

Outline of Closing Submissions for the Affected Owners Community Group (AOCG) in relation to the Inquiry into the Grose Valley (Mt Wilson) Fire, and Stage 2 ‘Backburning Operations – Planning and Execution

Introductory Matters

1. These are the outline of the closing submissions for the Affected Owners Community Group (AOCG), led by members Kooryn Sheaves and Jochen Spencer, which address the issues arising in the General Inquiry into ‘Backburning Operations – Planning and Execution’ in relation to the Grose Valley Fire.
2. This outline responds to Counsel Assisting’s Outline of Written Submissions (CAOWS) dated 5 July 2023.
3. The following issues were identified by Counsel Assisting at 56) as being “*explored in relation to the Gross Valley Fire during this Stage 2 hearing.*”
 - 12) What containment strategies were considered to control the spread of the southern edge of the Gospers Mountain Fire in the period up to 12 December 2019 and how did such strategies fit within the wider context of responding to other fire edges for the Gospers Mountain Fire along with other fires burning within the State?
 - 13) What prompted a change in the Southern Containment Strategy on 13 December 2019 and was the change reasonable in the circumstances?
 - 14) How was the Southern Containment Strategy implemented on 14 December 2019 (including timing, ignition pattern, resources and monitoring) and what led to the initial introduction of fire to the east of Mt Wilson Rd?
4. In addition, Counsel Assisting dealt in his outline at 2)-25) with the following issues:
 - 9) What terminology is used around back burns (e.g., backburns versus hazard reduction burns, strategic back burns versus tactical back burns, offensive vs defensive strategies)?
 - 10) What early suppression efforts (such as aerial attacks) were used in an effort to keep fires small across the 2019-2020 season?
 - 11) Who has responsibility for decision-making about back burns in circumstances where a declaration is in force pursuant to s44 of the *Rural Fires Act 1997* (NSW)?
5. The six issues reflect the draft outline of issues provided by the court, dated 31 March 2023.

6. The affected residents make no submission regarding issues 9) and 10). Their submission in relation to 11) is dealt with below at paragraphs 8. and 9. In the context of another matter.
7. Before addressing these, set out below is a brief outline of matters impacting the current inquiry that will impede the Coroner from finding out not just what in fact happened in relation to the Mount Wilson backburn but how and why it occurred, which is necessary to determine the central question of whether that backburn was, in the circumstances, appropriate.

Critical decision makers from the RFS or NPWS were not called to give evidence:

8. Neither the Rural Fire Service (RFS) Commissioner at the time of the Mt Wilson backburn, nor the current Commissioner were called to give evidence. In answer to CAOWAS at 21) to 24) and 248), 249), it is submitted that under the law of NSW, it is the Rural Fire Service Commissioner who is responsible for “*bush fire fighting operations and bush fire prevention measures*” once a s44 declaration is in place.
9. In answer to CAOWS at 23), Hawkesbury District Incident Controller (Superintendent Karen Hodges) who had authority to approve the strategic Mt Wilson backburn and request Emergency Warnings was relevantly the Incident Controller, having been appointed as such on 11 November 2018. She was not called to give evidence.
 - a. Mr Carter states:

Q. Perhaps I can say - you say you had no knowledge about the warnings, who would know about that, and are they coming to give evidence in this proceeding?

*A.I'm not aware of any of those personnel coming to give evidence, except potentially - yeah, I'm not familiar.*¹

Note: Superintendent Karen Hodges was available to give evidence and was sitting in the gallery during the evidence of Jamie Carter, Craig Burley and Ken Pullen.
10. The State Operations Controller and/or Assistant Commissioner who was on duty on 14 December 2019 (the day of the Mount Wilson backburn) were not called to give evidence.
 - a. RFS Assistant Commissioner, Mr McKechnie states:

¹ Transcript for 16 May 2023 (Carter) T1482 35-45

Q. --so I just wanted to make clear. You don't know who from a head office point of view had oversight of the Mount Wilson backburn on the 14th?

A. Not on that particular day.²

11. The State Operations Controller and/or Assistant Commissioner who were involved in the planning or oversight of the Mt Wilson backburn on 14 December 2019 were not called to give evidence.

- a. RFS Assistant Commissioner, Mr McKechnie states:

Q. Counsel Assisting, I think, asked you some questions about your personal involvement in the 14 December backburn. You didn't have any operational oversight of that?

A. Not on the day that it was done. There were - there were periods that - during the - when the IMT was planning the operation that I was on duty as the State Operations Controller. I was aware of an operation being planned. But on the day that it was carried out, I wasn't on shift that day, and I had no immediate involvement in terms of drafting the plan.³

12. The Head of the Public Information Unit within State Operations – personnel responsible for authorising and approval (along with the State Operation Controller) of RFS social media posts and major fire updates on RFS website at HQ⁴ and who was on duty on 14 or 15 December 2019 was not called to give evidence.

- a. RFS Assistant Commissioner, Mr McKechnie states:

Q. So it's not clear. As far as you know, no one involved in any of the processes that we've spoken about for the approval and dissemination of this material and material like it, none of those persons are giving evidence in this inquiry as far as you know?

A. Not as far as I know, or not - certainly not in this period. We have had people involved in public information present during the proceedings, but--

Q. Not in these five days.

A. Yes.⁵

² Transcript for 19 May 2023 (McKechnie) T1705 30

³ Transcript for 19 May 2023 (McKechnie) T1702 10-15

⁴ Transcript for 19 May 2023 (McKechnie) T1703-1704 35-10

⁵ Transcript for 19 May 2023 (McKechnie) T1704 25-30

13. The Hawkesbury District Facebook Administrator or the Public Liaison Officer within Hawkesbury RFS who were on duty on 14 December 2019 were not called to give evidence.

- a. Mr Pullen states:

In relation to the Hawkesbury District Facebook post inaccurately describing the fire threat on 14 December 2019:

Q. Do you know who the PLO was at the time of this post?

A. I don't know, but it would be in the evidence because I believe you have the list of who was holding what positions at what times.

Q. But importantly, you weren't responsible for this post?

*A. I was not the PLO responsible for that, no.*⁶

14. The Hawkesbury IMT Planning Officer who was on duty on 14 December 2019, or who had drafted the 14 December 2019 IAP was not called to give evidence.

- a. In relation to the 13-14 December overnight Planning Officer, Ken Pullen states *"I was not the Planning Officer that night."*

When asked about the contingency planning for the Mt Wilson backburn, Pullen states that: *"So I wasn't actually part of the team that put together the IAP for the 14th"*⁷

- b. Craig Burley stated, in relation to the planning of the Mt Wilson backburn on 14 December 2019, that:

*"I had very little input into the development of the plan, because I was operational in other areas of the fireground."*⁸

Minutes of key meeting and a complete set of relevant planning documents not presented by RFS

15. Evidence was heard by a number of witnesses about the critical planning teleconference meeting at 4:46 pm on 13 December 2019. Mr Carter gave evidence that *"a decision to go ahead on the 14th was made at this time."*⁹ This is dealt with in CAOWS at 100)-119).

16. **Elizabeth Raines**

⁶ Transcript for 16 May 2023 (Pullen) T1511 10-15

⁷ Transcript for 16 May 2023 (Pullen) T1508 35

⁸ Transcript for 17 May 2023 (Burley) T1551 15

⁹ Transcript for 16 May 2023 (Carter) T1503 40-45

Mt Wilson Captain Elizabeth Raines gave evidence that she first became aware of the plan to backburn at the Mt Wilson Rd and Bells Line of Road intersection via the Live Traffic App on at around midday on 13 December 2019.¹⁰

17. Following this, Ms Raines and Senior Deputy Captain Peter Raines, attended the 13 December teleconference meeting with Hawkesbury Fire Control.
18. Both Beth and Peter raised concerns about the change of plan proposed for the 14 December, including:¹¹
 - a. Concern for the fire escaping into the upper Bowens Creek Catchment
 - b. That the anchor point for the backburn should be relocated to Du Fours Rocks at Mt Wilson.
 - c. That the crew briefing should be held at Mt Wilson instead of Bilpin so that crews could familiarise themselves with the local topography.
19. In regard to the response from the Hawkesbury IMT and others present at the meeting to these suggestions, Ms Raines ultimately stated that:

“It seemed it had already been decided that the corner of Mount Wilson Road and Bells Line of Road would be the anchor point.”¹²

And further, that

“it was because it had to go ahead anyway, like, it was a foregone conclusion”¹³

20. Ms Raines stated that she had expressed concerns about the potential for the backburn to escape:

“I expressed concerns about potential for it to jump over Mount Wilson Road, into the Bowens Creek area. Once it was in there, as far as I was concerned, it would be uncontainable and would then cross Bells Line of Road and end up into the Grose Valley.”¹⁴

21. Ken Pullen

¹⁰ Transcript for 18 May 2023 (Raines) T1615 15

¹¹ Transcript for 18 May 2023 (Raines) T1615-1616 45-5

¹² Transcript for 18 May 2023 (Raines) T1616 15

¹³ Transcript for 18 May 2023 (Raines) T1618 10

¹⁴ Transcript for 18 May 2023 (Raines) T1617 15

Alternatively, Ken Pullen stated that there was a “*consensus*” in the meeting and that “*there were no final negative comment. It was all yes, yes, yes, yes.*”¹⁵

22. **Craig Burley**

Mr Burley stated “*Everybody seemed to be in agreement*”¹⁶

23. **James Carter**

Mr Carter was asked if minutes were kept of the 13 December 2019 Meeting in the planning cell at Hawkesbury fire control. Mr Carter replied that it is “*common place for minutes to be kept, and I’m not privy to those minutes at this point in time.*”¹⁷

24. Ultimately there were no minutes of this critical planning meeting produced by the RFS.

25. Furthermore, no minutes of any meeting of the IMT were presented to the Coroner as part of the factual evidence relating to the planning and management of the Gospers Mountain bushfire or the Mount Wilson backburn.

Evidence presented in written reports by experts on behalf of the Grose Valley Affected Owners Community Group were not presented in court or substantially addressed in the Counsel Assisting’s written closing submissions.

26. The Grose Valley Affected Owners Community Group (AOCG), led by members Kooryn Sheaves and Jochen Spencer, engaged three experts:

- a) Mr Nicholas Gellie, Fire Ecologist Expert;
- b) Mr Terence Kirkpatrick, Psychologist; and
- c) Mr Brian Williams, Captain, Kurrajong Heights Rural Fire Brigade.

27. Mr Gellie provided a detailed and comprehensive 120-page report of the backburn failures in the lead-up to and including the Mount Wilson backburn escape, as well as a comprehensive analysis of what he consider to be realistic possible alternatives to strategic backburning that, if implemented, may well have suppressed the Gospers Mountain bushfire better.

28. Mr Terence Kirkpatrick discussed the implementation of Recommendation 47 of the NSW Bushfire Inquiry 2020 in relation to two community meetings at Berambing and Kurrajong Heights in 2023. He discussed the need to improve accountability and

¹⁵ Transcript for 16 May 2023 (Pullen) T1505 5-15

¹⁶ Transcript for 16 May 2023 (Burley) T1522 20

¹⁷ Transcript for 16 May 2023 (Carter) T1503-1504 50-5

confiden in the RFS by implementing mechanisms for better community feedback and engagement with the agency.

29. Lastly, Mr Brian Williams as a long serving Bushfire Brigade member presented evidence into practical bushfire fighting approaches, including strategic fuel management.
30. None of these reports were challenged or questioned in any way.
31. At CAOWS 60), it is noted that *“The Court also received into evidence from Gross Valley Fire affected owners and the Submission of the AOCG to the NSW Bushfire Coronial Inquiry was marked for identification.”*¹⁸
32. The affidavits of Kooryn Sheaves and Jochen Spencer incorporate the Submission directly into their evidence.
33. None of the witnesses proposed by the affected residents were called to give evidence.
34. This matter was canvassed in correspondence from solicitors acting for the affected residents to the legal team assisting the Coroner on 8 May 2023 (email), letters dated 12 May 2023 and 12 July 2023 (answered on 14 July 2023), a letter dated 17 July 2023 in relation to the hearing of the expert evidence of Dr Nick Gellie, which was answered on 25 July 2023.
35. In addition, the matter did arise before the Court on 16 May 2023, transcript 1463-1464.
36. In correspondence from the legal team assisting the Coroner dated 25 July 2023, it was stated at paragraph 13 that:

Those assisting the Coroner formed the view there was no forensic utility in requiring witnesses for further examination where their evidence was in the coronial brief and no other party granted leave required those witnesses for oral examination.
37. This Court is not only a fact-finding tribunal, but is also vitally concerned with both restorative and therapeutic justice for those affected by the matters which form the jurisdiction of the court. This has been dealt with in some detail in the recent report of the Select Committee into the Coronial Jurisdiction in NSW.¹⁹ In the present case, it is those who were negatively impacted by the decision to conduct the backburn at Mount Wilson. It is submitted that failing to hear from any of those who were relevantly affected constitutes a failure to adhere to this core function and purpose of the Court.

¹⁸ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 99 (Affected Owners Community Group Affidavits); MFI-B (NSW Bushfire Coronial Inquiry Submission of the Bushfire Residents Group).

¹⁹ [https://www.parliament.nsw.gov.au/lcdocs/inquiries/2809/Report No. 1 - Select Committee on the coronial jurisdiction in New South Wales.pdf](https://www.parliament.nsw.gov.au/lcdocs/inquiries/2809/Report%20No.%201%20-%20Select%20Committee%20on%20the%20coronial%20jurisdiction%20in%20New%20South%20Wales.pdf)

38. Further, those persons clearly did not receive the warnings said to have been provided to the community regarding the threat posed by the backburn. This is evidence that goes to a central issue before the Coroner: whether the warnings were timely and appropriate - a matter the court-appointed expert deals with. Those directly impacted were not afforded the same opportunity to be heard on this issue (and others) and constitutes a failure to accord them natural justice.
39. Further in that same correspondence it was stated at paragraph 16 that:

During the hearing on 16 May 2023, and when your Counsel (Mr Searle) stated that Mr Gellie's Report was unchallenged, Counsel Assisting raised an objection and submitted that Mr Gellie was not required to give oral evidence because he had not engaged with the areas of focus for the hearing nor the evidence of the independent expert, Mr Conway, about the appropriateness or not of the relevant backburn in focus. In response to that submission, no application was made on behalf of your client seeking to have Mr Gellie added to the witness list.
40. As the legal team assisting the Coroner reminded the affected residents in the correspondence of 25 July 2023 at paragraph 20, it is a matter for Counsel Assisting to call witnesses, presumably subject to the views of the Coroner. The affected residents have made their request known in substance and clearly on more than one occasion to Counsel Assisting and the court regarding their desire to have their expert give evidence orally.
41. It is submitted that the failure to call Mr Gellie constitutes a failure to accord natural justice to the affected residents, particularly in circumstances where Mr Conway gave evidence regarding his views on at least some of Dr Gellie's evidence (see CAOWS 95)-97).
42. The reason Mr Gellie was not called was said to be because he does not engage, with the issues before your Honour and does not engage with what Mr Conway has said in his report about the appropriateness or not of the relevant backburn.
43. It is submitted that Mr Gellie **does** engage with the issues before this Court and Mr Conway's report, as will be explored below.
44. To the extent this evidence conflicts with other evidence before the Coroner in this matter, it is submitted that the evidence of Dr Gellie evidence should be preferred. If the Coroner is not minded to do this, the Court should hear from Dr Gellie.

ISSUE 12: What containment strategies were considered to control the spread of the southern edge of the Gospers Mountain fire in the period up to 12 December 2019 and how did such strategies fit within the wider context of responding to other fire edges for the Gospers Mountain fire along with other fires burning within the State?

45. There is very little evidence supplied by the RFS documenting the containment strategies that were implemented relating to the Gospers Mountain fire. There is little source documentation concerning the development, implementation, success or failures of strategies.
46. On 12 November 2019 the IMT identified a hard line containment strategy to encircle the fire with backburns ignited from control lines which was calculated to result in a fire area of approximately 450,000 hectares which would create “a planned protected zone around assets and allow firefighting to be undertaken on firefighters’ terms with sufficient resources under suitable conditions.”²⁰
47. Mr Gellie provided analysis of a series of significant backburn escapes and containment escapes totaling an area burnt of 242,990 ha.²¹
48. Mr Gellie further identified backburn escapes at Colo Heights on 19 November 2019, and Mountain Lagoon on 6 December 2019 which were not subject to detailed analysis in his report and thus not included in the total area burnt.
49. The overreliance on the “hard line” backburning approach to containing the Gospers Mountain Fire meant that opportunities to contain some of the Gospers Mountain Fire edges were missed. These alternative strategies could have reduced the size of the Gospers Mountain Fire.
50. Mr Gellie in his report to the coroner provided a detailed analysis of three possible alternative options that should have been considered to mitigate the spread and severity of the Gospers Mountain bushfire in the period from 3 November to 14 December. His report clearly demonstrated fire rain-stopping events and benign periods of fire weather which could have been used to buy time and opportunities for the fire to go out using natural and man-made advantages. His analysis has been successfully applied in the 1984/85, 1990/91, 1991/92, 1993/94, and 1997/98 fire seasons. There is even an example shown of the 1997 Lithgow Tip fire which was

²⁰ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4233

²¹ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4212

successfully suppressed using a combination of local area tactics, remote area firefighting, aerial ignition on mild fire weather days, and follow-up rapid attack of any escapes from natural containment using helicopters and RAFT teams.²²

51. In addition, Mr Gellie identified a series of “missed opportunities” and alternative strategies to backburning that could have been implemented by the IMT. These are termed containment escapes in his report. One critical one in his case study 5 would have obviated the need for any backburns around Mt Wilson and Mt Irvine.²³
52. In reply to CAOWS at 95)-87), it is submitted that there were successive backburn containment failures relating to the Gospers Mountain Fire edges leading up to the Mt Wilson Backburn on 14 December 2019. These are dealt with by Mr Gellie in his report.²⁴ Mr Conway was asked if he knew if these backburn failures were taken into consideration by the IMT. He replied that he assumed they were, but agreed that he had not seen that documented.²⁵
53. However, there is no evidence before the Court that the failure off these backburns, each of which became uncontrolled, was taken into consideration by those who decided to light the Mount Wilson backburn. This failure bears on the question of whether the change in the Southern Containment Strategy on 13 December 2019 was reasonable in the circumstances.

<p>ISSUE 13: What prompted a change in the Southern Containment Strategy on 13 December 2019 and was the change reasonable in the circumstances?</p>

54. The change in the southern containment strategy was caused by:
 - a. RFS concern about the threat posed by the escaped Glow Worm Tunnel Road and Black Fellows Hands Trail backburns that were burning intensely north east of Lithgow.
 - b. Failure to consider or implement alternative containment options
55. In reply to CAOWS at 100)-139), it is submitted that the change was unreasonable in the circumstances, because:
 - a. There was no risk analysis or contingency plan developed for the Mt Wilson Backburn operation;

²² Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4198-4200

²³ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4182

²⁴ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4156-66

²⁵ Transcript for 19 May 2023 (Conway) T1666 20-40

- b. The timing of the backburn was determined by resources availability, rather than the best conditions;
- c. Local brigades, with the best local knowledge, were not consulted about the decision; and
- d. The consequences of the 14 December 2019 backburn failures documented in Mr Gellie's report were not assessed.

Change to the southern containment strategy on 13 December 2019

- 56. On 7 and 12 December strategic backburn escaped along Glow Worm Tunnel Road & Blackfellows Hands Trail on the Newnes Plateau. Linescan imagery taken at 17:28 on 13 December shows intense fire activity caused by these escaped backburns.²⁶
- 57. Ms Raines gave evidence that the reason given for the change in strategy by the IMT during the 13 December 2019 phone conference was that *"They were worried about fire activity on the Newnes Plateau, which is further to the north-west of us."*²⁷
- 58. Ms Raines further added that in her recollection this was the only reason given for the change in strategy on 13 December 2019.²⁸
- 59. Mr Gellie stated that *"The failure of the Gloworm Tunnel backburn...contributed to the decision to commit to the (Mt Wilson) backburn."*²⁹

The change in strategy was not reasonable.

No risk assessment was produced for the Mt Wilson Backburn on 14 December 2019.

- 60. Mr Conway agreed that the backburn planned for the 14 December was a "high risk" strategy.³⁰ However, no risk assessment of the specific Mt Wilson backburn has been produced to the Court.
- 61. Risk assessment documents and contingency plans relating to the planning of the Mt Wilson backburn and other fire edges around the Gaspers Mountain Fire, were requested by the Affected Owners Community Group (AOCG) from the RFS several

²⁶ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4182

²⁷ Transcript for 1st8 May 2023 (Raines) T1633 10

²⁸ Transcript for 1st8 May 2023 (Raines) T1633 25

²⁹ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4185

³⁰ Transcript for 19 May 2023 (Conway) T1617 5-10

times. An application for the Coroner to make an order for the production of these documents was declined.

62. The RFS counsel Ms Woodland stated during the 6 April 2023 Directions Hearing that the RFS had spent considerable time revisiting and rechecking records regarding the production of documents and “to our knowledge there are no gaps”.

63. On 6 April 2023 Ms Woodland, Counsel for the Rural Fire Service stated:

“My client has spent considerable time revisiting and rechecking its records for what it produced both in relation to requests by the NSW Police during the course of its Coronial investigation and what it has produced to your Honour and those assisting your Honour in the present inquiry. Save for one IAP, incident action plan, for the period of 15-16 December 2019, which has now been provided.

We say that our production to your Honour has been comprehensive and to our knowledge there no gaps in what has been provided. We say that what has been sought has been provided and there is nothing further that needs to be produced pursuant to your Honour’s orders.

And I must say significant time has been spent checking that that is in fact the position – and it did turn up one document which had not been provided and we comfortable - more than comfortable that that production has been comprehensive.

So, its important to understand your Honour that my client has responded to all request made by your Honour and those assisting you to date, and will continue to do so.”³¹

64. An options analysis was provided by Mr Carter outlining a basic analysis of the different strategic options the IMT was considering regarding the implementation of the southern containment strategy for the Gospers Mountain Fire.³² It is not a formal document and is undated, only being included in the Factual Investigation and Jamie Carter’s statement a significant period of time after the Mt Wilson backburn.

65. Whilst the “options analysis” provides some commentary regarding the advantages and disadvantages associated with the different strategic options considered for the southern containment strategy, it does not provide any detailed risk or consequence analysis of the Mt Wilson backburn operation to be carried out on 14 December 2019.

66. Consequently, there appears to be no documentation of risk analysis relating specifically to the Mt Wilson Backburn on 14 December 2019. In this circumstances, it is submitted that a conclusion can reasonably be drawn that there was no specific risk

³¹ 6 April 2023 Directions Hearing

³² Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 77 (Supplementary Statement of James Carter), p 3587-3588

assessment done in connection with the proposal to conduct the back burn at Mount Wilson on 19 December 2019.

67. Further, according to Mr Conway, this was a departure from the established strategy and the triggers for undertaking the backburn in the Mount Wilson and Mount Irvine areas had not been reached.³³ Further, there was certainly an understanding that they might not have time to finish the backburn.³⁴
68. The identified trigger of the 99th parallel mentioned by Mr. Conway and Mr. Carter was not met despite Mr. Carter stating this was met on 11 December 2019 using a fire linescan image shown in the image below.³⁵
69. On page 4194 of Mr. Gellie's report³⁶ he shows that the fire had not crossed the lower Bungleboori Creek on 16 December at the points shown as yellow circles on Mr. Carter's map. The most relevant section of the Bungleboori Creek was the upper section of the Bungleboori Creek and not the lower section for the purposes of the fire risk assessment for Mount Wilson and Mount Irvine. Mr Gellie in case study no.5 in his report³⁷ demonstrated that there was a missed opportunity to put the fire out between 10 and 14 December 2019.

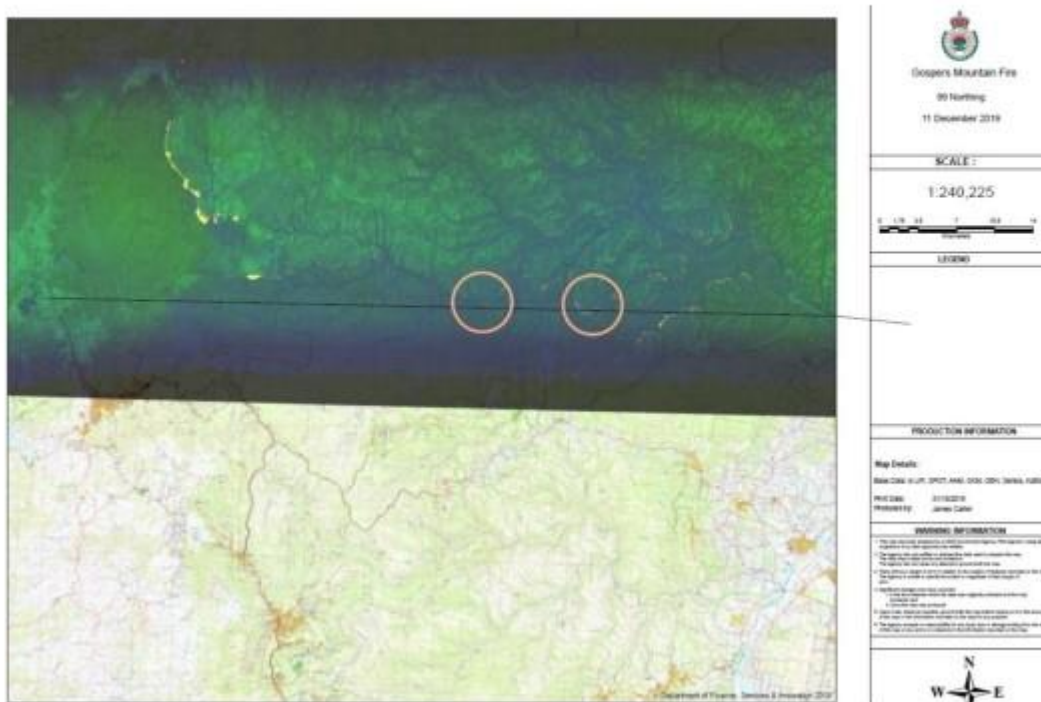
³³ Exhibit 56A, Brief of Evidence - Grose Valley Mount Wilson, Tab 82 (Report of Conway) at p3732, cited in CAOWS 120)

³⁴ Transcript for 19 May 2023 T 1652:16-48 (Conway)

³⁵ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 94 (99 Northing Grid Map, Carter), p.4144

³⁶ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4194

³⁷ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4182



No contingency plan was produced for the Mt Wilson Backburn on 14 December 2019.

70. In his oral evidence, Mr Carter was asked about the contingency planning for the Mt Wilson backburn operation on 14 December 2019. Mr Carter stated:

“I don’t recall it being specifically documented.”

“I didn’t see a written contingency plan.”³⁸

71. Mr Pullen agreed that if there was a contingency plan for the 14 December backburn, this should be in the IAP.³⁹

72. There is no contingency plan relating to the Mt Wilson backburn operation on 14 December 2019 included in the relevant IAP.

³⁸ Transcript for 16 May 2023 (Carter) T1476 15-30

³⁹ Transcript for 16 May 2023 (Pullen) T1508 35

73. Furthermore, in regards to the Contingency Planning, Mr Burley was asked what this planning consisted of:

A. It consisted of falling back to Bells Line of Road, that, if the backburn had escaped across Mount Wilson Road - that the next fallback option was going to be the Bells Line of Road”

Q. So it wasn't a contingency plan about how to deal with the backburn if it escaped its containment, it was about how you and the other firefighters would respond to that situation, to protect—

A. Well, that was - that was - my understanding, would have been the next fallback option, the next control-line option. The contingency plan for a spot, or a cross, or a slopover, whichever term one wants to use, was to go direct with aircraft against that. So that was really clear; we knew what we were going to do if we had a spot, and that was go direct with aircraft, support it with ground troops, if possible.⁴⁰

74. Mr Gellie stated in relation to the planning of the Mt Wilson Backburn:

“On the information available, there is no source documentation outlining detailed planning of any of the case study backburning operations listed in this report. Given the high risk and high consequences of each backburn listed in this report, it is concerning that these basic planning documents are unavailable as they would provide significant insight into the decision-making process of the IMT and RFS before each backburn was implemented.”⁴¹

Timing of the backburn was determined by the availability of resources

75. Mr Pullen stated that, had the resources been available on the evening of 13 December, the general consensus would be that this would have been a good opportunity to try putting that backburn in. However, the IMT was unable to get any strike teams for that night.⁴²
76. Contrary to Mr Pullen’s statement, RFS Assistant Commissioner Peter McKechnie was asked:

Q. So you're saying availability of resources for that reason would not have been a factor in deciding to have the backburn on a Saturday?

⁴⁰ Transcript for 17 May 2023 (Burley) T1550 35-50

⁴¹ Exhibit 56A Brief of evidence - Grose Valley Mount Wilson, Tab 96 (Report of Gellie), p. 4218

⁴² Transcript for 16 May 2023 (Pullen) T1504 30-40

*A. I don't think the availability of resources would have been in terms of volunteer availability.*⁴³

77. Chris Banffy, Air Attack Supervisor, also stated that the backburn should have been done at night⁴⁴, agreeing with the statement of Ken Pullen that the “*general consensus*” was that implementing the backburn on the evening of 13 December 2019 would have been a “*good opportunity*” if resources were available.

There were not enough resources were available to control the backburn and put out spot overs.

78. In reply to CAOWS 144)-148), it is submitted that there was conflicting evidence as to what resources were planned, what were available and what were actually used by the IMT to carry out the Mt Wilson backburn on 14 December.

79. In his evidence, RFS Assistant Commissioner, Mr McKechnie stated that:

*“ I am informed and verifiably believe the following eight planned aircraft were allocated to the Bell Division throughout the day and evening of 14 December 2019: FB245, Park Air 4, FB287, HT296, FB324, FB283, HT101, and HT340. The following five unplanned aircraft were available to call upon: Bomber 210, Bomber 134, Bomber 139, Bomber 911, and Bomber 273.”*⁴⁵

80. However Mr Carter stated that:

*“we continued and maintained a minimum of three Helitak; three medium machines, and the large aircraft was also made available to us with both gel and retardant.”*⁴⁶

81. Mr Carter was also queried about the benefit of having additional regional “surge” crews stationed at Orchard Hills, located approximately 1 hour and 30 minutes away from the backburn.

82. Mr Carter stated that:

*“he was comfortable with that.”*⁴⁷

⁴³ Transcript for 19 May 2023 (McKechnie) T1705 5

⁴⁴ Exhibit 56A, Brief of Evidence – Grose Valley Mt Wilson, Tab 80 (Statement of Chris Banffy), p. 3703

⁴⁵ Exhibit 56A, Brief of Evidence – Grose Valley Mt Wilson, Tab 79 (McKechnie), p. 3647, 3690.

⁴⁶ Transcript for 16 May 2023 (Carter) T1472 35-45

⁴⁷ Transcript for 16 May 2023 (Carter) T1474 5-10

83. However Mr Burley stated that it took 1 hour from 14:40 when the spot fires were reported to when additional crew arrived. Mr Burley responded that the fire had become “*significantly*” worse within this hour.⁴⁸
84. Furthermore, Mr Conway states that additional resources were requested by the Hawkesbury IMT after the Backburn had escaped but this request was declined by Blue Mountains RFS because there were no resources available to send.⁴⁹
85. Fire and Rescue NSW Clayton Allison statement describes how resources could not reach Mt Wilson due to the escape backburn fire activity. Mr Allison states that at 15:24 hrs is strike team (Strike Team Quebec) attempted to get through to Mt Wilson but approximately 3-4km along Mt Wilson Road they were prevented by the extreme fire conditions and returned to the intersection. It was not until after 5pm that his Strike team was able to reach Mt Wilson to setup for property protection.⁵⁰

Bilpin RFS Brigade not included in consultation on 13 December 2019

86. In reference to the 13 December 2019 meeting, Mr Carter stated that:

“I don't recall anyone from Bilpin being involved in that meeting, no.”

and further, that

“My assertion would be that Bilpin was involved in locating containment lines and that would have been the extent of their involvement.”⁵¹

87. Ken Pullen, Hawkesbury Group Captain, who was also involved in the same meeting on 13 December 2019 stated when questioned:

Q. Okay. I think Counsel Assisting took you to some of the evidence about the meeting on 13th and you gave some evidence about who was there. At paragraph 28 of your statement, you say there were volunteers from Bell, Mount Wilson, Bilpin and Mount Tomah Brigades. Are you absolutely certain that representatives of all those Brigades were present to your best recollection?

⁴⁸ Transcript for 17 May 2023 (Burley) T1555-1556 50-5

⁴⁹ Transcript for 19 May 2023 (Conway) T1664 5-20

⁵⁰ Brief of Evidence Gaspers Mountain Fire, Tab 20 (Statement of Clayton Allison), p. 613-614

⁵¹ Transcript for 16 May 2023 (Carter) T1476 40-50

A. The only one - to my best recollection, and certainly when I wrote this, I believed that that was the case, to my recollection last August. Today, in further reflection in coming to this inquiry, I'm not 100% certain of the Bilpin but I am of all the others.⁵²

88. The Bilpin RFS district includes Berambing which was heavily impacted by the escaped backburn east of Mt Wilson Road on the 15 December 2019.

Bilpin Divisional Commander on 15 December not told that backburn had escaped

89. At 3pm on 14 December, shortly after the spotfires were reported east of Mt Wilson Road, the Hawkesbury IMT completed fire spread prediction modelling⁵³ which indicated that the escaped backburn would impact Mt Tomah, Berambing and Mt Wilson area on 15 December 2019.
90. An additional "Best Estimate" Fire Spread Prediction was completed at 9:30 am on 15 December 2019, which indicated that the escaped backburn would likely impact Mt Wilson, Mt Tomah, Berambing and Bilpin that day.⁵⁴
91. Kevin Tame, the Bilpin Divisional Commander on 15 December 2019, stated that, on the morning of 15 December 2019 he was not told the Mt Wilson Backburn had escaped.⁵⁵ Under instructions, on 15 December 2019 he and his crew were tasked with lighting a test backburn at Mt Tootie.

Consequences of the backburn failure were not assessed during the planning of the Mt Wilson Backburn

92. Mr Carter provided an options analysis table used in the planning of the southern containment strategy.⁵⁶ This document outlines advantages and disadvantages of the 4 options the RFS had considered. The potential backburn escape and the likely extreme consequences this would cause for communities east of Mt Wilson Road are not

⁵² Transcript for 16 May 2023 (Pullen) T1507 5-10

⁵³ Brief of Evidence Gaspers Mountain Fire, Tab 37 (Fire Spread Prediction Map, 14 December 2019) p. 1603

⁵⁴ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 94 (Additional Gaspers Mountain Fire Spread Prediction Map) p. 4139

⁵⁵ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 99 (AOCG Affidavit of Kevin Tame), p. 4355

⁵⁶ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 77 (Supplementary Statement of James Carter), p 3587-3588

identified or considered in this analysis.

93. There are no documents within the Brief of Evidence indicating that the RFS produced detailed consequence analysis or utilised tools such as Pheonix RapidFire predictions or Fire Behaviour Analyst predictions to develop potential breakout scenarios prior to the backburn commencing.
94. Fire spread prediction modelling was completed by the RFS at 3:00pm on 14 December (after the spot overs were reported) which indicated that the escaped backburn would likely take a several kilometre run towards Mt Wilson, Mt Tomah, Berambing and Bilpin on 14 and 15 December 2019.⁵⁷
95. Ultimately this is the scenario that occurred on 14 and 15 December 2019. The consequences of the escaped Mt Wilson Backburn created the worst case scenario that the RFS had tried to prevent.
96. As a result, the communities of Mt Tomah, Berambing and Bilpin were faced with extreme circumstances on 15 December 2019 as a result of the intense fire and long distance spotting. The consequences of the backburn escape on 14 December 2019 resulted in firefighters being forced into a defensive strategy.
97. As Mr Conway explained how “*very, very high risk*” such a defensive scenario is for firefighters and the community:

“The sort of fire intensity that you get from significant fire runs that have been running for a number of kilometres is incredibly challenging for firefighters, and very, very high risk, and we've seen tragic consequences for firefighters and residents in circumstances where defensive strategies were the only things available to them, in those high intensity fire runs.”

“The challenge for firefighters in that circumstances are extreme, and the potential for successfully protecting life and property in those circumstances is minimal.”⁵⁸

98. Mr Conway was further asked about the potential of long distant spotting, and he replied:

“There's actually a lot of very good research being done in Australia in relation to potential for spotting, and a lot of the modelling nowadays gives you really good indications of potential. So, you know, three to 5 kilometres is not uncommon. Eight to 10 kilometres in extremely severe circumstances.”⁵⁹

⁵⁷ Brief of Evidence Gaspers Mountain Fire, Tab 37 (Fire Spread Prediction Map, 14 December 2019) p. 1603

⁵⁸ Transcript for 19 May 2023 (Conway) T1647 25-35

⁵⁹ Transcript for 19 May 2023 (Conway) T1647 40-50

99. Despite being aware that the escape backburn was likely to impact Mt Tomah, Berambing, Mt Wilson and Bilpin, public communication and warnings relating to the fire threat were inaccurate.

Warnings and Communications on 14 and 15 December 2019 inaccurate.

100. Hawkesbury District RFS public Facebook post at 6:41pm on 14 December inaccurately explained that the fire remained within planned containment lines. This was despite the IMT having been told the backburn had breached the Mt Wilson Road containment line by the Divisional Commander Jamie Carter approximately 4 hours earlier.⁶⁰
101. Mr Carter, who was Bell Divisional Commander on the 14 December 2019 agreed that this warning information was inaccurate. He stated that there was no contention that the backburn had escaped containment lines earlier in the afternoon⁶¹ and that he had communicated this to the Hawkesbury IMT “within minutes” of the backburn failing.⁶²
102. The MFI-B submission, incorporated into the affidavits of Kooryn Sheaves and Jochen Spencer, details a sequence of inaccurate warnings and public communications by the RFS from 14 December and 15 December 2019.
103. Following the 6:41 pm Facebook Post from Hawkesbury District RFS (annex 41 of MFB-1 submission), none of the public warnings issued by the RFS described:
- a. that there was any fire located south of Mt Wilson
 - b. that the backburn had escaped containment lines
 - c. that the backburn posed an imminent threat to communities in Mt Wilson, Mt Tomah, Berambing and Bilpin
 - d. that there was fire threat to the Blue mountains LGA wherein 3 of the towns impacted on 15 December are located.
104. Mr Conway was shown various publicly available warnings and communications issued by the RFS on 14 and 15 December 2019.
105. He was also taken to a copy of an Emergency Warning issued by the RFS on 14 December regarding fire threat to Mt Wilson. He agreed that the message doesn't make it clear that the threat is from the backburn or that the backburn had escaped.⁶³

⁶⁰ Transcript for 16 May 2023 (Carter) T1480 10-15

⁶¹ Transcript for 16 May 2023 (Carter) T1481 40

⁶² Transcript for 16 May 2023 (Carter) T1482 10-15

⁶³ Transcript for 19 May 2023 (Conway) T1670 5

106. Mr Conway was shown another Facebook message issued by the Hawkesbury District RFS at 6:36pm on 14 December 2019 which stated that “the fire remains within planned containment lines”. Mr Conway stated in response that: *“I can indicate that it doesn’t reflect what was happening.”*⁶⁴
107. Mr Conway was shown a Major Fire Update which described fire north of Mt Wilson, Mt Irvine and Bell and that it did not mention the escaped backburn. He was asked if this was a significant omission and he replied that: *“The point you make is valid, it doesn’t capture that.”*⁶⁵
108. Mr Conway described a fire spread prediction map that he had studied which he explained: “As far as Mount Tomah, the indication from the fire progression map that I studied indicated a significant fire run on that particular day, as far as Mount Tomah.”⁶⁶
109. Mr Conway agreed that the fire threat posed by the escaped backburn was not reflected in the RFS community newsletter posted at 12:06 pm on 15 December which stated that fire was *“north of Bell, Mount Wilson, Mount Irvine”* and there *“was no immediate threat”*.⁶⁷
110. The ICON Intelligence log records a request for an upgrade to Emergency Warning Level at 12:55 pm on 15 December 2019. The request was made from crews on the Fireground stating that *“moving into property protection....fire moving uphill from the backburn – impact within 30 min.”* This request was denied by the Incident Controller eight minutes later.⁶⁸

519973	352934	15-Dec-19 12:55:15 PM	dking	[From Bell DC] Moving into property protection west of Mt Wilson station - NW side of Church Lane - fire moving up hill from the back burn - impact within 30 min. Requesting increase in warning level.
519982	352934	15-Dec-19 1:03:27 PM	MattheR1	IC, DIC's & PLO in conference with fireground Ops concur that warning level will remain at W&A in relation to Mount Wilson. Strike teams are in position on the southern side of Mount Wilson for property protection and an additional strike team is moving into the area. Crews will door knock and advise the community of what is happening. The combination of resources, time until impact and community already being aware of the situation negates the need to move the warning level up.

Icon Intelligence Log, Gaspers Mountain Fire

111. In reply to CAOWS 236)i) and the evidence of Mr Conway cited there, and the further submission at CAOWS 237) and the evidence of Mr Conway cited there, it is submitted

⁶⁴ Transcript for 19 May 2023 (Conway) T1670 35

⁶⁵ Transcript for 19 May 2023 (Conway) T1670 40-50

⁶⁶ Transcript for 19 May 2023 (Conway) T1672 5

⁶⁷ Transcript for 19 May 2023 (Conway) T1672 5

⁶⁸ Brief of Evidence - Gaspers Mountain Fire, Tab 41 (ICON Intelligence log, Gaspers Mountain Fire), Intel Id 519973 & 519982

that the evidence of the affected residents who have not been permitted to attend to give their evidence on this point in person, and the evidence contained in the affected residents Submission, incorporated in the affidavits of Kooryn Sheaves and Jochen Spencer, should be preferred to that of Mr Conway on this point.

ISSUE 14: How was the Southern Containment Strategy implemented on 14 December 2019 (including timing, ignition pattern, resources and monitoring) and what led to the initial introduction of fire to the east of Mt Wilson Rd?

Breaches of Standard Operating Procedures

112. Mr Gellie states in his conclusion that:

“The planning of this strategic backburn on 13 December 2019 and its implementation on 14 December breached RFS Operational Protocol for back burning causing a large bushfire that continued for 53 days burning out 51,000 hectares, damaging or destroying about 70 structures and threatening the homes of tens of thousands of people.”⁶⁹

113. Standard operating procedures SOP #17 *Backburning activities*, that were in effect at the time of the Mt Wilson Backburn, clearly outline the responsibilities of fire ground managers and under what circumstances backburning should be conducted.

Standard Operating Procedures were breached in the following circumstances:

⁶⁹ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 96 (Report of Nicholas Gellie), p. 4228

Breach 1: Spot Overs were not able to be quickly extinguished due to thick scrub

114. SOP #17 provides that “All backburning must be strictly supervised. Officers in charge must ensure: Spotovers can be quickly extinguished.”⁷⁰

Impenetrable vegetation prevented crews from putting out spotfires

115. Jamie Carter was asked why the spot overs were not able to be extinguished:

Q. In the event, despite your evidence that you had sufficient resources, why were the spot overs not able to be quickly extinguished?

A. It comes back to the fuel load on the eastern side of Mount Wilson Road, and this is, in thinking this through last night, this is one of the things that potentially could have been done in advance of this kind of fire event, but the fuel load - that area had not been burnt for, as I understand it, since 1994, which means that from our perspective as Fire Managers, it's maximum fuel load, and that includes a very heavy elevated shrub layer, a lot of it quite thick, and crews were, as I understand it, unable to penetrate the shrub layer through an access because it was just too hard to actually force their way through. Without any hazard reduction burning being done in that area, access was impeded simply because the vegetation was so thick.

116. Had a formal risk analysis and contingency plan been thoroughly developed prior to the backburn commencing, the thick vegetation that prevented the spot fires from being extinguished could have easily been identified.

Fuel and Weather conditions and high fuel load on the east of Mt Wilson Road meant that spotfires would grow rapidly

117. Field fire intelligence such as the would indicate spotfires were unlikely to be extinguished quickly. This includes:
- a. An understanding of high fuel load on the east of Mt Wilson Road,
 - b. Conducting Fuel Moisture Readings and calculations
 - c. an understanding of the forecast conditions from the Bureau of Meteorology (including the cHaines index relating to atmospheric instability) Incident Weather

⁷⁰ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 66 (Fireground SOPs v1) p. 3310

Breach 2: There was *insufficient* time or resources to conduct the backburn.

118. SOP #17 clearly state that “Backburning is not to be conducted when: There is insufficient time or resources to conduct the backburn.”⁷¹
119. However, the logbook of PSO Mary Wilbour in Hawkesbury IMT noted at 8:12am:
“Craig advised Karen may not get all in but need to try & minimise spotting. We are not going to get all in within the time approved this morning.”⁷² (Underlining added)
120. This is reflected in CAOWS 236)b) and the evidence of Mr Conway there cited.
121. Mr Gellie in his expert report noted that, in all of the backburn escape case studies (including the Mt Wilson backburn) that he analysed, all were carried out without sufficient time allowed for mop up and patrol.⁷³
122. Furthermore the court-appointed expert, Mr Conway, described the weather conditions as providing only a “*narrow window.*”⁷⁴
123. This is also consistent with CAOWS at 236 where Counsel Assisting, citing the evidence of Mr Conway, acknowledges that even on the case for the RFS:
- There was barely sufficient time to complete the burn before conditions deteriorated .. weather conditions generating more intense fire behaviour;
 - Those conducting the burn engaged in an ‘*known risk*’ in deciding to anchor the backburn at the corner of Bells Line of Road and Mt Wilson. While claimed the risk was mitigated by taking the measures identified at 236)c), they did not work;
 - The timing of the backburn during the day, in a relatively narrow window of suitable weather, and the decision to burn upslope was clearly problematic given the ‘*constraints of topography, fire behaviour and deteriorating weather forecasts*’.

Breach 3: Weather and fuel conditions were not suitable for a controllable backburn

124. In reply to CAOWS 233)-235) (Carter evidence) and at 236)-237) (the expert evidence of Mr Conway), it is submitted that the evidence before the Court shows weather and fuel conditions were not suitable for the backburn conducted at Mount Wilson on 14 December 2019.

⁷¹ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 66 (Fireground SOPs v1) p. 3310

⁷² Exhibit 56A, Brief of Evidence - Grose Valley Fire, Mt Wilson, Tab 11, (Operational Log Book Extracts of Management Support Officers) p. 375

⁷³ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 96 (Report of Nicholas Gellie) p. 4222

⁷⁴ Transcript for 19 May 2023 (Conway) T1667 10

125. SOP #17 clearly state that “All backburning must be strictly supervised. Officers in charge must ensure: Weather and fuel conditions are suitable for a controllable backburn.”⁷⁵

Fuel Moisture Content Readings were not taken

126. Fuel Moisture Content readings were not obtained by IMT or the Divisional Commander prior or during the backburn on 14 December 2019.

127. **Both** Mr Gellie and Mr Conway agreed that Fuel Moisture Content is an incredibly important in understanding fuel flammability.

128. Mr Conway states:

“Fuel moisture content's incredibly important and one of the critical things that a Fireground Manager must consider.”⁷⁶

129. Mr Conway also stated that:

“I wasn't able to find any reference in the brief of evidence to the IMT taking fuel moisture readings, which you can do at the fireground quite simply, to give them confidence.”⁷⁷

130. Mr Gellie states:

“Fuel moisture content must be carefully considered to understand the potential flammability of fuel in the fire ground and therefore the likelihood of a backburn escaping by spotting outside containment lines. Fuel moisture content is measured as Dead Fuel Moisture Content (DFMC). Even at lower FFDI ratings the DFMC can still be extreme and conducive to unpredictable fire behaviour that can lead to spot fires and backburn escapes.”⁷⁸

131. Further, Mr Conway gave evidence that:

“There are fuel moisture meters that are being used by fire services around Australia that would enable you to take a fuel moisture reading in real time in about ten minutes.”⁷⁹

132. The RFS Wildfire Behaviour manual describes the effect of fuel moisture content on fire behaviour.

⁷⁵ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 66 (Fireground SOPs v1), p. 3310

⁷⁶ Transcript for 19 May 2023 (Conway) T1660 15

⁷⁷ Transcript for 19 May 2023, (Conway)T 1674.49-1675.5

⁷⁸ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 96 (Report of Nicholas Gellie), p. 4217

⁷⁹ Transcript for 19 May 2023 (Conway) T1659 40

Fuel Moisture Contents of less than 5% can result in “Extreme and difficult to predict fire behaviour.”

Fuel Moisture Content between 5-10% can result in “ Severe fire behaviour, crowning likely at lower values”⁸⁰

133. Mr Gellie describes in his report that at 10:00 am, the estimated Fine Fuel Moisture Content at the location of the Mt Wilson Backburn on 14 December was at 9% and later in the afternoon they had decreased to 4%, and possibly even 3 %, critically low fuel moisture conditions for undertaking a high-risk backburn.⁸¹
134. Mr Conway was asked to assume these fuel moisture values of 9% were correct and, in conjunction with the materials with which he was briefed, was asked if this fuel moisture levels would cause him to alter his opinion about the appropriateness of the burn on 14 December 2019. Mr Conway stated:
- “As a Fireground Manager you would certainly think carefully about what your plan was looking to do and you may modify your plan, you may try to get additional resources, depending on the circumstances you may abandon the plan, but it would be one consideration amongst others. It would certainly be cause for thought without a doubt and it would certainly get you to review what you'd intended to do. It may not necessarily stop the burn, it may change the burn.”⁸²*
135. Despite both experts agreeing that Fuel Moisture Content was important, no readings were taken by fireground managers.

Updated gridded weather forecast from the morning of 14 December 2019 was not used by IMT or Divisional Commander.

136. Mr Pullen agreed that there was a limited window of opportunity before the weather turned bad and it would be unadvisable to implement the backburn. ⁸³ He agreed the principal reason the backburn was brought forward was the weather.⁸⁴
137. Mr Conway described the weather conditions as providing a “*narrow window.*”⁸⁵
138. Chris Banffy, Air Attack Supervisor on 14 and 15 December 2019 provided evidence that at the morning briefing at Wilberforce on 14 December, the weather forecast raised a “red flag”, causing him to seek out further clarification from the Operation Officer, the Planning Officer and weather forecaster within the Hawkesbury IMT.⁸⁶

⁸⁰ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 64 (Wildfire Behaviour Manual), 3189

⁸¹ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 96 (Report of Nicholas Gellie) p. 4187. See also table on p. 4185.

⁸² Transcript for 19 May 2023, (Conway)T 1660 25-35

⁸³ Transcript for 16 May 2023 (Pullen) T1503 30-35

⁸⁴ Transcript for 16 May 2023 (Pullen) T1503 25-30

⁸⁵ Transcript for 19 May 2023 (Conway) T1667 10

⁸⁶ Transcript for 17 May 2023 (Banffy) T1590 15

139. Mr Carter provided detailed submissions and oral evidence relating to the gridded forecast used to plan the Mt Wilson Backburn on 14 December 2019. In his evidence Mr Carter referred to the gridded forecast obtained on 13 December 2019, saying that it showed an improvement in conditions for 14 December which were more favourable for the backburn operation.
140. Mr Carter stated that the gridded weather forecast obtained on 13 December (at page 3623 as part of his second statement, (Annexure H), was used as part of the decision making.⁸⁷
141. However, earlier evidence supplied by the RFS as part of the Factual Investigation included a gridded weather forecast for Mt Wilson Road and Bells Line of Road intersection obtained on the morning of 14 December 2019.⁸⁸ Mr Carter does not refer to this updated forecast in his statement, he only refers to the superseded 13 December gridded forecast.
142. The 14 December AM gridded forecast is significant for the following reasons:
- a. It superseded the 13 December AM gridded forecast.
 - b. Is more accurate given that it was produced only hours before the backburn was planned to commence.
 - c. It showed that wind speed was forecast to be higher.
 - d. relative humidity was forecast to be 24% lower than the 13 December forecast.
 - e. A south westerly wind change would arrive 2 hours earlier.
143. Mr Carter stated:
- “The updated 13 December 2019 forecast which showed suitable conditions for burning until 18:00 hours on 14 December 2019...”⁸⁹*
144. However the 14 December AM forecast shows that by 16:00hrs the wind direction would turn SW and wind speed would increase.⁹⁰ This indicates the “favourable” weather window was forecast to be even narrower.
145. Ken Pullen, Hawkesbury Group Captain, was questioned about the weather window available based on the forecast issued on 13 December 2019. Mr Mullen states:

⁸⁷ Transcript for 15 May 2023 (Carter) T1424 10

⁸⁸ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson Tab 11 (Factual Investigation), p. 170

⁸⁹ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 77 (Supplementary Statement of James Carter), p. 3563-3564

⁹⁰ Exhibit 56A, Brief of Evidence – Grose Valley Fire, Mt Wilson, Tab 77 (Supplementary Statement of James Carter), p. 3563-3564

Q. Of course, things didn't go to plan on the 14th, you'd agree with that. While you weren't there, are you able to say what the principal reason is that the plan, as executed, did not follow that?

A. Given that I wasn't there, but the change in weather to the predicted weather was clearly a factor.

Q. So the change in weather on 14 December and as that change as had been forecasted or known to you on 13 December.

A. There was a change predicted late, but we were informed that we would have a significant window of opportunity with a south easterly influence. A south-easterly influence on the Mount Wilson Road should have enabled us to get the backburn along Mount Wilson Road sufficiently in and deep, that any change in the weather would not be a problem.⁹¹

Incident Weather Forecast

146. Finally, the western Incident Weather Forecast in the IAP issued by the Bureau of Meteorology was generally accurate when compared to the observed weather data from both Mount Boyce and Marrangaroo AWS. Mr Gellie⁹² used the 10-minute weather data from these weather stations in his report to analyze the fire weather conditions at the Mount Wilson with a slight adjustment for elevation between the Mount Wilson backburn location relative to these two weather stations. They were also located to the west of the backburn location and could have been used to predict the weather for the day at the burn. It is standard practice to undertake this monitoring when conducting any burn in the Blue Mountains or assessing fire weather risk on an active fire.
147. Mr Carter conceded that the more qualified person to interpret weather data is a meteorologist.⁹³ Mr Carter also agreed that, the gridded weather data he obtained for the 14 December 2019 Mt Wilson Backburn did not include the cHaines forecast for atmospheric instability.⁹⁴
148. When asked if Mr Carter had any recollection of looking at the cHaines readings in planning for the 14 December backburn he replied: "No, I don't."⁹⁵ Mr Carter agreed that while he "would have" taken the cHaines reading into account it was not part of his evidence.⁹⁶

⁹¹ Transcript for 16 May 2023 (Pullen) T1506 5-15

⁹² Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 96 (Report of Nicholas Gellie), p.4154

⁹³ Transcript for 16 May 2023 (Carter) T1470 5

⁹⁴ Transcript for 16 May 2023 (Carter) T1478 40

⁹⁵ Transcript for 16 May 2023 (Carter) T1479 45

⁹⁶ Transcript for 16 May 2023 (Carter) T1479 40

Breach No.4: the Backburn did not commence from a suitable, safe “anchor” point

149. In answer to CAOWS 120)-133), it is submitted that the anchor point for the back burn which was chosen was not suitable.
150. Mr Gellie illustrated this in Annexure C of his report with his pictorial training exercise for the unauthorized backburning failures that were undertaken in 1994. The Mount Wilson turn-off from the Bells Line of Road is not a good anchor point to conduct backburning from. Interestingly, the dead fine fuel moisture content was in the critical range of 3-4%, similar to that on the afternoon of 14 December during the backburn escape.
151. SOP #17 clearly state that “All backburning must be strictly supervised. Officers in charge must ensure: Backburning is commenced from suitable, safe “anchor” points.”⁹⁷
152. Ms Raines was asked about the preparation that had been done around the area of Bells Line of Road and Mt Wilson Road by 11 December for any backburning operations to commence. She replied:
- “So, fire trails around Mount Wilson and Mount Irvine had been done, but nothing had been done on the east side of Mount Wilson Road.”⁹⁸*
153. The existing southern containment strategy was to backburn from east to west from Mt Tootie, through Mt Irvine, Mt Wilson and to Bells Line of Road. The advantage of burning in this direction is that it is going against the prevailing fire winds (from a westerly direction).
154. Mr Carter provided evidence that rain had fallen in the Mt Wilson area on 12 and 13 December which, in the view of the IMT, precluded starting the backburn from Mt Wilson⁹⁹.
155. However, Ms Raines, who lives at Mt Wilson, stated that 2.5mm of rain had fallen on 11 December 2019, and that “any advantage of that rain, or disadvantage of that rain, would have gone by the 14th.”¹⁰⁰
156. Ultimately the perspective of the IMT and Divisional Commander regarding the anchor point was never tested, as no fuel moisture readings were conducted at Mt Wilson on the morning of 14 December 2019.¹⁰¹ Had these been carried out, the preferred and existing southern containment strategy of burning from Mt Wilson (where the preparation of containment lines had been completed) may have been feasible.

⁹⁷ Exhibit56A – Grose Valley Fire, Mt Wilson, Tab 66 (Fireground SOPs v1), p. 3310

⁹⁸ Transcript for 18 May 2023 (Raines) T1632 5

⁹⁹ Transcript for 15 May 2023 (Carter) T1422-1423 50-5

¹⁰⁰ Transcript for 18 May 2023 (Raines) T1625 15-25

¹⁰¹ Transcript for 19 May 2023 (Conway) T1651 25-40

Instead, the anchor point at the Mt Wilson Road and Bells Line of Road was chosen as the burn location, even though preparatory work on the containment lines had not been completed.

157. As referred to above, Mr Conway gave evidence that:

“There are fuel moisture meters that are being used by fire services around Australia that would enable you to take a fuel moisture reading in real time in about ten minutes.”¹⁰²

158. A simple fuel moisture reading and/or test burn at Mt Wilson to verify whether the Du Fours Rock strategy was feasible could have been easily carried out with the right equipment.

The significance of Forest Fire Danger Index

159. In the CAOWS there is a discussion of the research conducted by the University of Wollongong evaluating backburning undertaken during the 2019-2020 bushfire season, at 263) onwards. It notes, appropriately, that this research and the report arising from it *“is of significant relevance to the Court’s Inquiry because of the stated objectives of the study”* which are set out at 265).

160. In the context of the Mt Wilson backburn the objectives set out at 265) c) and d) are particularly relevant.

161. At 272), the CAOWS states, relevantly, that *‘The report identified that backburns which did not stop fires ... tended to occur in conditions with a higher Forest Fire Index rating than that which existed for backburns which did stop fires.’*

162. Notwithstanding that *‘the authors could not confidently predict FFDI thresholds that might lead to low or high risk of escape’*, it is clear that there are ranges which make conducting backburning safer or less safe. In this regard, reference is made to the expert evidence report of Mr Gellie at p4217-4218. Mr Gellie’s evidence is that the the FFDI rating in relation to the Mount Wilson back burn was very high, strongly suggesting the backburn was not suitable or appropriate.

¹⁰² Transcript for 19 May 2023 (Conway) T1659 40

Conclusions

163. That the Mt Wilson backburn on 14 December 2019 was not appropriate under the circumstances.¹⁰³
164. That the emergency warnings and public information provided to the affected communities on 14 and 15 December 2019 were not timely or appropriate and were misleading as to the threat posed by the escaped backburn.¹⁰⁴
165. That the NSW Rural Fire Service Standard Operating Procedures (SOP#17 – Backburning Activities 1999) were breached in the Mount Wilson backburn. Those breaches were:¹⁰⁵

... Officers in charge must ensure:

- i. Weather and fuel conditions are suitable for a controllable backburn.
- ii. Adequate time and resources are available for the backburning operation (eg: tankers, firefighters, look-outs, communications, etc).
- iii. Backburning is commenced from suitable, safe “anchor” point/s.
- iv. Spotovers can be quickly extinguished.

Backburning is not to be conducted when:

- v. There is insufficient time or resources to conduct the backburn.

ISSUE 19: Whether it is otherwise necessary or desirable for the Coroner to make recommendations pursuant to section 82 of the *Coroners Act 2009* in relation to any matter connected with these fire inquiries?

166. Noting the above analysis, it is submitted that it is both necessary and desirable for the Coroner to draw conclusions and make recommendations pursuant to section 82 of the *Coroners Act 2009* in relation to the matters set out above, as follows:

¹⁰³ See paragraphs 45-85 and 92-99, 112-158

¹⁰⁴ See paragraphs 100-111

¹⁰⁵ See paragraphs 112-158

Recommendations

- 1) **That NSW Rural Fire Service OP 1.2.20 Operational Protocol for Backburning be strengthened as follows:**
 - a) **Specific Risk analysis, consequence analysis and contingency planning to be completed as part of operational planning prior to a strategic backburn operation including:**¹⁰⁶
 - i) Development & implementation of standardised risk assessment, consequence analysis and contingency planning processes to be completed prior to a strategic backburn operation.
 - ii) Use of appropriately validated fire prediction tools and localised fire knowledge and expertise in validating the fire risk assessments above.
 - b) **That there be mandatory public reporting of identified threats posed by planned backburning including**¹⁰⁷
 - i) Publication of risk analysis and consequence analysis prior to the backburn commencing, if practicable in the circumstances. If not, this to be done as soon as possible.
 - ii) Publication of risk and threat assessment if backburn escapes.
 - iii) Location of backburn to be clearly identified, including planned limits of backburn on a map for public dissemination.
 - iv) Identification of backburn as a separate fire, with naming distinction, to ensure clear and informative public communication.¹⁰⁸
 - v) Where threats are identified through risk analysis the NSW Police must be notified before the operation begins as an issue of public safety.
 - c) **Calls for emergency warnings from fireground managers are escalated *directly* to State Operations.**¹⁰⁹

¹⁰⁶ See paragraphs 60-85

¹⁰⁷ See paragraphs 100-111

¹⁰⁸ See Exhibit 56A, Brief of Evidence - Grose Valley Mt Wilson, Tab 96 (Report of Gellie), p4234-4236.

¹⁰⁹ See paragraph 110

- d) **Mandatory documenting, minuting and record keeping of planning meetings relating to strategic backburning operations¹¹⁰**
- e) **Local NPWS staff and RFS brigades from regions identified at risk from a backburning operation must be involved in the planning, consulted and advised of a strategic backburn operation prior to the operation beginning.¹¹¹**
- f) **Given the Operational Protocol states that strategic backburns are rarely initiated at short notice in the field¹¹², the RFS conduct mandatory community consultation prior to the commencement of a strategic backburn.**
- g) **That the Rural Fire Service conduct scientific fuel moisture content readings with appropriately calibrated fuel moisture meters:¹¹³**
 - i) Prior to the commencement of strategic backburn operations
 - ii) Routinely during the operation along with standard Situation Report weather observations along with temperature, relative humidity, wind direction and wind speed.
 - iii) That fuel moisture content readings and test burns are conducted prior to all backburn operations.
- h) **Fuel Moisture Content calculations based on forecast conditions be used:¹¹⁴**
 - i. That safe minimum and maximum Fuel Moisture Content limit be identified for each backburn operation.
 - ii. The Rural Fire Service develop and make public a set of protocols that define the minimum and maximum weather and fuel conditions that strategic backburning must be conducted within.
 - iii. Where a strategic backburn is planned and does not meet these conditions, a review at State Operations must be undertaken and documented.

2) Backburning protocols must be enforced with disciplinary action mandated for personnel who are found to have breached protocols¹¹⁵

¹¹⁰ See paragraphs 15-25

¹¹¹ See paragraphs 86-91

¹¹² See Exhibit 56A, Brief of Evidence - Grose Valley Mt Wilson, Tab 68, (Operational Protocols for Backburning), p. 3410

¹¹³ See paragraphs 124-135

¹¹⁴ See paragraphs 124-135

¹¹⁵ See paragraphs 112-158

When a backburning operation is identified as escaping containment, a mandatory post-incident review should take place with the following aims:

- a) Assess whether the relevant employees of the RFS or NPWS were in compliance with operating procedures and backburning protocols.
- b) Incorporate feedback from affected communities into the review
- c) That disciplinary action be mandated when personnel are identified as breaching protocols
- d) Publish the findings of the review for public comment.

3) The NSW Government implement an independent Inspector General of Emergency Services to promote continuous improvement and best practice.

This recommendation is supported by the *Royal Commission into Natural Disaster Arrangements* which recommended:

Recommendation 24.2 An independent accountability and assurance mechanism for each state and territory.

“An approach to continuous improvement and best practice that has worked successfully for some states is the establishment of an Inspector-General for Emergency Management. Similar arrangements would be desirable for other jurisdictions.”¹¹⁶

4) That the NSW Government commission an independent study to establish the social and economic costs of backburning operations across the state.

Without understanding what the actual cost is to taxpayers and residents and the impact to community and individuals health, it is impossible to weigh up the costs and benefits.

5) That the NSW Government formally apologise to residents, firefighters and communities that are adversely impacted by escaped backburns.

If Victoria can do it, so can NSW.¹¹⁷

¹¹⁶ Royal Commission into Natural Disaster Arrangements, 2020, p 509

¹¹⁷ <https://www.abc.net.au/radio/programs/worldtoday/delwp-apologises-for-botched-burn-off-in-victoria/6955046>

- 6) That the NSW Government establish a compensation scheme for residents and communities impacted by the escaped Mt Wilson backburn and other backburns across the state.