and, shortly

[1] LEWIS, Paul – SP AusNet - Statement dated December 2011, page 12, para 36.
[2] Ibid.
[3] JOHNSTONE, Glen – SP AusNet - Statement dated December 2011.
[4] JOHNSTONE, Glen – SP AusNet - Statement dated December 2011, page 30 , para 48.
[5] ROSS, Dr David - Statement dated 18/06/2009, page 2 , para 6
[6] ROBINSON, Ian - Statement dated 17/2/2009, page 3, para 27-36

afterwards, noticed that his power went off.[7] Unlike Dr Ross, his power had been on all morning. Mr Philpott made himself a sandwich and went back to the river to re-join friends there. Shortly after arriving back at the river, Mr Philpott smelled smoke. He immediately ran to his vehicle and drove along Wilhelmina Falls Road towards the Sawmill.

8. Patricia Mitchell, also a local resident, was outside in her vegetable garden when she heard two loud bangs within ten seconds of each other and then nothing. She described the bangs as sounding like steel being hit by metal. She went inside and told her husband, Leonard, who had also heard the two noises. Patricia also noted that the power went off around the time the fire started.[8]

9. Leonard described the noises as 'something banging in the wind at the old Murrindindi Saw Mill'.[9] He got up and looked out of the lounge room window and saw smoke. He stated *"There wasn't a lot at first. I could see it as I looked NNW towards the mill. It was low to the ground and on the RHS of the old mill. I believe it was on the roadside."*[10]

10. In a later statement, Leonard stated, *"In my first statement I mention hearing two noises on page 1. I can say that I heard these noises about 15 or 20 minutes before I saw the smoke and made the 000 call at 14:56.32 seconds. It may have been 10 minutes but it is about that period".*[11]

11. At approximately 2:48pm, Anthony La Grutta drove his blue Ford utility south along Wilhelmina Falls Road, towards the Murrindindi Scenic Reserve, to meet with friends. He drove past the hay shed and silo, and then past the stand of mature trees on the western roadside verge. At this time, Mr La Grutta observed fire along the western fence line and opined that the fire was in its early stages. He noticed that there was very little smoke and that the flames were as high as the fence. He further described the fire as being in three separate sections, burning over a distance of about fifty metres in total, all underneath the fence line. Mr La Grutta stated that there was no fire in the roadside reserve and no fire in the paddock, only along the fence line. He did not see any other persons or pass any vehicles whilst travelling along Wilhelmina Falls Road.[12]

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[7] PHILPOTT, Ronald – Interview dated 27/06/2011.
[8] MITCHELL, Patricia - Statement dated 14/02/2009, pages 1 and 3.
[9] MITCHELL, Albert Leonard - Statement dated 14/2/2009.
[10] Ibid.
[11] MITCHELL, Albert Leonard - Statement dated 01/06/2010, page 2.
[12] La GRUTTA, Anthony – Statement dated 22/02/2009, page 4.

12. Mr La Grutta believed he had no telephone service, so he continued travelling to the Murrindindi Scenic Reserve to alert his friends to the fire. As he continued south along Wilhelmina Falls Road, he passed the technicians, who were seated in their vehicle just inside the gate of the Sawmill compound.

13. At approximately 2.48pm, the technicians observed Mr La Grutta's car drive past the Sawmill. They saw what they believed was smoke coming from the vehicle's location and turned their vehicle to face the direction that the smoke was coming from, which was north of their location, on the grassy roadside verge on the western side of Wilhelmina Falls Road. They immediately attempted to contact their supervisor to report a fire.

14. At 2.55pm, the fire was also identified by the (then) Department of Sustainability and Environment (DSE) fire tower operator at Mt Despair, who saw smoke about five kilometres north-north-west of the Sawmill in Wilhelmina Falls Road. The fire tower operator saw the Murrindindi fire move quickly to the south along the western side of the road and alerted the Country Fire Authority (CFA) and DSE.

15. At the same time, Mr Philpott, who was driving along the Wilhelmina Falls Road to the Sawmill to investigate the smoke, used his UHF Radio to report the fire to the CFA Communications Operator, identifying himself as the Murrindindi CFA Captain and stating, *"we have a fire at the Old Mill. It's ... getting into dry grass and heading for the trees and we need help immediately."*[13]

16. Fanned by strong winds and in low humidity, and assisted by the extreme drought-like conditions, the fire front travelled quickly in a south-westerly direction. By 2:59pm, the fire front reached the abandoned structure of the Sawmill. Fire Tower Observers noted that the smoke changed colour from white-blue to black, indicating that the Mill building had commenced burning.

17. Just after 3.00pm, Mr Philpott drove south towards the Sawmill from where he had seen tyre marks on Wilhelmina Falls Road.[14] As he passed power pole 5 (11525), he observed a powerline (conductor) between power poles 5 and 6 (11526) had broken/fallen and was laying flat across the road and over a fence, into a paddock to the western side of the road

[13] JOYCE, Janice - Communications Officer, Glenburn CFA - Statement dated 19/03/2009, page 2.
[14] Mr Philpott had concluded at this stage that the fire had commenced at the point of the tyre mark, as the land to the west was blackened and burnt but the land to the north and east was untouched. At that time, Mr Philpott believed the fire was deliberately lit.

near the point of origin of the fire. The conductor originated from the power pole located further west in the paddock. Mr Philpott was the first person to notice the fallen conductor.

18. The CFA attended Wilhelmina Falls Road shortly thereafter and commenced attempts to control the fire and to attempt to evacuate people from the Murrindindi Scenic Reserve and the Water Gauge camping area. At 3:04pm, all local CFA volunteers were paged, advising of the fire at Murrindindi.

19. At approximately 3:05pm, Mr Lewis noticed the fallen conductor laying across Wilhelmina Falls Road and in the grassy paddock to the west of the road. Mr Johnstone placed witches hats around the conductor as a safety precaution to alert others of its presence on the road.[15] Mr Lewis, stated:

    I assumed the conductor wasn't energised. I don't recall conducting any tests on the fallen conductor. I can't recall whether I spoke to anyone else at the time regarding the conductor on the road. Neither Mr Johnstone nor myself moved the conductor.[16]

20. The fire-front quickly consumed the Sawmill and reached the adjacent blue gum plantation, which was quickly burnt out. The fire-front raced up and over Mt Despair towards neighbouring rural townships.

21. On its initial run, the Murrindindi fire burned through public forested land that consisted mainly of tall, mature mountain and alpine ash trees, and mixed species of wattle type trees at lower elevations. Typically, these types of forests are moist, but by the end of January 2009, they were exceptionally dry due to Victoria's extreme, protracted drought and they carried a very high fuel load, up to 50 tonnes a hectare. The ash trees had long ribbons of bark that hung loosely from their trunks and branches, which were easily ignited and transported long distances by convection columns;[17] this caused damaging spot fires ahead of the main fire.[18]

22. The Murrindindi fire travelled rapidly, affecting Narbethong by 4.30pm. Following a wind change at about 6.15pm, the fire burned through to Marysville, Buxton and Taggerty, before merging with the Kilmore East fire early in the morning of 8 February 2009.

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[15] LEWIS, Paul - SP AusNet - Statement dated December 2011, page 29-30, para 71-72.
[16] LEWIS, Paul - SP AusNet - Statement dated December 2011, page 29-30, para 71-72.
[17] Convection columns are rising column of hot gases that alter the angle at which flames meet unburnt fuel, make the entire air mass more energetic, produce spot fires and spawn smaller turbulent features that may carry burning embers outside the fire perimeter.
[18] LAUDER, Michael – DSE – Royal Commission Transcript dated 06/10/2009, page 8242, line 31 & page 8243, line 1-4

23. The Murrindindi fire burned for weeks in forested public land, and was not formally contained until 5 March 2009. By the time it was contained, the combined Kilmore East and Murrindindi fires had burnt 168,542 hectares and threatened Melbourne's water catchments.

24. The Murrindindi fire resulted in the deaths of 40 people and destroyed the townships of Marysville, Buxton and Narbethong. Seventy-three people were injured, 17 severely, required varying degrees of hospitalisation. In addition to the loss of life, over 500 properties and many vehicles were destroyed or damaged by the fire, mainly in and around Marysville, Buxton and Narbethong.

Standard of proof

25. All coronial findings must be made based on proof of relevant facts on the balance of probabilities and, in doing making this finding, I am guided by the principles enunciated in *Briginshaw v Briginshaw.*[19] These principles state that, in deciding whether a matter is proven on the balance of probabilities, in considering the weight of the evidence, I should bear in mind:

    a. the nature and consequence of the facts to be proved;

    b. the seriousness of an allegations made;

    c. the inherent unlikelihood of the occurrence alleged;

    d. the gravity of the consequences flowing from an adverse finding; and

    e. if the allegation involves conduct of a criminal nature, weight must be given to the presumption of innocence, and the Court should not be satisfied by inexact proofs, indefinite testimony or indirect inferences.

Investigations into the Kilmore East/Kinglake fire

2009 Victorian Bushfires Royal Commission ("the VBRC")

26. On 16 February 2009, then Governor of Victoria, Professor de Kretser issued letters patent setting out the terms of reference for a Royal Commission into the bushfires that raged through Victoria on 7 February 2009, on what came to be known as Black Saturday. The VBRC was given very broad terms of reference. The VBRC produced two interim reports and a four-volume Final Report containing 67 recommendations.

[19] (1938) 60 CLR 336.

27. The VBRC was comprised of three members and was chaired by the Honourable Bernard Teague AO. The VBRC was supported by a considerable team of lawyers including Senior Counsel appointed to assist the VBRC.

28. The VBRC heard from 434 witnesses including 100 lay witnesses over 155 sitting days, accepted the tender of more than 1000 exhibits and produced 20,767 pages of transcript. The VBRC also received almost 1700 public submissions, together with its own internal research.[20] The VBRC convened and directed two expert panels.

29. The VBRC undertook an extensive investigation and delivered detailed findings, along with a large number and range of recommendations relating to prevention, response and public health and safety, in its Final Report dated July 2010.

30. Police investigations initially determined the cause of the Murrindindi fire to be suspicious. In order that criminal investigations and proceedings were not prejudiced, the Commission heard no evidence about the cause of the Murrindindi fire.

Victoria Police Phoenix Taskforce and CFA fire investigations

Arson investigation

31. Early investigations by the Victoria Police Forensic Services Centre Scientists and the CFA Fire Investigators focussed on arson. The cause of the fire was initially suspected to be either an act of deliberately lighting the vegetation in the roadside reserve or of negligently discarding an ignition source in the vegetation in the roadside reserve. This theory was based, in part, on witness reports of a car at the scene at the time the fire started and circumstantial evidence that identified a person of interest. The Phoenix Taskforce thoroughly investigated this fire and the person of interest. However, the evidence against this person was determined to be purely circumstantial, with no admissions made, no forensic evidence linking the person to the lighting of the fire and no eyewitness account placing the person at the scene of the fire at the time of ignition. Investigators were advised to continue their investigations, which they did throughout 2009 and 2010.

32. As time progressed and further information was discovered and the commencement time of the fire was narrowed down, various crucial witnesses were re-canvassed and their accounts corroborated by telephone records. Closer scrutiny of these witness accounts, in conjunction with examination of the telephone records, meant the circumstantial case against the

[20] Final Report of the VBRC, Volume 1: page xxvi.

suspected arsonist significantly diminished. Telephone records and other evidence concerning the suspect's movements and activities on 7 February 2009 became exculpatory in nature.

2009 electrical asset investigation

33. In the days immediately after the fire, CFA Fire Investigator, Fabian Crowe, also examined power poles 5 and 6 and various conductors strung between the two as a possible source of ignition, given that one had broken and was resting on the ground near the ignition area. On 17 February 2009, an AusNet linesman, Mr Jason Kaak, advised an Energy Safe Victoria investigator Bruce Cutler, who was examining the electrical infrastructure of the Murrindindi Zone, that *"during the fires one of conductors that spanned between poles 5 and 6 had fallen to the ground."*[21]

34. Pole 6 is situated in the paddock between the area of origin of the fire and the Sawmill, closer to the Sawmill on the side of Wilhelmina Falls Road. The first fire fighters attending the scene reported seeing one of the six powerlines strung between poles 5 and 6, broken from pole 6 and resting in the paddock. The conductor was still attached at pole 5.

35. On the western verge of Wilhelmina Falls Road stood a typical boundary farm fence, constructed of eight metal strands of wire with treated pine posts spread evenly apart at regular intervals. Between the posts, timber stay droppers kept the strands of wire spread evenly apart. Also along this fence line was a metal "strainer", which is a metal stake connecting all wire strands and securing it firmly in the ground. This fence spanned in a north/south direction from the disused saw mill right up to and past the area of origin, up to the intersection of Banbury Road. At a certain position, the fence stood directly under the spanned electrical powerlines between poles 5 and 6.

36. Some of the first attending fire fighters thought at the time that this fallen conductor may have been the cause of the fire, however it dismissed because the location was south of the perceived origin of the fire.

37. Mr Cutler prepared three reports relating to his findings, concluding that the old electrical fencing was not a factor in the cause of the fire and that the fallen conductor was also not a cause. Phoenix Taskforce investigators believed Mr Cutler formed this opinion because, although he observed arcing and sparking events to have occurred in the vicinity of pole 6

[21] CUTLER, Bruce – ESV – "Report of Fire Murrindindi Fire Electric Lines" page 10 Poles 5 to 6.

and that the conductor between poles 5 and pole 6 was broken, he believed (incorrectly) that the power was off at the time and therefore concluded that the fire itself was the cause of the conductor breaking.

38. On 25 February 2009, investigators, with Mr Cutler's assistance, seized segments of the conductor between these poles, metal stay wires and other electrical exhibits.

Investigation of other possible causes

39. Other potential sources of the fire thoroughly investigated were:

    a. Lightning – No evidence was found to indicate that lightning had struck the ground, fencing or poles in or near the point of origin and no record was found to suggest that lightning had occurred in the ten days prior to 7 February 2009.

    b. Powerlines – No evidence was found initially to suggest the power lines in the vicinity clashed or that the vegetation had come into contact with the lines.

    c. Electric Fence – The electric fence in the area was disconnected at its source at the time of ignition.

    d. Hot exhaust particulars or metal fragments from machinery – Ignition from a vehicle exhaust is far more likely to occur closer to an intersection, a hill or bend in the road and no evidence of metal fragments were found within or near the point of origin.

    e. Escape from campfire/barbeque – The point of origin is located on a roadside reserve in an area of high visibility and no evidence of a recent campfire or barbeque use was located in or near the point of origin.

    f. Escape from burns or fires – No record or evidence to suggest that there were other fires burning within a 50 km north or north-west of the point of origin and the ignition from the nearest wildfire, being Kilmore, was discounted due to distance and direction of winds at the time.

    g. Rubbish or debris – no debris was found within or immediately adjacent to the point of origin that was of a nature that would cause ignition by refraction or reflection processes and no paper, match or cigarette was found.

    h. Deliberate ignition – No device or ignition source was found.

40. The Phoenix Taskforce engaged numerous experts in the investigation of the cause of the fire, including:

a. Dr Phillip Maynard, a Senior Lecturer at the University of Technology, Sydney, was engaged with a specific focus on cigarette butts as a potential cause. He reviewed all available material relevant to the point of origin and concluded that:

   i. *The chance of a cigarette tossed from a moving vehicle causing an accidental ignition of this fire is extremely low due to the distance it would have to travel without the combustion coal disintegrating and the likelihood of the combustion coal embedding itself in densely matted vegetation in an area where the grass cover was continuous and short was also extremely low.*

   ii. *A deliberately placed cigarette would be likely to ignite the available fuel and the fire would be able to propagate under the influence of the prevailing weather conditions.* (However, no cigarette remains or evidence of cigarette ignition were found in the area of origin.)

b. In September 2010, Dr Paul Steensland, a USA-based Wildland Fire Investigator, was engaged to assist with enquiries into possible causes of the fire but also a focus on the possibility of a discarded cigarette butt being involved. Dr Steensland concluded that a discarded cigarette could not unequivocally be eliminated as a source of ignition for the fire, but that it was very unlikely based on the following:

   i. lack of physical remains of a cigarette butt;

   ii. the general characteristics of cigarettes as a competent ignition source;

   iii. probable fuel arrangement of slashed grass items would likely not allow sufficient contact with the smouldering tip of the cigarette to support ignition; and

   iv. the horizontal distance that a discarded cigarette would have had to travel to reach the specific origin area of the fire.[22]

c. A vegetation ecologist from the (then) DSE, Mr Nic Gellie contacted investigators and put forward a possible cause of the fire as the self-combustion of "discarded green plastic silage wrapping containing portions of silage". Mr Frank Mickan, a Pasture & Fodder Conservation Specialist with the (then) Department of Primary Industry, and also a recognised silage and hay expert, was consulted. Mr Mickan

[22] STEENSLAND, Paul - International Wildfire Investigator – Report dated 20/12/2010, page 5.

formed the opinion that this material could not have spontaneously combusted. In conjunction with their original findings and on examination of the DSE information, Phoenix Taskforce investigators eliminated the possibility of plastic silage wrapping as a cause.

41. Following the investigations into deliberate or accidental ignition throughout 2009 and 2010, and resulting from the investigative review, Phoenix Taskforce investigators identified significant parallels between the timing of repair work performed on electrical assets on/near the Sawmill and the ignition time of the fire. As investigators narrowed down the estimated time of the ignition of the fire to sometime between 2.44pm and 2.48pm, serious concerns emerged that this was at the same time that Mr Lewis and Mr Johnstone repaired the blown high voltage fuse at the rear of the Sawmill and re-energised the line.

2011 electrical asset investigation

42. In April 2011, as the Phoenix Taskforce's investigations focussed on electrical assets. They engaged the services of Senior Executive Engineer, Electricity Networks, Terry Krieg of Sinclair Knight Merz Limited (SKM) of Adelaide, South Australia, to assist to ascertain what role, if any, electricity may have played in the start of this fire. Mr Kreig was assisted by Gregory Whicker,[23] of the same firm.

43. Investigators forwarded extensive material relating to the electrical issues of the Murrindindi Zone, including the various reports from Mr Cutler, the statements from Mr Crowe, witnesses and others, and photographs to Mr Kreig.

44. On 5 May 2011, Mr Kreig travelled to and observed the electrical infrastructure of the Murrindindi Zone. Following his examination of the Murrindindi scene and the seized items held at the Police storage facility in Collingwood, Mr Kreig turned his mind to the fallen conductor and, specifically, that it was still live when it fell onto the wire boundary fence.

45. Mr Kreig and other investigators determined that the fire location and description was extremely indicative of the cause of the Murrindindi fire being the electrified fence scenario (the fence having become electrified through contact by the fallen conductor).

46. Having examined all the relevant material, witness statements, diagrams from the Surveyor General, Mr Cutler's final reports and from their own inquiries, Mr Kreig and Mr Whicker put forward a plausible theory. The theory includes but is not limited to the following:

[23] Bachelor of Applied Science (Metallurgy).

a. the metal stay wire spanning from high on pole 6 down into the ground (to secure the pole) was positioned in too close proximity to the 22 kV conductor strung between poles 5 and 6;

b. because of the close proximity and in the extreme conditions on 7 February 2009, the northern-most conductor between poles 5 and 6 periodically came into close proximity to the northern stay wire, causing arcing to occur;

c. this activity in all likelihood caused the failure of the 22kV volt fuse on pole 7A (20530) (situated further south from pole 6);

d. the replacement of the 22 kV fuse at 2.45pm re-energised the conductor;

e. worsening conditions at this time (stronger winds) again caused the conductor to come into close proximity with the northern stay wire and it possibly clashed, causing a considerable arcing event to occur;

f. a very short time later, the conductor failed and broke at a position in very close proximity to the northern stay wire and the top of pole 6;

g. the now broken/detached conductor then fell to the ground in the paddock and across the paddock boundary fence on the western side of Wilhelmina Falls Road;

h. as a result, and for a short period of time, this fence became electrified;

i. the boundary fence then conducted electricity, resulting in multiple points of ignition along the western verge of Wilhelmina Falls Road (the fence became electrified and ignited vegetation directly under the fence); and

j. this caused the Murrindindi fire.

47. Mr Kreig conferred with colleagues, both in Australia and in the USA, who concurred with his theory.

48. Mr Crowe and John Kelleher, a Scientist with the Victoria Police Forensic Services Centre (VPFSC), were presented with Mr Kreig's theory and Mr Mitchell's account. Both responded that Mr Kreig's theory was extremely plausible and stated that if they had been fully and correctly briefed at the time of their initial forensic examinations of the scene, i.e. that power was re-energised at 2.45pm and that the conductor failed and fell to the ground (at an undetermined time), they would have considered it had been the cause of the fire. Mr Crowe and Mr Kelleher originally understood that the conductor came down *because of* the

fire and did not consider the possibility that it may have occurred *prior to* the fire. They advised that they compiled their respective original findings on the basis that electricity was not the cause of the fire.

49. On 23 May 2011, investigators spoke to Kevin Mitchell, a linesman for over 30 years, who was working as a linesman with Australian Powerline Consultants in Bendigo on 7 February 2009. On 9 February 2009, Mr Mitchell was tasked, along with Ron Sullivan, to repair the fallen conductor between poles 5 and 6 of the Murrindindi line. Upon arrival at approximately 10.00am, Mr Mitchell examined the fallen conductor and noted that most of it was in good condition. The conductor from pole 5 was resting on the side of the road nearer the Sawmill. The conductor had been moved to the side of the road and it appeared that someone had cut the end of the conductor before Mr Mitchell arrived. Mr Sullivan stated that, after it came down, the conductor would have been resting across the road and on the fence and leading out into the paddock. This was consistent with witness accounts of the scene on 7 February 2009. Mr Mitchell drove into the paddock to pole 6 and went up in a cherry picker to pull the line back up into its original position. Mr Mitchell stated:

> *I saw splash marks on the stay wire. I describe splash marks as burning damage to the steel stay wire. This would be caused by clashing of the overhead conductor in the wind. We have a live overhead 22kV conductor to an earthed steel stay wire. It would have clashed and broke the conductor, which is why it was lying (sic) in the paddock. Once the conductor was back into its original position, I observed it did not have enough clearance to the stay wire. I sagged both conductors to a tighter stringing and altered the cross arm to give a little more clearance between the stay wire and the overhead conductor. ...I lowered the cross arm and changed the angle to try and increase distance between the stay wire and 22kV conductor. I put insulation on both the stay wire and conductor. There was no insulation on the day of the fire. By having no insulation it would have caused a clash of 22kV to earth, which is going to cause sparks... On the day of the fire, I believe there would not have been enough distance between the stay wire and the conductor. The winds were unusually strong, which caused the wires to swing and clash with the stay wire. This would have created sparks causing the wire to burn through and fall to the ground.*[24]

[24] MITCHELL, Kevin - APC Linesman – Statement dated 23/05/2011

50. On 29 May 2011 and 11 June 2011, Mr Sullivan provided police with statements about his attendance and repairs to the Murrindindi line after the 7 February 2009 fire. Mr Sullivan was employed as a linesman with Australian Powerline Consultants. He has 30 years experience as a linesman. Mr Sullivan attended the Wilhelmina Falls Road area on 9 February 2009, with Mr Mitchell and other AusNet personnel. He stated:

> *When I arrived, I noticed that the conductor was still across the road and leading into the paddock, I vaguely remember some witches (hats) out on the road near the down wire. The conductor was still hanging across the post and wire fence. The conductor on the roadway had been severely damaged due to traffic that had been travelling over it.... Whilst doing repairs I noticed on the stay wire arcing below the guy wire insulator. I would say that this is where the conductor broke as a result of the aluminium conductor clashing with the steel guy wire... If the ACR didn't activate when the conductor broke and when it fell on the fence, this would have more than likely made the wire strands live. Depending on where it earthed along the fence, would be where a fire may start. Once striking the fence, all the electricity wants to do is get to earth... We were responsible for moving the 22kV cross arm and twisting it around, that was just to try and get some more clearance between the conductor and the stay. A protective barrier commonly referred to as 'spag" was placed around both the stay and conductor to prevent the clash of wires. In my opinion, when the line was designed it was not done properly. Clearly, there is not enough clearance between the phase and the stay. There was no 'spag' on the wires prior to us doing the repair and this should have been rectified earlier.*[25]

51. Investigators requested SKM to enquire further about the electrical assets in the Murrindindi Sub Zone and, in particular, the set up of pole 6. On 4 July 2011, Matthew Trevaskis, a Geomatics Consultant-Surveyor from SKM, attended at the Murrindindi Sub Zone in Wilhelmina Falls Road. He conducted a scan of electrical assets, particularly the conductor spans between poles 5 and 6 and the associated electrical hardware on pole 6. Mr Trevaskis prepared a 3D presentation based on the scan results and provided a report. Mr Trevaskis obtained a measurement of 0.35m from the northern 22kV conductor spanned between poles 5 and 6. Industry experts advised that this clearance does not meet required standards both at

[25] SULLIVAN, Ronald - APC Linesman – Statements dated 29/5/2011 & 11/06/2011.

the time of measuring (2011) and on 7 February 2009 (the clearance distance on 7 February 2009 was likely to have been even less than 0.35m).

52. On 26 May 2011, investigators from the Phoenix Taskforce had sought the assistance of Mr Kelven Barnbrook, Senior Instructor at the Gippsland TAFE Energy Training Centre,[26] to examine the electrical infrastructure on the Murrindindi Sub Zone, in particular that surrounding Pole 6.

53. On 12 and 25 June 2011, Mr Barnbrook attended and inspected the assets in the Murrindindi Sub Zone. Mr Barnbrook then provided investigators with a statement:

> *Based on the material I was provided with, and from my own observations, I formed the view that an earthed stay/guy wire supporting Pole 6 was incorrectly positioned, too close to the northern-most conductor on the 22kV line between poles 5 and 6 on the Murrindindi line. The stay wire bracket assembly where it is secured to pole 6 should have been positioned below the cross arm holding the 22kV lines. The earthed stay/guy wire was in fact positioned so that it was secured to the pole above the 22kV cross arm. The earthed stay/guy wire was positioned so that it passed in between the northern conductor and the middle conductor. This is not a correct set up. This meant that the clearance between the conductor and the earthed stay/guy wire was less than the required 450mm. I was not in a position to take an exact measurement but I could tell that it was clearly under the required 450mm. I have checked the SECV Overhead Line Manual and obtained the relevant drawing for this type of pole set up. I referred to diagram 22kV Subsidiary Concrete Pole Steel Crossarm Construction Strain Pole drawing ref VX9/76 1 C. This clearly stipulates that "Minimum clearance of 450mm must be maintained between the stay & conductor.*
>
> *Based upon my observations and the material provided to me by (then) Detective Senior Sergeant Kerr, it is my view that during the very strong winds of February 7, 2009, the northern-most 22kV conductor on the span between poles 5 and 6 of the Murrindindi line in the vicinity of Pole 6 came into very close proximity, if not clashed, with the earthed stay attachment. As a result, a violent flashover (electrical discharge) occurred with significant force that resulted in the conductor breaking at this location and falling*

[26] Mr Barnbrook has worked in this capacity since 1987. He has worked in the electrical industry since 1976, where he commenced with the SEC as an apprentice line worker. He has significant experience in the supervision and instruction of line workers and auditing and inspecting of electrical assets.

to the ground. It is my view that the conductor may have been thrown some distance in this violent flashover. The conductor would have been live when it fell to the ground.

I have been advised by the police that the Boric Acid Fuses (Blue and White Phase) located on pole 7A (20530) adjacent to the Murrindindi Mill activated at approximately 2.45pm. I was informed that this information was supplied to the police by SP AusNet. It is my view that the flashover that caused the conductor to break would have resulted in the immediate blowing of the Boric Acid Fuses located on pole 7A (20530) adjacent to the sub-station within the Murrindindi Mill complex.

I have been informed that when the conductor between Pole 5 and 6 broke, that it fell into a paddock below and came to rest across the north-south wire boundary fence along Wilhelmina Falls Road. The contact between the fallen conductor and the wire fence would have resulted in the wire fence being energised that is, caused it to be "live".

54. On 28 June 2011, the Phoenix Taskforce engaged the services of HRL Technology Pty Ltd (HRL), specifically Mr Trevor Layzell, Senior Materials Engineer, Mr Dick Coldham, Principle Material Engineer and Mr Harry Better, Principle Engineer, who had previously been of assistance to Victoria Police in the investigation of the 7 February 2009 Kilmore East fire. HRL were engaged to determine if damage markings on the 22kV conductor from span of conductor between poles 5 and 6 and the stay wire to pole 6 of the Murrindindi feeder line were the result of electrical discharge. If the damage was found to be caused by arcing, then further analysis was to be undertaken to try to characterise the component with which the conductor had come into contact to cause the arc. HRL conducted various examinations of the seized conductor and electrical assets. Examinations were conducted in the presence of experts engaged by Freehills solicitors (for AusNet). Examinations were also conducted at the VPFSC in the presence of Mr Kelleher and scientist Mr Harald Wrobel, who was operating a Scanning Electron Microscope (SEM).

55. On 11 November 2011, Mr Kreig and SKM delivered their final report to the Phoenix Taskforce. The report was titled *'Murrindindi Bushfire, February 2009, Investigation in Relation to Electricity Assets'*. The report concluded:

The investigation carried out by Terry Krieg and Greg Whicker of SKM considered a range of statements from individuals who were at the scene when the Murrindindi Fire

started on 7/02/09. Items of physical evidence and other specialist reports were also examined as part of the investigation.

The key aim of the SKM investigation was to provide specialist advice on whether electrical network assets did or did not play a role in the causal aspects of the Murrindindi Fire.

Scenarios involving fire start by electric fence or clashing conductors were eliminated. A plausible explanation, that fits available information, was developed to link the fire start to a fallen conductor span (Poles 5-6) which energised a fence line at the reported point of fire origin.

The review of statements provided to this investigation indicates that a deliberately lit fire was initially suspected. This appears to have been based, in part, on the assumption that the fire start occurred up-wind from the fallen conductor span. In addition, the fallen span was shown to be on the load side of the feeder, seeming to indicate that electrical assets were unlikely to have been the cause. The SKM investigation provides a plausible explanation for these seeming anomalies.

It is evident that the conductor span parted and fell from a point near Pole 6 of the Murrindindi feeder. Examination and modelling of the construction of Pole 6 shows that the construction was flawed and a number of aspects were not compliant with SP AusNet line construction standards for 22kV or other relevant Australian industry guidelines and Standards. From examination of evidence presented, it is beyond doubt that the conductor was alive when it fell across the boundary fence, in contact with conducting metal fence wire supported by wooden or steel posts directly in line with the reported point of fire origin.

An independent witness (Mr La Grutta) observed the fire at its origin and reported fire along the fence line and at intervals approximately the distance between posts. He also reported a smokeless flame that is consistent with multiple arcing from the fallen span energising the fence-line. It should be noted that the fallen span was an extremely dangerous hazard to anyone who may have been in contact with the fence at that time (perhaps attempting to extinguish the fire) until all the fuses blew or supply was removed by other means.

It is clear that Pole 6 was not constructed to the internal standards of the utility or to industry guidelines applicable at that time. The clearances between conducting and

earthed parts on the pole were inadequate. Even apart from fire risk, the pole construction at the time of the fire start presented a safety risk to animals and humans who came into contact with the pole or its stay wires due to the location of an important stay wire insulator.

Distribution utilities are responsible for vast networks of inherently hazardous equipment and this presents a management challenge for the organisations involved. Utilities have developed standards and procedures to ensure that assets are managed effectively, minimising risk to the public and reducing the risk of damage caused by their assets. Many of these standards and procedures have developed over a number of years, encapsulating accumulated knowledge of past events and risks. The risk of fallen conductors is foreseeable and proper application of known technical knowledge and existing procedures should have prevented the failure on the Murrindindi feeder and the subsequent damage that resulted.

A key issue, if the circumstances of the Murrindindi fire were as suggested in this report, is how these types of events can be avoided in future. In the case of SP AusNet, the construction of Pole 6 appears to have been deficient. In addition, SP AusNet personnel conducted an inspection and patrol of the line prior to line restoration and replacement of the fuse at 14.45. This patrol was detailed and thorough, according the witness statements, but failed to identify the construction issues with Pole 6 (e.g. the proximity of the stay wire to the conductor) or any signs of previous damage that would be expected. The nature of inspections undertaken by utility personnel is targeted at identifying obvious issues such as broken conductors, branches or debris on the conductors. These fault-related line patrols are usually undertaken while the crew is under time pressure and it is not unexpected that a field patrol would fail to identify the type of issues that were most likely evident in the scenarios described in this report. While the construction issues can be regarded as reasonably obvious to most observers, the arcing damage between the stay wire and the conductor may not have been obvious from ground level without a careful examination of Pole 6.

It is a conclusion of this report that the distribution equipment associated with the Murrindindi feeder was the most likely cause of the fire that started in the region on the 7 of February 2009.[27]

[27] SKM Report Murrindindi Fire – Investigation in Relation to Electricity Assets date 01/11/2011, page 50-51

State Coroner's request for documents and further statements from AusNet employees

56. On 30 September 2011, the former State Coroner, Judge Jennifer Coate, issued a request for documents and statements from the two AusNet employees present at the Sawmill when the fire commenced (Mr Lewis and Mr Johnstone), pursuant to section 42 of the *Coroners Act 2008*. Certain documents, photographic records and queries were subsequently provided to assist Mr Lewis and Mr Johnstone in the compilation of their statements.

57. On 16 December 2011, the Court received Mr Lewis and Mr Johnstone's statements detailing their accounts of the events of 7 February 2009. The statements contained an amalgamation of earlier statements and information provided to investigators and queries that they were asked to address in their statement. Both Mr Lewis and Mr Johnstone stated that they did not see the conductor down at an early stage after the fire, when they drove down Wilhelmina Falls Road. They each stated that they believed they would have noticed a fallen conductor, as it is very obvious. However, Mr Lewis and Mr Johnstone also did not account for all the conductors being up and intact when they drove along Wilhelmina Falls Road.

58. The fallen conductor had recoiled some distance to the east and, particularly, to the south. It did not fall directly under its normal sagged location, as one might reasonably expect. The recoil aspect also meant that the angle of the conductor, still connected at pole 5 down to the roadway, was such that it was parallel to a stay wire supporting pole 5 and could have conceivably be mistaken for a stay wire. The conductor was on the ground, running parallel with Wilhelmina Falls Road on the eastern side for a small distance before it crossed the road, laying flat across the roadway. The conductor was not suspended in the air or hanging across the road in the air, as was expected by Mr Johnstone. Scene photographs depict that the fallen conductor was difficult identify from across the road. One of the scene photographs was taken by Mr Lewis at 3.16pm and shows how difficult it was to see the fallen conductor.

59. Failure to notice a fallen conductor does not mean that it was not down. This issue arose for investigators when canvassing and re-canvassing witnesses; many people did not notice the conductor down at all and some still did not see the conductor, despite observing the witches hats alerting them to its presence. It was apparent that the fallen conductor was difficult to see.

60. Other factors that may have affected the AusNet technicians' ability to observe the downed conductor include:

    a. being distracted by a major and rapidly-spreading fire to the west of Wilhelmina Falls Road;

    b. the limited visibility as a result of smoke from the fire;

    c. that they were travelling along Wilhelmina Falls Road, immediately behind the CFA Captain and in his dust trail;

    d. the technicians were concerned that the isolating transformer may have been responsible for the fire and their focus was on that, rather than other electrical aspects.

61. Phoenix Taskforce investigators believed that Mr Lewis and Mr Johnstone simply failed to see the fallen conductor. I accept that, on the balance of probabilities, this was most likely the case.

62. On 21 November 2011, the former State Coroner issued an Authority under Section 39 of the *Coroners Act 2008*, for certain records and information from AusNet with respect to the Murrindindi fire of 7 February 2009. Two of the schedules were:

    a. All records (whether categorized as capital works, emergency repairs, fault rectifications or entries on Q4 database) that detail any works, repairs, alterations, modifications, adjustments, augmentations and re-configuration made relating to Pole 6 (11526) and any of its associated hardware post 7 of February 2009 to current date; and

    b. Technical engineer type documents or Drawing Route Plans (DRP) for Pole 6 (11526) applicable for how Pole 6 (11526) was constructed immediately prior to 7th of February 2009, and the latest technical engineer type documents or latest Drawing Route Plan (DRP) applicable to Pole 6 (11526) post 7th of February 2009.

63. Despite investigators knowing that, following the 7 February 2009 fire, certain augmentation and re-alignment and repairs works were carried out on the electrical hardware at pole 6 and having obtained signed statements from Mr Mitchell and Mr Sullivan, who undertook the repair work, to that effect, AusNet were unable to locate or supply any records relating to these works.

64. AusNet provided the Court with copies of the 'detailed route plans' for the section of AusNet's electricity distribution network, including pole 6, which were in place both immediately prior to and following 7 February 2009.[28] Somewhat contradictory was the detailed route plans that detailed plans of the line pre and post 7 February 2009, which detail alterations.

Additional reports following receipt of AusNet's Drawing Route Plans

65. On 11 May 2012, SKM provided an additional report titled *'Murrindindi Bushfire, February 2009, Investigation in relation to electricity assets Annexure 1: Further comments on pole 6'*. Phoenix Taskforce investigators requested this report to determine what the differences were in AusNet's Drawing Route Plans for Pole 6 pre and post 7 February 2009. The report stated in part:

> *In summary, the Rev B drawing shows the following changes (marked in red) associated with Pole 6:*
>
> *(i) Repositioning of 22kV Cross arm*
>
> *The 22kV cross arm appears to have been repositioned in two ways, presumably to increase the clearance between the Red phase conductor and the staywire identified "A" on the drawing:*
>
> *(a) The angle of the crossarm was changed to bisect the line deviation angle and the line deviation angle was decreased from 48°17' to 45°25' and*
>
> *(b) The crossarm was re-located to 2400mm below the 66kV crossarm. A "General" note on both drawings indicates that the distance is typically 2100mm.*
>
> *The clearance distance for the current configuration (i.e. Revision B of drawing VH8/4321) was calculated as 370mm. This calculation remains valid.*
>
> *Calculations for the configuration "at the time of the fire" assumed that the 22kV cross-arm height differed by only 60mm from the current configuration. A 60mm height adjustment on 09/02/2009 was referred to in Cutler's ESV Report and linesman Mitchell's Statement (23/05/11). However, the recently submitted drawings indicate that the 22kV crossarm at the time of the fire was approximately 300mm higher than the current position.*

[28] drawing route numbers VH8/4321A and VH8/4321B

This represents a major movement of the crossarm and SKM will therefore need to re-model and re-calculate the conductor/staywire clearance "at the time of fire". The re-calculated clearance distance will then replace values shown for "Case 2" scenario in section 8.1 of our previous report.[29]

66. Mr Barnbrook was provided with AusNet's Drawing Route Plans for Pole 6, pre and post 7 February 2009, and was asked to provide advice in relation to them. On 8 April 2012, Mr Barnbrook re-attended at pole 6 and confirmed that adjustments had been made to the pole 6 configuration, as per the Drawing Route Plan post 7 February 2009. Mr Barnbrook advised:

The structures which are currently in place have been built according to the detailed drawings as sent to me, with the placement of the 22kv strain arm to the existing bi-sect position and the replacement of the number 8, 60 degree stay, to the new 51 degree stay, not exactly to measurement, but not significant enough to alter any existing risk.

The existing structure still has a certain amount of risk due to the close proximity of live 22kv conductor to the earthed stay configuration, which only offers minimal clearance, (separation). It still appears that both of the stay's are within the 400 mm allowable clearance area for earthed apparatus.[30]

67. On 30 March 2012, HRL provided their final report upon their examinations of the electrical assets to investigators. The summary of the findings follow:

The inspection and analysis revealed:

The mark on the conductor 68.5m from Pole 5 was from arcing, i.e., electrical discharge. Analysis around the arc damage showed high levels iron and zinc, consistent with contact with galvanised wire.

The damage at this position, 68.5m along the conductor, was the result of arcing against a galvanized structure. This is consistent with the notion that the conductor came into contact with the galvanised wires of the fence after the failure. The lack of any blackening of the conductor either side of the arc marks suggests that this length of the conductor was off the ground, possibly straddling the fence. This arc damage would have developed after the fracture of the conductor.

[29] SKM Report Investigation in Relation to Electricity Assets Annexure 1; Further Comments on Pole 6, dated 11/05/2012, page 1 and page 2.
[30] Email Response from BARNBROOK to KERR dated 16/04/2012.

There was evidence of arcing and flash damage approximately 1.5m along the conductor section from Pole 5. No analysis of this site was completed.

The damage on the northern pole stay at pole 6 was consistent with electrical arcing damage. Some of the arcing appeared to have occurred a considerable time ago, whereas other sites appeared more recent. Analysis of arc damage areas did not reveal indications consistent with the presence of aluminum (sic) spatter from arcing, as would be expected if an aluminum (sic) conductor had contacted the stay.

Fencing wire and timber post clips recovered by VP were consistent with a galvanized steel construction.

It is our opinion that the arc damage on the conductor at approximately 68.5m from Pole 5 occurred after the failure, when the conductor had come into contact with the fence along Wilhelmina Falls Road, and the section experiencing arc damage had been draped over the fence.

It is our opinion that the arc damage on the stay wire at Pole 6 occurred as a result of contact with a conductor. This appears to have occurred from time to time over a protracted period.[31]

68. On 20 March 2012, Mr Kelleher provided investigators with an additional statement concerning the Murrindindi Fire. Mr Kelleher had previously been briefed on the status of the investigation, developments and further witness accounts. He was provided with copies of SKM and HRL's reports. Mr Kelleher stated:

There is chemical and microscopic evidence to indicate that the power line broke near Pole 6, and fell across the wire of the paddock fence.

Further chemical and microscopic evidence shows major arcing on the conductor, demonstrating that it was still energised when it contacted the fence.

A voltage of 22,000 volts applied to the top wire would energise the whole fence to that voltage, and create a major fire hazard where vegetation reached the height of the bottom wire, such as in the feed storage area.

[31] Better, Harry - HRL Technology – Report *"Examination of Aluminium Conductor Sections and Pole Stay Exhibits 22kV Conductor Failure, Wilhelmina Falls Road, Murrindindi"* dated March 2012, page 35, Summary of Findings section 10.

There is evidence (from La Grutta) that the fire started in several places beneath the fence.

There is evidence (from Mr Crowe) that the fire started near the fence along the edge of the feed storage area.

While there is no direct evidence as to how the fire started, the scenario proposed by SKM is technically feasible.

The proposed scenario fits both the observations of the witnesses and the findings of Mr Crowe in relation to the area of origin.

Microscopic examination and analysis of various wire samples from the scene provided evidence that the conductor had contacted the wire fence.

Given the results of the scene examination and the evidence provided by SKM and HRL, the most likely cause of the fire in my opinion is the energising of the fence by the fallen conductor.

69. On 29 March 2012, Mr Crowe provided investigators with an additional statement concerning the Murrindindi Fire. Mr Crowe had previously been briefed on the status of the investigation, developments and further witness accounts. Mr Crowe stated:

I have also been asked by Detective Sergeants Andrew Kerr and Mark Kennedy of the Phoenix Task Force to consider the possibility that the Murrindindi fire may have been caused as a result of a live power line between a pole on Wilhelmina Falls Road (Pole # 4711525) and the pole situated in the paddock immediately adjacent to the north-west corner of the mill yard (Pole # 4711526) falling on the fence line on the west side of Wilhelmina Falls Road.

In response to this proposition, I can say the following –

- *At the time of examining the fire scene on 8 and 9 February 2009, I was told by Detective Darren Gleeson and a number of firefighters on scene that the power had been off since approximately 1100 hours on 7 February.*
- *At the time of examining the scene on 8 and 9 February 2009, I noted witches hats on the edge of Wilhelmina Falls Road. These witches hats marked a power line which was attached to pole # 4711525 and was lying on the ground – over*

Wilhelmina Falls Road and over the fence on the west side of that road. The line over the road was barely visible due to dust and vehicle track marks.

- *I later observed that this power line had been broken at or immediately adjacent to pole # 4711526 and the severed end was lying on the ground within approximately ten metres of that pole. Close examination of this line revealed that two strands of the wire had fused together – apparently as a result of heat. The wire appeared to have separated from an insulator on the west side of the pole.*
- *I did not examine the fence to determine whether there was any evidence of arching or charring as a result of the contact between the power line and the fence.*

For the proposition to be sound, one of the observations and conclusions made in my original statement has to be incorrect. I refer to the first dot point in paragraph 28, where I state –

"Fuel under the power line on the ground was burnt between the pole and for a distance of approximately 50 metres east of the pole. This indicated that the fire passed through this area before the line fell to the ground".

- *At the time of examining the scene on 8 and 9 February 2009, I noted that there had been considerable vehicle traffic over the burnt area in the paddock on the west side of Wilhelmina falls Road – particularly in the area adjacent to the northern boundary of the mill and pole # 4711526. The extent to which this vehicle traffic and/or any other activity altered the disposition of the power line on the ground is unknown.*
- *If the power line had been moved prior to my examination of the scene, I cannot conclude that the power line came down after the fire passed pole #4711526.*

For the proposition to be sound and consistent with my determinations about the movement of fire, when the power line came into contact with the fence it had to be live and capable of causing ignition at multiple points along the fence over a distance of approximately 300 metres.

- *There were isolated pockets of unburnt grass and occasional shrubs between the ripped ground on the roadside reserve and the fence-line. These grass stems were over 500 millimetres in height and had the potential to be in contact with the wire on the fence – as did the foliage of the shrubs.*

- *There were substantial quantities of ash residue along the fence-line which suggested that there had been a significant amount of tall grass along the entire fence-line prior to the fire.*
- *If in fact the fence-line became "live" as a result of the contact with the fallen power line, then there was potential for ignition of this tall grass and/or the shrub foliage – in multiple locations.*
- *I have insufficient knowledge of the physics associated with electricity to provide any advice or opinion other than to know that fencing wire will carry or conduct electricity and that if dry grass or shrub foliage is in contact with "live" wire it can cause fires. I can only summise that there were limited contact points between the "live" fence and the vegetation and therefore it was at these points ignition took place.*

70. In February 2012, Phoenix Taskforce investigators sought the assistance and opinion of electrical engineer Mr Tim Otley, Chief Technology Officer, Tru-Test Limited. Mr Otley has considerable experience and expertise regarding electric fences. Mr Otley was provided with reference material and photographic evidence of the boundary fence situated along Wilhelmina Falls Road, Murrindindi (area of origin). On 12 April 2012, Mr Otley provided investigators with a report which, in part, stated:

> *In my professional opinion, the 22 kV power transmission line that fell onto and remained in contact with the boundary fence on the western side of Wilhelmina Falls Road, Murrindindi, on the afternoon of 7th of February 2009, could have provided sufficient energy to ignite (dead) vegetation in contact with, or in close proximity to, one or more of the high tensile steel wires incorporated in the boundary fence, at the location where the fire was observed to have started.*

Conclusion

71. The Phoenix Taskforce investigation concluded that the cause of the Murrindindi fire was a failed conductor between poles 5 (11525) and 6 (11526) on a section of the Murrindindi power line, which contacted and electrified a boundary fence that then ignited vegetation under the boundary fence line along Wilhelmina Falls Road, Murrindindi.

Civil proceedings

72. On 7 August 2012, civil proceedings in the name of Rod Liesfield[32] were commenced as an 'open' class group proceeding.[33] The plaintiff sought compensation for loss and damage suffered as a result of the Murrindindi fire. The defendants to the proceeding were:

    a. AusNet Electricity Services Pty Ltd ('AusNet'), the operator of the electricity distribution system the failure of which allegedly caused the Murrindindi fire;

    b. 'UAM',[34] a maintenance company contracted by AusNet to undertake periodic inspections of its assets including those at Murrindindi; and

    c. the State parties, being the Secretary of the Department of Environment, Land, Water and Planning ('DELWP', formerly the Department of Sustainability and Environment 'DSE'), the Country Fire Authority ('CFA') and the State (specifically, Victoria Police).

73. The plaintiff alleged:

    a. negligence by AusNet, based on:

        i. the design, construction, maintenance and inspection of its electricity distribution assets (wires and poles) at Murrindindi; and

        ii. the training and supervision of inspectors in relation to its patrol of the Murrindindi assets and the reconnection of electricity on Black Saturday following a power failure;

    b. that AusNet was liable for breach of its statutory duty, in nuisance, under a derivative liability and as principal for the acts and omissions of its agent, UAM;

    c. UAM had been negligent in its inspection of the Murrindindi assets and in the training and supervision of its inspectors; and

    d. the State parties were liable in relation to the failure to provide adequate warnings of the Murrindindi fire on 7 February 2009 and the Secretary of DELWP was liable in relation to planned burning.

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[32] Dr Katerine Rowe, whose husband, Dr Kenneth Rowe, was killed and who lost two properties in the Murrindindi fire, was later substituted as the lead plaintiff.
[33] under Part 4A of the *Supreme Court Act 1986* (Vic).
[34] ACN 060 674 580 Pty Ltd.

74. AusNet made counterclaims against UAM and the State parties and the defendants denied the claims made by the plaintiff (and, where relevant, the counterclaims).

75. The parties did not dispute:

    a. the origin of Murrindindi fire at Wilhelmina Falls Road; and

    b. that, on Black Saturday, a particular conductor spanning two power poles on the western side of Wilhelmina Falls Road failed as a result of arcing between the conductor and a stay wire supporting the relevant pole;

    c. the conductor broke and fell, draping itself over a fence abutting the roadside reserve; and

    d. the conductor was live and this caused at least one strand in the fence to become electrified.

76. The plaintiff contended that the fence contained a metal strainer and that, consequentially, all of the fence wires became electrified. Vegetation in contact with the fence then created an electrical path to the ground, producing sparks and embers, which fell into the tinder dry grass along and underneath the fence, igniting the fire.

77. AusNet contended that the fire started away from the fence, and that it was not caused by the electrification of the fence. Among other things, it contended that the arcing between the conductor and the stay wire most likely occurred after the fire had started (as a result of smoke in the air) and that the electric current in the fence would not have been sufficiently strong to ignite a fire.

78. The factual and legal issues in the proceeding were complex and the trial was set down to be heard over several months. The parties proposed to call 21 expert and 131 lay witnesses, and to tender thousands of pages of exhibits. However, on 6 February 2015, the parties agreed upon terms for the settlement of the proceeding. On 18 February 2015, Justice Dixon made orders providing for the notification of the settlement to group members. On 27 May 2015, Justice Emerton handed down the judgment in the matter of *Rowe v AusNet Electricity Services Pty Ltd & Ors*.[35]

79. The proceeding settled for $300 million, with no admission of liability and inclusive of costs. AusNet's contribution was $260.9 million, UAM's was $10 million and the State

[35] [2015] VSC 232.

Parties' was $29.1 million (with the State Parties' contribution to be applied in the payment of personal injury and/or dependency claims, not property or economic loss).

80. Having regard to section 7 of the *Coroners Act 2008* (Vic), this court determined to await the outcome of the civil proceedings before finalising the coronial investigation.

Coronial investigation

81. A brief of evidence in relation to the Murrindindi fire was delivered to the Coroners Court in September 2012. The Murrindindi fire coronial brief contained statements from eye witnesses, experts, witnesses from events prior to and during the fire, police investigators, forensic pathologists, Disaster Victim Identification (DVI) investigators, as well as photographs and images, an interactive re-enactment of the events and a range of documents including maps, meteorology, DVI and police comparison reports, reports and transcripts and statements provided to the VBRC. Much of the material in the Murrindindi fire coronial brief was made available to, and considered by, the VBRC.

82. I have had regard to the Murrindindi fire coronial brief and the material from the VBRC, particularly the findings and conclusions contained in Chapter Ten of the VBRC Final Report. I accept the VBRC's conclusions regarding the origin of and the response to the Murrindindi fire.

83. In October 2010, the Victorian Premier appointed Mr Neil Comrie AO APM, to monitor government agencies and departments as they implemented the VBRC's recommendations.[36] The role of the implementation monitor became known as the Bushfires Royal Commission Implementation Monitor (BRCIM) and was subsequently formalised through the *Bushfires Royal Commission Implementation Monitor Act 2011* (the BRCIM Act). The BRCIM's functions were to monitor, review and report on the progress of agencies in carrying out the government's response to the VBRC's Final Report recommendations. The BRCIM Act required the BRCIM to table in Parliament a Final Report by 31 July 2012.[37]

Application for inquest into the Kilmore East fire

[36] This was consistent with recommendation 67 of the VBRC's Final Report.

[37] An amendment extended the operation of the BRCIM Act until 30 September 2014 and required the BRCIM to prepare two additional reports (Annual Reports) on the progress of any implementation action not completed at the date of the tabling of the BRCIM Final Report.

84. Mr Michael Gunter lodged five applications for inquest, dated 7 July 2011, in relation to the 7 February 2009 Murrindindi, Kilmore East, Weerite, Coleraine and Vectis fires.

85. I have summarised Mr Gunter's reasons for an application for inquest into the Murrindindi fire as follows:

    a. concerns regarding initial arson investigations, including the provision of the alleged arsonist details, which he suggested was "deliberate misinformation" and that an AusNet repair truck was witnessed at the Murrindindi Saw Mill at 2.30pm (near the origin and shortly prior to commencement of the Murrindindi fire);

    b. concerns relating to the AusNet repair crew having undertaken work to restore power (following blackouts in the area) before the extreme weather conditions had moderated, including seeking a finding that it was too dangerous for a power company to restore power in such conditions, and regarding their procedures on the day being *'by the book'*; and

    c. a suggestion that 'considerable resources should be applied in an effort to reach a definitive finding, not an open finding'.

86. On 18 July 2011, then State Coroner, Judge Jennifer Coate determined not to make a decision as to whether or not an inquest should be held in relation to each of the fires.

87. Section 7 of the Coroners Act 2008 states that:

> *It is the intention of Parliament that a coroner should liaise with other investigative authorities, official bodies or statutory officers—*
>
> *(a) to avoid unnecessary duplication of inquiries and investigations; and*
>
> *(b) to expedite the investigation of deaths and fires.*

88. Having considered Victoria Police and the VBRC's extensive investigations into all of the Black Saturday Bushfires, and the response to the Murrindindi fire, the BRCIM's role in monitoring government agencies' and departments' implementation of the VBRC's recommendations and the civil proceedings, and having regard to sections 1(c) and 7 of the *Coroners Act 2008*, I have decided not to hold an inquest into the Murrindindi fire.

Conclusion

89. In light of:

    a. the VBRC's:

i. extensive investigation into the location, sequence of events and fire response and management;

ii. detailed findings which considered the sequence of events and fire response and management; and

iii. number and range of recommendations, many of which go to issues of prevention and public health and safety; and

b. the BRCIM's role in monitoring government agencies' and departments' implementation of the VBRC's recommendations; and

c. the civil proceedings relating to the 7 February 2009 Murrindindi fire;

and having regard to sections 1(c) and 7 of the *Coroners Act 2008* (Vic), the court does not propose to conduct any further investigation into the Murrindindi fire.

Findings

90. I find that:

a. the Murrindindi fire occurred between 7 February and 5 March 2009; and

b. the origin and cause of the Murrindindi fire was a failed conductor between poles 5 (11525) and 6 (11526) on a section of the Murrindindi power line, which contacted and electrified a boundary fence that then ignited vegetation under the boundary fence line along the west side of Wilhelmina Falls Road, Murrindindi.

I thank Detective Acting Inspector Andrew Kerr and all of the Phoenix Taskforce officers for their tireless efforts investigating each of the Black Saturday Bushfires and compiling the comprehensive coronial briefs, in this case the Murrindindi fire brief.

I convey my sincere condolences to the families of the 40 people who died as a result of the Murrindindi fire.

Pursuant to rule 64 of the Coroners Court Rules 2009, I order that this finding be published on the internet.

I direct a copy of this finding be provided to the following:

Coroner's Investigator, Detective Acting Inspector Andrew Kerr (formerly of the Phoenix Taskforce)

Michael Gunter

Herbert Smith Freehills (for AusNet)

Signature:

JUDGE IAN L. GRAY

Date: 27/11/15