

CORONER'S COURT OF THE AUSTRALIAN CAPITAL TERRITORY

Matter Title: Inquiry into the Orroral Valley Fire

Citation: [2025] ACTCD 4

Hearing Date: 14 November 2022, 6 June 2023 - 9 June 2023

Decision Date: 13 June 2025

Before: Chief Coroner Walker

Findings: [36]-39], [189]-[198], [226]-[227], [238]-[246]

Catchwords: **CORONIAL LAW** – bushfire – scope of inquiry – cause and origin of the fire – circumstances in which the fire happened – Defence Assistance to the Civil Community – interagency communications and operations – delay in reporting a bushfire – risk management planning and processes – reporting obligations – matters of public safety

Legislation Cited: *Coroners Act 1997 (ACT)* ss 18, 52, 57
Emergencies Act 2004 (ACT)

Case Cited: *R v Doogan; Ex parte Lucas-Smith* [2005] ACTSC 74

Representation: **Counsel Assisting the Coroner**
K Nomchong SC (instructed by S Richards)
Counsel for the Commonwealth of Australia
M Fordham SC and S McCarthy (instructed by Clayton Utz)
Counsel for the Australian Capital Territory
M Jones SC and K Weir (instructed by ACT Government Solicitor)
Counsel for the Affected Residents
P Tierney (instructed by Ken Cush & Associates)

File Number: CF 1 of 2021

CHIEF CORONER WALKER:

1. The summer of 2019/2020 saw a particularly catastrophic bushfire season in the south-east of Australia. Bushfires were raging between Canberra in the Australian Capital Territory and the South Coast of New South Wales.
2. During the season, the Australian Defence Force (“ADF”) provided aid to civil authorities upon request in a number of locations and capacities, through the Defence Assistance to the Civil Community Initiative (“DACC”).
3. 27 January 2020 in the ACT was, according to the Bureau of Meteorology, a hot day with gusting winds and very high fire danger.
4. On that day, in the course of providing assistance, a fire was ignited (“the incident”) by the searchlight of an Australian Regular Army helicopter, a Multi-Role Helicopter 90 Taipan (“MRH-90”). This occurred at the head of the Orroral Valley in the Namadgi National Park in the ACT. It came to be known as the Orroral Valley Fire (“OVF”).
5. The OVF burned for over five weeks. Thankfully, no human life was lost. There was, however, very significant loss of domestic and wild flora and fauna, wide environmental damage, damage to Indigenous and other sites of cultural significance and significant property damage to landholdings. Affected persons suffered emotionally and financially.

Procedural History

6. The question of an inquiry into the fire arose as the result of a request made to me as Chief Coroner on 29 March 2021, on behalf of the residents of Bumbalong in New South Wales. Those residents had suffered property damage from the fire, which commenced in the Orroral Valley, but in NSW became known as the Clear Range Fire. The correspondence caused me to consider the circumstances in which the OVF had begun.
7. Section 18 of the *Coroners Act 1997* (ACT) (“the Act”) provides:
 - 18 Coroner’s jurisdiction in relation to fires**
 - (2) A coroner may (at the request of the owner or occupier of destroyed or damaged property or on the coroner’s own initiative) hold an inquiry into the cause and origin of a fire if the coroner considers that an inquiry should be held.
8. I was satisfied that an “own motion” inquiry was warranted.
9. I initially declined to grant leave to the Bumbalong residents to appear, as I considered that the property damage suffered by them, being in NSW, did not afford them a sufficient interest in the ACT fire inquiry. My determination was subject to an appeal to the ACT Supreme Court. In light of the observations made by the Chief Justice in that successful

appeal, I received further submissions and granted leave to a group of both ACT and NSW residents¹ (“the Residents”) to appear under a single representation.

10. Other parties granted leave to appear were the Australian Capital Territory (“the Territory”), on behalf of the ACT Emergency Services (“ESA”), the ACT Parks and Conservation Service (“PCS”) and ACT Rural Fire Service (“ACTRFS”) (together, “ESA”), and the Commonwealth, representing the interests of members of the Australian Defence Force (“ADF”).
11. The first directions hearing in this matter was held on 30 November 2021. On 9 May 2022, orders were made to anonymise the names of personnel who were on board ADF Multi-Role Helicopter 90 Taipan (call sign ANGEL21 (“ANGEL21”)) and to prohibit the publication of those names.
12. The hearing proper commenced on 14 November 2022. Due to a number of factors unrelated to the inquiry itself, the matter was adjourned and unable to resume until 6 June 2023. It was completed on 9 June 2023. Additional records were obtained under subpoena. Final submissions were received on 20 October 2023.
13. A copy of my provisional findings was provided to parties on 20 December 2024. Section 55 notices were also directed to the Commonwealth and Witnesses D1 and D2 on this same day.
14. Counsel for the Affected Residents made no further comments in relation to the factual matters contained in the provisional findings.
15. On 28 January 2025, the Territory offered two factual/typographical suggestions.
16. Responses to the s 55 notices were received on 14 February 2025.
17. I have considered these in relation to my findings and recommendations at [228]-[237].

Issues

18. Following consultation amongst the parties, prior to the hearing, an agreed list of issues was arrived at:
 - (i) The cause of the ignition or start of the fire on 27 January 2020.
 - (ii) The time at which the ignition of the fire occurred.

¹ Karen Gallagher, Michael Gallagher, Nicole Small, Nina Clarke, Tony Weston, Annika Safe, Stephen Littlehales, Judy Eagle, Peter Bottomley, Stephen Angus and Julia Angus.

- (iii) The location of the ignition site of the fire.
- (iv) The purpose of the activities being conducted on 27 January 2020 (“the Activities”) in Namadgi National Park involving the ADF and the ESA.
- (v) The nature and scope of the operations (including communications) of the ADF Multi-Role Helicopter 90 Taipan (call sign ANGEL21 (“ANGEL21”)) during the Activities.
- (vi) The nature and scope of interagency communications between the ADF, the ESA and the PCS in preparation for and during the Activities, as to:
 - (i) any risk assessments as to the operation of the ADF helicopters in proposed or actual landing zones within the Namadgi National Park during the Activities; and
 - (ii) protocols in relation to communications between the agencies during the Activities.
- (vii) The nature and scope of any reporting undertaken by ADF personnel in relation to the cause, ignition and location of the fire.
- (viii) The circumstances surrounding the time and the means by which the ESA became aware of the fire, and its immediate response in terms of notifications both internally and with other agencies.
- (ix) The effect of any delay in the reporting of the ignition of the fire to the ESA.

Scope – Preliminary Consideration

19. In its written closing submissions, the Commonwealth raised the question of the scope of a Coroner’s inquiry into a fire, submitting, in essence, that any acts or omissions of ADF members after the fire ignited were not amenable to the Coroner’s findings or recommendations, because they did not relate to the cause and origin or circumstances of the fire. It was submitted that “while the circumstances which led up to the ignition/origin of the fire (whether causally connected or contextual) are circumstances in which the fire happened, circumstances that happened after the ignition of the fire are less readily describable as circumstances in which the fire happened, viewed in light of the statutory context”. It follows, as submitted by the Commonwealth, that:
- (a) if it is found that the time taken by the aircrew of ANGEL21 to report the fact and the location of the fire had no effect on the spread of the fire, then the circumstances post ignition which relate to why there was such a delay are not properly describable as circumstances in which the fire happened, but are rather

circumstances arising from the fire and without factual nexus to the causal origin of the fire; and

- (b) in any event, circumstances arising after 1420 hours on 27 January 2020, including internal ADF communications and communications between the ADF and the ESA, are “sufficiently temporally removed from the ignition of the fire such that they cannot be properly described as circumstances in which the fire happened”.

- 20. It was also submitted, correctly, that the Coroner’s power to make recommendations, which arises from s 57 of the Act, does not operate to enlarge the Court’s jurisdiction. Recommendations must relate to the findings.
- 21. In support of these submissions, the Commonwealth relies on the decision in *R v Doogan; ex parte Lucas-Smith* [2005] ACTSC 74 (“*Doogan*”), a decision in which the approach taken, or expected to be taken, by former Coroner Doogan in the inquiry into the 2003 bushfires in the ACT was subject to appellate scrutiny.
- 22. Neither the Territory nor the Bumbalong residents addressed this issue in their submissions.
- 23. Determination of the proper scope of a coronial inquiry is rarely lit with a “bright dividing line” of certainty; the task must always be approached with regard to the particular factual matrix and the public interest, but also with appropriate judicial restraint.
- 24. For the reasons which follow, I consider that *Doogan* supports the approach that factual findings relevant not only to the ignition of a fire but to the antecedent causal factors, and the response to and spread of the fire, are properly within the scope of this Inquiry.
- 25. Section 52 of the Act provides, relevantly:

52 Coroner’s findings

- (2) A coroner holding an inquiry must find, if possible—
 - (a) the cause and origin of the fire or disaster; and
 - (b) the circumstances in which the fire or disaster happened.

- (4) The coroner, in the coroner’s findings—
 - (a) must—
 - (i) state whether a matter of public safety is found to arise in connection with the inquest or inquiry; and
 - (ii) if a matter of public safety is found to arise—comment on the matter

- 26. Section 57 of the Act provides, relevantly:

57 Report after inquest or inquiry

- (1) A coroner may report to the Attorney-General on an inquest or an inquiry into a fire held by the coroner.
- (2) A coroner must report to the Attorney-General on an inquiry into a disaster.
- (3) A report by a coroner to the Attorney-General—
 - (a) must be in writing; and
 - (b) must set out the coroner's findings about any serious risks to public safety that were revealed in the inquest or inquiry to which the report relates; and
 - (c) may make recommendations about matters of public safety if the recommendations—
 - (i) relate to the coroner's findings about a cause of death, fire or disaster; and
 - (ii) would, in the coroner's opinion, improve public safety.

27. In respect to the scope of inquiry into a fire, Higgins CJ, Crispin and Bennett JJ noted at [39] of *Doogan*:

The word 'circumstances' has a wide meaning and the concept referred to in s 52(2)(b) of the Act is broader than that referred to in s 52(2)(a) of the Act. Nonetheless, the word must be construed by reference to the statutory context within which it appears. A coroner is not authorised to make findings in relation to any circumstances arising from the fire, but only in relation to the circumstances in which the fire occurred. The distinction between a cause and circumstances may essentially be one of degree.

28. Their Honours also state at [20]:

If the concept of 'the fire' were to be interpreted narrowly, the jurisdiction might be confined to determining whether the initial ignition was due to arson or is caused by some accident or natural phenomenon such as a lightning strike. The most obvious impediment to such a construction is that, unlike a death, a fire is not a one-off event but a process that develops over time. The process may have been initiated by a single event such as ignition due to a lightning strike, or as in the present case, by ignition due to lightning strikes at four separate places. However, when the concept of causation is applied to a process that has developed over a period of several days, it must extend beyond such origins to embrace those factors that had a causal effect on development *or continuance* (my italics) of the process. It would be quite unrealistic to regard a fire that had travelled long distances and/or burnt out vast areas of bushland as coextensive with a fire that had been smouldering on the end of a cigarette and negligently thrown from a car window and, then to dismiss from consideration any intervening or contributing events.

29. The process required is one of identifying causation of a fire in which factors that are proximate rather than remote are appropriately considered. Again, as observed by their Honours in *Doogan* at [29]:

The point where such a line is to be drawn must be determined not by the application of some concrete rule, but by what is described as the 'common sense' test of causation affirmed by the High Court of Australia in *March v E & MH Stramare Pty Ltd* [1991] HCA 12; (1991) 171 CLR 506.

30. The example given by their Honours at [39] in relation to the distinction between a cause and a circumstance is elucidating:

For example, had the fires reached Canberra eight days later, the deployment of fire fighting units could conceivably have been hampered by additional traffic due to Australia Day celebrations. It would have been somewhat fanciful to regard the celebration of such an anniversary as a 'cause' of the fire but it might well have been a circumstance that could have been alluded to in the findings.

31. As to the power to make comments, provided for in s 52(4) of the Act, their Honours noted at [41]:

Comments may obviously extend beyond the scope of 'findings'. The latter term refers to judicial satisfaction that facts have been proven to the requisite standard or that legal principles have been established. The former refers to observations about the relevant issues, and may extend to recommendations intended to reduce the risk of similar fires, deaths or disasters occurring in the future. However, conferral of the power to make comments does not enlarge the scope of the coroner's jurisdiction to conduct an inquiry.

32. I am mindful of this guidance in considering the evidence received in the inquiry and in making the findings and comments below.

The Evidence

33. Much of the voluminous evidence was in the form of transcripts of interviews or statements from witnesses, as well as other documentary evidence filed by the Commonwealth and the Territory.
34. Within the ADF, the Director General of Aviation appointed an Headquarters Forces Command Aviation Safety Investigation Team on 29 January 2020. That Team provided a comprehensive report, dated 29 September 2020, regarding the incident and the role of the aircraft and aircrew in it. I have been assisted by the Team's comprehensive findings in respect to what occurred in the incident, risk factors which contributed to the incident and recommended remediation. I have adopted aspects of those findings where pertinent and consistent with the evidence received in this inquiry. However, the report dealt with matters internal to ADF, as is consistent with its purpose; it does not address the significance of the incident to the broader community, in particular interagency operations.
35. On 31 October 2022, by letter, and prior to evidence being called, the Commonwealth made the following concession, consistent with [97] of the Aviation Safety Investigation Report:

...the Commonwealth does not dispute that the heat from the search light of ANGEL21 caused ignition of the Orroral Valley Fire on 27 January 2020.

36. It is now uncontentious that the fire ignited at 1338 hours on 27 January 2020.

37. ANGEL 21's flight data recorder establishes the location of fire ignition, namely GPS coordinates 35.5847 latitude and 148.9162 longitude by reference to the point at which the aircraft had "weight on wheels". This location is at the head of the Orroral Valley in the Namadgi National Park, 35 kilometres southwest of Canberra.
38. The location of the fire at ignition was available both from the flight data recorder but also from photographs taken by one of the passengers aboard ANGEL21, a soldier of the 7th Battalion, Royal Australian Regiment ("7RAR").
39. Thus, issues 1, 2 and 3, that are the immediate cause, time of ignition and location of the fire, are resolved.
40. Whilst the remaining issues are somewhat more complicated, the factual matrix is largely uncontentious. I was greatly assisted, and have in parts adopted and adapted below, factual summaries provided in submissions by Senior Counsel Assisting, Counsel for the Commonwealth and Counsel for the Territory. I note that Counsel for the Residents adopted Senior Counsel Assisting's summary of the evidence.

The Territory's Bushfire Response Arrangements and Request for Assistance from the Commonwealth

41. In relation to preparation for the 2019/2020 fire season, and particularly in response to the OVF, the following ACT government agencies were prime actors: ESA, ACTRF, and PCS, the latter of which falls under the Environment, Planning and Sustainable Development Directorate. The roles of these agencies in bushfire planning are contained in the Strategic Bushfire Management Plan, which is created under the *Emergencies Act 2004* (ACT).
42. In response to an actual or anticipated emergency, the Chief Minister of the ACT may appoint an Emergency Controller pursuant to the *Emergencies Act 2004* (ACT). Ms Georgina Whelan, ESA Commissioner at the relevant time, was appointed as Emergency Controller on 2 January 2020 in response to concerns about bushfire threat to the ACT.
43. The ESA headquarters was at Fairbairn, adjacent to the Canberra Airport.
44. During significant incidents, such as on days of elevated fire danger, an Emergency Coordination Centre is established in a room adjoining the ESA headquarters (including its communication centre), hosting a multi-agency Incident Management Team ("IMT") comprised of relevant stakeholders who need information from the ESA in support of their own operations, including other ACT government agencies, civilian agencies and

the ADF. That team is responsible for coordinating emergency responses, including the deployment and management of resources for the incident. The team is headed by an Incident Controller.

45. On 27 January 2020, the Incident Controller was Mr Rohan Scott, who was otherwise the Director of Operations of the ACT Rural Fire Service at that time. The Incident Controller, as the head of the Incident Management Team, reports to the Emergency Controller. On the day of the incident, Mr Scott reported to Ms Whelan.
46. On 27 January 2020, the IMT, which had been stood up earlier in the month because of threats to the ACT from fires to the west, was operating at a scaled-down level, as there were no active fires in the ACT at that time.
47. Specialist ADF liaison officers were embedded in the Emergency Coordination Centre and operated as the point of contact between the ADF and the ACT Fire authorities. The liaison officer could speak directly with an ESA staff member in the Emergency Coordination Centre or with a member of the IMT next door. The ADF liaison officers participated in daily planning meetings of the IMT.
48. Tasking requests were relayed from the IMT to the ADF liaison officer, who was able to both provide guidance as to what the ADF could do to assist with the objective and liaise with the ADF Joint Task Force Headquarters for approval and allocation of the requested tasks.
49. On 7 January 2020, Ms Whelan made a request to the Commonwealth for assistance “to support efforts to maintain and expand containment lines”, including “all weather reconnaissance aircraft capability”. That request was answered.
50. A particular request was made by the IMT to the ADF on 15 January 2020 to provide a helicopter and crew to conduct aerial reconnaissance of a network of remote helipads or helicopter landing zones across the ACT which needed to be assessed as to whether they were safe for landing. The request was for photographs and observation notes in respect to the identified landing zones. This would facilitate the triage of potential work required, namely for assistance to clear and remediate the landing zones as required.
51. The proposal was that the aerial reconnaissance be undertaken solely by ADF personnel. The remediation work, however, was to be performed by ADF personnel accompanied by a PCS officer equipped with a handheld radio, water and handheld clearing equipment suitable for remote area dry firefighting. It was recognised that the work was to be undertaken in an area of high fire danger; the PCS officer being present with appropriate fire-fighting equipment operated as a safety strategy.

The ADF Response – Operation Bushfire Assist

52. From late October 2019, the ADF provided DACC to assist the State of New South Wales in its bushfire response.
53. Operation Bushfire Assist (“Op BFA”) was the DACC response to the request for assistance from the State and Territory Emergency Services in the 2019-2020 fire season. It was stood up in late December 2019.
54. Op BFA was headquartered at Joint Operations Command (“HQJOC”) in Bungendore, NSW. It was delivered by Joint Task Force 629, commanded by Major-General Justin Ellwood.
55. On 8 January 2020, the ADF formed the Multinational Rotary Wing Task Group (“MNRWTG”) to establish command arrangements for the ADF, the Royal Singapore Airforce (“RSAF”) and the Royal New Zealand Airforce (“RNZAF”) rotary wing assets provided in support of Op BFA. Lieutenant Colonel Jamie Martin commanded the MNRWTG with Major Patrick Rodis as Chief of Staff. Lieutenant Colonel Martin reported to Major-General Ellwood.
56. Air Element Commanders (“AECs”) with tactical command of rotary air assets of the MNRWTG were co-located within State and Territory coordination centres, supported by ADF liaison officers. The AEC embedded in the relevant State or Territory Emergency Control Centre received tasking requests from personnel in the Emergency Control Centre. The relevant AEC, in planning the task, would communicate directly with the Operations Officer (“OPSO”) or Operations Cell of the Task Unit (“TU”) likely to undertake that task. Sometimes, Major Rodis, in his capacity as the Chief of Staff of the MNRWTG HQ, would participate in those conversations.
57. The AEC informed the MNRWTG HQ of the proposed taskings at a daily 1100 hours meeting. At this time, the OPSO of the MNRWTG HQ gathered all the tasks received from the various AECs and allocated them to a TU. The AEC and TU then continued to plan the task to be executed within the next 24 hours.
58. It was expected that whilst a task was being executed, the pilots on a particular task would be in contact with their TU Ops Cell, who would monitor the task. That Ops Cell would communicate with the AEC embedded within the Emergency Control Centre and with the MNRWTG HQ if necessary.
59. The AEC located at ESA Command Centre on 27 January 2020 was Lieutenant Commander Stuart Withers.

TU Taipan

60. The MNRWTG was given command of several task units and associated rotary wing assets, including TU Taipan. From 8 January 2020, TU Taipan was constituted by 4 Australian Regular Army MRH90 helicopters, crewed by members of the 5th Aviation Regiment.
61. From 16 January 2020, TU Taipan operated from RAAF Base Richmond, NSW.
62. The Officer Commanding (“OC”) TU Taipan was Witness D1. He reported to the CO of the MNRWTG, Lieutenant Colonel Martin. Communication between Witness D1 and Lieutenant Colonel Martin was sometimes facilitated by Major Rodis.
63. TU Taipan included the following roles and individuals:
 - (a) Operations Officer – Captain Andrew Bryson was the Operations Officer (“OPSO TU Taipan”) on the relevant day. As OPSO, Captain Bryson's role included liaising with internal and external operatives to ensure that required helicopter assets from TU Taipan were available and efficiently tasked;
 - (b) TU Taipan Ops Cell (call sign "2-Alpha" or “2A”) – on 27 January 2020, this included Captain Bryson and two other ADF personnel monitoring communications from TU Taipan helicopters;
 - (c) Authorisation Officer(s) – Witness D7 was the Authorisation Officer for the sortie conducted by ANGEL21 on 27 January 2020. Witness D7 was qualified as both a pilot and flying instructor. Coincidentally, he had been involved in a Blackhawk incident in 2013 in which the landing light of that aircraft had ignited a grass fire;
 - (d) Troop Commander/Aircrew Detachment Commander – Witness D2 was the Troop Commander/Aircrew Detachment Commander. This role included preparing Standard Operating Procedures (“SOPs”) for TU Taipan;
 - (e) Pilots – which included Witness D1, Witness D2, Witness D7. The pilots of ANGEL21 on 27 January 2020 were Witness D1 and Witness D2;
 - (f) Aircrewmembers – which included Witness D4 and Witness D6.

The MRH-90 Helicopter

64. The MRH-90 is a multi-role twin engine utility lift helicopter, which was acquired by the ADF to provide conventional and special forces combat troop lift capability or medical evacuation. It is painted in camouflage colours, which make it difficult to see against the Australian landscape.

65. It operates on a "fly-by-wire" system, whereby the controls are connected via an electrical wiring system, rather than mechanical linkages.
66. The MRH-90 is primarily constructed with modern composite materials that are lighter and stronger than aircraft aluminium, which is historically used in aircraft structures. The composite structure can continue to burn and degrade after being in contact with fire.
67. The fuel bladder for the MRH-90 is located under the floor of the helicopter.
68. The MRH-90 is normally flown with an aircrew consisting of:
 - (a) the aircraft captain – the pilot who has total responsibility for the safe and effective operation of the aircraft and for supervising their crew. The aircraft captain has authority over all persons on board, irrespective of rank, for the period of the operation of the aircraft;
 - (b) a co-pilot – a qualified pilot available to perform that role as required in the aircraft;
 - (c) two aircrewman, whose role includes:
 - (i) pre-flight – weight and balance of the aircraft, briefing passengers, loading/unloading of passengers and cargo; and
 - (ii) during flight – providing clearance information to the captain and co-pilot, monitoring any aircraft systems, looking after the welfare of passengers and cargo in the rear.

MRH-90 Searchlight

69. The MRH-90 has a landing light and a searchlight. The landing light is an infrared light that is not visible to the naked eye, located at the front of the MRH-90. The searchlight contains both an infrared lamp and a white light (halogen) lamp and is located towards the rear of the MRH-90 near the left sponson. The searchlight may be extended or stowed. When stowed, it sits approximately 35 cm from the ground (albeit this height varies depending on fuel loads and cabin weight). When extended, with the aircraft fully fuelled, and configured for Air Mobile Operations, the searchlight sits a mere 15 cm above the ground.
70. The searchlight can be controlled by the aircrewmen using the Hoist Main Control Unit and can be activated (turned on and off and dimmed/brightened) by the pilots via a button on the collective.

71. On testing, it was found that after operating for 10 minutes, the centre of the glass lens of the searchlight has a temperature range of 340 to 546 degrees Celsius. This is, unsurprisingly, sufficient to ignite grass. The Aviation Safety Investigation Report addresses this in detail. Exact conditions are not known in this incident, but, by way of indication, at 500 degrees with a windspeed of just 4 kph, the time to glowing ignition is only 16 seconds.
72. An Engineering Change Proposal to modify the landing and search lights to LED (to reduce visibility and to increase both illumination and controllability of the light beam) was rejected within the ADF following a cost/benefit analysis, after the OVF, in August 2020.

MRH-90 Communications Arrangements

73. At the time of the incident, the MRH-90 was equipped with the following external communication systems:
 - (a) Satcom radio;
 - (b) HF (high-frequency) radio;
 - (c) VHF (very-high frequency) radio;
 - (d) UHF (ultra-high frequency) radio; and
 - (e) an encrypted FM radio.
74. In addition to the above, text messages could be exchanged using the Variable Message Format function, being a secure data communication capability through V/UHF and HF radios.
75. Individuals also carried personal mobile phones, through which they could communicate, though not verbally due to aircraft noise, but by text on the encrypted message application, "Signal". The use of Signal was unexceptional. It was even included as a third level communication option in the SOP applied to this task.
76. ANGEL21 aircrew gave evidence that SATCOM and radio were intermittently unreliable in areas of operation during Op BFA.
77. The radios on the MRH-90 are able to communicate with other aircraft on the Common Traffic Advisory Frequency and the Fire Common Traffic Advisory Frequency, with the relevant Ops Cell monitoring the flight and with Air Traffic Control over VHF radio.
78. The MRH-90 also has an internal communication system, which enables the pilots, aircrewman and passengers to talk to and hear each other. This system can be configured to connect to only some, or all, aircrewman and passengers. Audible

communication without the aid of the internal communication system is very difficult because of aircraft noise.

79. The Commonwealth submits that there is no capacity within the MRH-90 to connect a mobile phone into the communications systems or to make a phone call.
80. Certainly, the first part of that assertion is unchallenged. There was however an understanding, indeed expectation, reflected in the applicable SOP that personal mobile phones could be used for communications in the event of the unavailability of other communications systems. In that event, "Signal", a secure encrypted application, was to be used. Whilst the ability to make a voice call would have been severely impeded by aircraft noise, the text message function of the application was both generally available and used.

Current ADF Utilisation of MRH-90

81. I note that the MRH-90 was permanently grounded by the ADF this year due to factors unrelated to this inquiry. That fact does not derogate from the purpose of this inquiry, in which the particular type of aircraft ultimately became less significant than other factors in Op BFA.

Documentation Relating to Risk Management and Reporting in the Performance of Tasks by TU Taipan in Op BFA

82. Colonel Kim Gilfillan, Director of Operational Airworthiness for the ADF, gave evidence regarding the ADF's four tier risk management system. In summary, he described it as:
 - (a) The top tier of risk control is a systems level arrangement, reflected in the ADF's standing instructions, flight manuals and standardisation manual, which is necessarily broad because of the range of operations they may apply to. I note that in this respect, the flight manual for the MRH-90, which is the working guideline for pilots in respect to a particular aircraft, did not identify the risk relating to heat emanating from the searchlight on the aircraft. This failure was subject to criticism in the Aviation Safety Investigation Team's report.
 - (b) The second tier of risk management is that undertaken to support a particular activity which may reflect hazards specific to it, environmental or otherwise, such as in a SOP.
 - (c) The third tier of risk control is the flight planning conducted prior to a particular mission, captured in a local pre-flight authorisation brief.

- (d) The fourth tier of risk management is that exercised by an aircraft captain and crew during a mission.

83. The Aviation Safety Investigation Team's report was critical of the risk management planning for Op BFA, stating at [5](d) of the Executive Summary:

Risks associated with the potential for this event (the fire damage to MRH-90) were not identified in any planning or risk management process. The development of risk management plans by TU Taipan did not follow the RM process in accordance with the Defence Aviation Safety Manual. No overarching RMP existed for Op BA 19 Multinational Rotary Wing Task Group as this was delegated to the respective task units due to different risks in each state.

84. The Aviation Safety Investigation Team concluded that the risk management process was not properly understood across elements of the Army aviation community.

Unlearned Lesson – the Blackhawk and Other Experience

85. The Aviation Safety Investigation Team's report disclosed that on 13 January 2013, a Blackhawk landing light ignited a grass fire on a civilian property. The investigation report which followed that incident revealed that the heat from the landing light had ignited long grass. The remedial actions arising out of the 2013 event included the addition of a "Caution" in the Operating Procedure for the Blackhawk, which stated that:

The aircraft landing light generates significant heat when illuminated. When operating in close proximity to foliage, the heat generation may be sufficient to start a fire.

86. A warning was included in the maintenance publications for the MRH-90 about exposing flammable materials within three metres of a searchlight. A similar warning was added to the Blackhawk flight manuals, but such a warning was not replicated for the flight manuals for other types of aircraft, including the MRH-90.

87. Because that warning was not replicated in the flight manuals, which are an essential working document for aircrew, that information was not made readily available to them. Members of TU Taipan were being required to operate in a highly volatile fire-risk environment, yet a foreseeable risk had not been identified for them despite past organisational experience.

88. Witness D4, left-side aircrewman/loadmaster, had also witnessed an MRH-90 landing on grass with the searchlight on, causing the grass to smoulder, but not ignite, on a previous occasion. He recalled that this happened a couple of years prior to the incident. There is no evidence as to what, if any, follow-up there was on that occasion. Witness D4 stated that when aboard ANGEL21 on 27 January 2020, he was unaware of the fact that the searchlight was on as they went into land. His prior experience did, however,

translate into an immediate recognition when the OVF ignited, the searchlight may well have been responsible.

Risk Management Processes Adopted in Op BFA

89. There is a plethora of documentation regarding the ADF's operations, which provide the backdrop to all military aviation activities, including Land Warfare Doctrine 3-3-1 Employment of Army Aviation, the Army Military Air Operator Operational Airworthiness Management Plan, Standing Instructions (Aviation) Operations and Standing Instructions (Aviation) Safety. There is little utility in considering those high-level documents in detail here. That is because, as found in the Aviation Safety Investigation Team's report, the core risk which eventuated in this incident was the risk of ignition of grass by the activated MRH-90 searchlight, and that risk had not been identified and captured for the MRH-90 aircraft, and had not therefore filtered down as a risk management consideration at the operational level, particularly in the MRH-90 flight manual.
90. Certain task-specific processes and documents are more relevant in this inquiry to elucidate the factors that were considered in TU Taipan's risk management processes.
91. Under Op BFA, risk management planning was delegated from the MNRWTG to the individual TU's in light of the disparate work that was being engaged in by the various units.
92. On 14 January 2020, Witness D1, in his capacity as OC of TU Taipan, approved an Aviation Risk Management Plan prepared by the previous TU Taipan OPSO in connection with Op BFA. It identified a number of environmental and operational risks. It did not identify the risk of fire relating to the activated searchlight on landing, which would have been more granular than the plan is generally.
93. On or around 15 January 2020, TU Taipan circulated a document titled "Task Unit Taipan – MRH-90 SOP – OP Bushfire Assist", its standing operation procedure for Op BFA ("the SOP"). This SOP was prepared (at least, in part) by Witness D2 in his role as Troop Commander/Aircrew Detachment Commander. The SOP was marked "correct as at 14 Jan 2020" on each of the four versions in evidence. It was, however, revised on 18 January 2020, 22 January 2020 and 31 January 2020. The SOP did not identify the risk associated with the searchlight until after the incident, even though the question of use of the searchlight for deconfliction was addressed.
94. The 14 January 2020 version of the SOP provided:

10. Searchlights - due to very poor visibility and dense traffic within the AO, searchlights are to be switched on and extended.
95. The revised version of the SOP on 31 January 2020, now paragraph 11, read:
11. Searchlights - due to very poor visibility and dense traffic within the AO, searchlights are to be switched on and extended.
- Due to the heightened risk of unintended fire ignition, ensure the searchlight is switched off and stowed prior to coming within 10 feet of the ground or any vegetation.
- Consideration should be given to the residual heat that will remain post turning the searchlight off. No data is available that outlines the level of heat on a recently used searchlight, or on the heat required to cause an unintended fire.
96. This failure to address the fire risk associated with the searchlight reflects the fact that the risk had not been identified organisationally within the ADF prior to the incident.
97. In relation to communications, the SOP provided the following:
7. Reports back to Ops-Aircraft are to flight follow with 2A. SATCOM is the primary method of communication followed by FM and then Signal. The following reports must be communicated to the 2A:
- (i) Call sign
 - (ii) Whey
 - (iii) Where heels up and wheels down times and locations
 - (iv) ETA on tasks and RTB
- ...
- 23 – to facilitate current and future Ops, aircrew are to pass back as much information as possible to 2A regarding current weather conditions and pertinent information regarding evacuees, cargo etc. All reports are to be sent in the ‘at at what what what’ format on SATCOM or Signal.
98. This formulation of paragraphs 7 and 23 was retained through the four versions of the SOP.
99. It is apparent from the evidence that there was uncertainty on the part of the ADF personnel as to whether the obligation to report “wheels up, wheels down” was intended to apply to only mission-specific landings or to any landings during the flight. It is also unclear whether this notice was expected to be conveyed before the landing (“wheels down”) or at some later unspecified point in time. Witness D7 stated that the obligation to report “wheels up, wheels down” only arose at the start and the end of a mission, with no obligation to advise of any landing in between. Given the evidence (addressed below) regarding the pilot’s discretion to land as deemed necessary, even outside the mission objectives, this lack of clarity was significant. If there was no obligation to report the intention to land before actually landing, then the question of risk assessment for any decision to land lay squarely and solely with the aircraft captain.

100. The fact that there was no reformulation or refinement of this aspect of the SOP after the incident suggests that it was the ADF's intent that risk management as to whether and where to land was indeed to remain squarely and solely with the aircraft captain. That is not problematic if the captain is properly armed with information as to known and relevant risk factors. Here, however, the knowledge of the danger associated with the searchlight was not either known or understood at Joint Task Force ("JTF") or TU level. Further, none of the aircrew in TU Taipan had been fully briefed about the risks associated with operating in a bushfire-prone environment.
101. As the CO of the MNRWTG, Lieutenant Colonel Martin issued a Minute detailing his Critical Information Reporting Requirements ("CCIR") in relation to Op BFA on 15 January 2020. That document required accurate and timely reporting of all incidents which may impact "our people, the execution of our mission, our reputation, or achievement of our directed objectives or tasks". Specifically, an aircraft accident, incident or maintenance event that impacts or undermines ADF personnel safety or the ability to provide guaranteed lines of effort were to be reported to the CO immediately.
102. The Minute provided that:
- The primary point of contact should always be the immediate supervisor up through the applicable TU COMD and AEC, who will report to the CO by phone in the first instance. Where either the immediate supervisor or AEC are unavailable, notification should be directed to the CO. Where the CO is unavailable, the incident should be notified (in order) to the COFS, OPSO or S33... Most of these CCIR's will be incidents that require external reporting within specified timelines. All external reporting will be managed by the CO and/or nominated delegate. Reporting of CCIR's does not negate extant requirements to report ASR's, SENTINEL events, etc.
103. Witness D2 attempted, at least in part, to comply with the CCIR Minute, in communicating early with the OPSO by text message (see below). However, there was no attempt to follow up on early reporting with others in the chain of command until after landing at Canberra Airport. Witnesses D1 and D2 gave evidence that attending to the immediate operational challenges precluded them from considering any alternative reporting of this critical incident, despite the CCIR Minute. Lieutenant Colonel Martin endorsed their conduct as exemplary.
104. The CCIR Minute did not anticipate the need to notify the relevant civilian fire authority if a fire was spotted (let alone caused), even though the very purpose of the ADF's involvement was to assist in reducing the risk, or respond to the sequelae, of bushfires. Ordinarily, such a response would be expected as common sense. Perhaps because

this was so obvious, it did not occur to Lieutenant Colonel Martin to include it in the CCIR Minute.

Arrangements between JTF/Op BFA and ESA

Coordination of taskings between AECs, MNRWTG HQ and Task Units

105. On 13 January 2020, prior to any tasking being provided, ESA staff provided a general briefing to MNRWTG personnel, including TU Taipan pilots.
106. Mr Adam Atkinson was a member of the NSW Rural Fire Service (“RFS”) assisting in the pre-emptive IMT on 13 and 14 January 2020. Having worked with the RFS in various capacities for many years, he was at that time a qualified aircraft officer, whose role involved planning aircraft missions in conjunction with operations personnel within an incident management team.
107. At that stage, the MRH-90 aircraft had been allocated to Op BFA, but the ESA had not determined how best to use them, largely due to a lack of familiarity with the aircraft.
108. Mr Atkinson was involved in the initial briefing of the MRH-90 crew who attended from Holsworthy on 13 January 2020. He was aware of the difficulty regarding communication between ADF aircrafts and the IMT, as the ADF had no agency radio they could be contacted on. Mr Atkinson also noted that the areas of operation in which they would be functioning were too far out to allow contact on air band radio.
109. Mr Atkinson understood that the ADF liaison officer was embedded in the IMT to facilitate communications. He noted, however, “that was a little bit of a slower process than what we would have liked at that point in time. Hmmm, that was probably one of the major risks that we sort of captured on the day...”.
110. It is not apparent who from TU Taipan was at this briefing when the issue was identified. No resolution was arrived at. Clearly, having to communicate via an ADF liaison officer, particularly where the aircrew were not in a position to contact that person directly, was an inadequate way of communicating urgent information.

Tasking of ANGEL21 on 27 January 2020

111. An undated ADF task request headed “Remediation of HLZ in Namadgi National Park” was issued by the IMT. This tasking required insertion of crews to various helicopter landing zones for remediation and clearance of sites. It also noted that “further aerial recon will be conducted to identify additional sites”.
112. Prophetically, the request included the following statement:

Remote area access within the ACT is difficult with current access via 4WD fire trail. Dismounted movement through the park is constrained by the significant amount of undergrowth and high fuel loads. These areas have not had fire since 2003 and due to high fuel loads and low moisture content, if the ACT is unable to respond to new ignitions quickly and safely, it is highly likely fires will grow rapidly causing significant damage to ACT water catchment areas, sensitive ecological zones, rural properties and the potential to impact urban Canberra.

113. The particular task given to ANGEL21 was to undertake aerial reconnaissance of helicopter landing zones (“HLZs”) and report back any observations.
114. 7RAR teams were tasked to be on the ground that day in various locations, carrying out HLZ and firebreak clearance work.
115. As noted in the Territory’s submissions, the key difference between the two tasks was that the reconnaissance task was to be undertaken by ADF personnel alone, whilst the clearance, or “remediation”, task was to be undertaken by ADF personnel accompanied by a PCS officer. The PCS officer was equipped for remote area dry firefighting with a handheld radio, water and handheld clearing equipment due to the recognised high fire danger.

Execution of Task by ANGEL21 on 27 January 2020

116. Prior to commencing flight for the day, the aircraft captain, Witness D2, was required to obtain authorisation from the authorising officer, Witness D7.
117. A written record of the authorisation brief was entered into a system called “Patriot Excalibur”. The authorising officer also had a handwritten note relating to the briefing. The plan that was agreed was departure from Richmond at 0830 hours, with anticipated return between 1730 hours and 1800 hours. There was to be a planned landing at Canberra with engine shutdown, followed by a second landing without shutdown for hot refuel (that is, engine on and rotors spinning during fuelling) at Majura. There would be a second hot refuel at Majura before returning to Richmond. A 30% probability of decreased visibility due to smoke in the Canberra aerodrome was noted. Risks associated with hot refuelling, passenger management, instrument flying, traffic, visibility cloud, possible storms and mountainous terrain were identified. The authorising officer was satisfied that the sortie was appropriately planned, and that appropriate risk mitigation was in place. There was no discussion regarding the possibility of other landings or any risks that might be associated with them.
118. At 0700 hours on 27 January 2020, the two pilots (Witnesses D1 and D2) and two crewmen, both Corporal Loadmasters (Witnesses D4 and D6), commenced work and

preparations for their task in Op BFA that day. Witness D1 was the senior ranking officer, with the rank of Major. He was also the OC of TU Taipan. His non-flying pilot on this mission, Witness D2, holding the rank of Captain, was the assigned aircraft captain for the mission and was therefore primarily responsible for all operational decisions during the flight.

119. ANGEL21 departed RAAF Richmond at 0835 hours and landed at 34 Squadron at the Canberra Airport at 0948 hours.
120. There, two members of 7RAR, Witness D3, holding the rank of Corporal and having the role of photographer, along with Witness D5, holding the rank of Private and assigned as notetaker, boarded the aircraft.
121. At 1109 hours, ANGEL21 lifted off from the Canberra Airport and landed to refuel at nearby Majura.
122. At 1133 hours, ANGEL21 lifted off from Majura and made its way to the Namadgi National Park.
123. In accordance with its tasking, ANGEL21 flew to a number of the identified HLZs and circuted at each whilst the 7RAR personnel completed their roles.
124. The mission proceeded according to plan, until an issue arose regarding a request for landing.

Discretion to Land

125. At 1333 hours, one of the aircrewmen asked if there was any chance of a toilet break. This is contrary to the Aviation Safety Investigation Team's report, which stated that the reason for the break was because one of the passengers (inherently a reference to one of the 7RAR personnel) was experiencing motion sickness. The evidence does not support that finding. On the contrary, a transcript of the flight recording reflects that someone enquired as to the chances of a "whizz break". The timing coincided with an opportunity for a meal break. Ultimately, the reason for the landing, apart from noting it was not an emergency landing, is less important in the circumstances of this particular case, than the fact of the landing and its location.
126. Consideration of the flight recording discloses that there was some reticence about the appropriateness of landing at all. After the request was made for a "whizz break", the following exchange took place:

Unidentified male: Oh, we could put down somewhere.

Unidentified male: Are we, like, authorised to land in some of these areas for the guys to get out and have a piss?

Unidentified male: Um, on the nose. Just down at-like, it is not, are, near the car park, but on the nose up there at about a mile.

Unidentified male: (indistinct) I did not brief them (indistinct)

Unidentified male: Oh, just wait for the, um-the (indistinct) fuel point.

Unidentified male: Yeah. We have got-probably another hour left, man I will shoot them a message with an update. The fact that we have-that it is a recce position. You know what I mean? Like, it is our-it is an LZ, in my opinion.

Unidentified male: That is right.

Unidentified male: Oh, will prove that its, ah, a good landing spot.

127. This exchange reflects the evidence that the general expectation was that the reconnaissance mission would take place without a landing, other than for the purpose of refuelling. However, it appears that the decision-maker determined that because: the reconnaissance was of helicopter landing zones; and a message was to be sent to 2-Alpha to advise “with an update”; and that it would be some time (another hour) before a scheduled landing, it was appropriate to undertake the landing.

128. The overarching consensus of the ADF aviation witnesses, maintained under cross-examination, was that an aircraft captain has a discretion to land. Indeed, this point was made in the Aviation Safety Investigation Team’s report, which found:

The aircraft captain’s decision to land in the valley for an airsick passenger and a lunch and toilet break was reasonable and permissible within the OIP.

129. Only Colonel Gilfillan recognised that the general discretion to land could be subject to restrictions in certain circumstances and that it may have been appropriate for some engagement between the ADF and the ESA in respect to landings, having regard to the particular environment the TU was operating in. This was a reasonable and proper concession, made with the benefit of hindsight.

130. Clearly, had the possibility of an unscheduled landing in the combination of conditions as now known (that is, a tinder dry, high fuel load location, adverse weather conditions and an activated and very hot searchlight) been known and fully appreciated, the decision to land, particularly without prior consultation with the ESA, would have been extremely foolhardy.

131. However, noting that the aircrew were unaware of the risk associated with use of an activated searchlight on the MRH-90, I make no criticism of the decision to land. This is

distinguished from the organisational failure to recognise that risk based on the Blackhawk experience, and the failure to assess and document that risk in the MRH-90 flight manual.

132. Further, having regard to the uncertainty of the ADF witnesses as to whether there was an obligation to report “wheels down” before landing, I make no criticism of the failure of the aircrew to obtain approval prior to the landing. Indeed, Witness D1 gave evidence that he had intended to report a “wheels down” once the landing had been effected. Of course, events quickly overtook that possibility on this occasion.
133. However, the situation is unlikely to have arisen had the aircrew been made aware through the MRH-90 flight manual of the risk of fire associated with landing lights. This failure reflects a systemic failure to apply the lesson learned in one context, that is, the Blackhawk experience, to the broader yet patently like context of another aircraft utilising similar technology.

ESA and the Decision to Land

134. Mr Rohan Scott, Incident Controller, gave evidence that had he been made aware that a TU Taipan aircraft engaged in reconnaissance, such as ANGEL21, had intended to land as part of their mission, he would have questioned the need to do so or, depending on why they needed to land, given them other options, which would have been safe having regard to his knowledge of ground conditions.

The Ignition

135. ANGEL21 landed at 1338 hours. Witness D6 got out of the aircraft straight away in order to take the comfort break that he had requested. Witnesses D1 and D2 remained in the cockpit. Witnesses D3, D4 and D5 remained in the rear of the helicopter. There was discussion about having lunch.
136. About 50 seconds after landing, Witness D4, one of the aircrewmen, noticed fire in the region of the left sponson of the helicopter. The following conversation was captured on the flight recording:

Unidentified male: We started the fire. We started a fire.

Unidentified male: Turn the searchlight off now.

Unidentified male: Come up. Come up. Come up.

Unidentified male: Come up. Come up.

Unidentified male: Just-just wait, wait, wait, wait guys. Just wait.

Unidentified male: We have got a fire under the aircraft.

Unidentified male: We have got a fire.

Unidentified male: Are you-are you set? Take it over. All right. Control. Are you set in the back? Are you set in the back?

Unidentified male: Yes.

unidentified male: (indistinct) set the back. Clear up. come up straight.

Unidentified male: Fuck me, that's....

Unidentified male: (indistinct) backup.

Unidentified male: And that is quite large.

Unidentified male: Yep fucking searchlight. Dammit. (Indistinct)

137. The conversation continued; it was noted that the wind was coming from the northwest and "pushing it" (referring to the fire). Someone identified that the fire was directly under the aircraft and "spreading fast under the fuselage".
138. Clearly, this was an emergency, in which there was a real risk to the safety of the aircraft and those on board.
139. At 1339 hours, one minute and four seconds after landing, ANGEL21 took off again.
140. Witness D2 took control of the aircraft and ensured all were on board. The aircraft then hovered briefly over the initial ignition point at about 10 to 20 feet. The downdraught from the aircraft served to accelerate the fire.
141. Witness D2 handed control of the aircraft to Witness D1, who circled the valley in order to assess the airworthiness of the aircraft and whether it was necessary to land somewhere else.
142. The two aircrewmen were leaning out of the rear doors of the helicopter, face down, making a visual assessment of the underside of the helicopter. They observed blistering paint and burning on the composite material. This information was relayed to Witness D1 and D2, the former who stated in evidence that "we were very unsure as to the state of the aircraft, we didn't know if we were going to fall out of the sky at any second".
143. The location of the fire was recorded by Witness D2 by pressing a button on the instrument panel which served to mark the GPS location on the database, allowing it to be stored. That point was identified as "Waypoint 304".
144. Witness D2 applied the "CANCA" process, that is:
 - (a) Communicate (internally);
 - (b) Aviate;
 - (c) Navigate;

- (d) Communicate (externally); and
- (e) Administrate.

145. Meanwhile, Witness D3, one of the 7RAR personnel, took photographs of the fire on the army issued camera. Metadata from these photographs was used to provide GPS coordinates when the fire was ultimately reported.
146. As ANGEL21 left the Orroral Valley, the fire was estimated to be approximately 200 x 200 m in area and spreading quickly.

Action Following Ignition

147. A decision was made to return to the Canberra Airport. As to what was occurring during the flight, Witness D1 stated that:

At every point throughout this sortie – sorry, this orbit and every minute afterwards we were constantly assessing – not only was I assessing the aircraft’s viability but Witness D2 was conducting systems assessments every step of the way and we were reviewing in our mind (sic) if there was anything else we could be doing. We had continual in-feed, inputs from my aircrewmembers to provide situational awareness if anything degraded further, so it was a-it was quite busy and we were also very-we were in a position where we were uncertain as to the aircraft’s state. So as I was flying back, every step of the way I was identifying not only where I was going but potential crash landing sites that if we did start to fall out of the sky that I would at least try and put us down to minimise impact upon not only ourselves as humans but the aircraft if there was any chance of saving it.

148. A “PAN-PAN” emergency call was made at 1345 hours, 6 minutes and 50 seconds after the ignition of the fire.
149. Witness D1 was asked why he did not direct Witness D2 to tell air traffic control during the flight back to the Canberra Airport that their aircraft had started a fire. He replied: “because I didn’t think of it at the time”. He denied that the failure to report the fire was out of concern for reputational damage to the squadron or the Regiment.
150. ANGEL21 landed at the Canberra Airport at 1358 hours.

Internal Communications during Task

151. Arrangements were in place for “flight-following” during the flight. 2-Alpha maintained a flight log, which demonstrated that ANGEL21, consistent with the TU Taipan SOP, was reporting in approximately every 30 minutes. The last check-in by ANGEL21 to 2-Alpha prior to the ignition of the fire was at 1326 hours.

152. Witness D1 gave evidence that it was not practical to make mobile phone calls from the aircraft. This is because they had close-fitting helmets and were “hard-wired” to the aircraft. Additionally, it was too noisy on the aircraft to be heard on a mobile phone.
153. However, subpoenaed records establish that Witness D2 called Witness D7 at approximately 1334 hours from his mobile phone, that is some minutes before the landing of ANGEL21 in the Orroral Valley. That call was not answered and no text message was left.
154. At 1354 hours, Witness D2 sent a text message to 2-Alpha as follows:
- A21 Pan pan. Enroure (sic) cb in contact with atc. External fire damage to. Landing cb in 2.... No cas or anything.
155. 2-Alpha’s response was “2A ack”, which I take to be a simple acknowledgement of the message.
156. It is apparent that a personal mobile phone could be used to communicate, via text message, from the aircraft.
157. Direct communication by the aircraft captain with the AEC fell within the CCIR made by Lieutenant Colonel Martin. There was no provision in place for direct communications between ANGEL21 and the ESA. Witness D1 (at least) had the contact details for the AECs, the ADF liaison officers embedded in the ESA. He had the capacity to contact them via text using the Signal application on his mobile phone, but did not consider that communication to the ESA via this route was a priority, despite the obvious significance of igniting a fire at this time.

External Communications during Task – the Canberra Airport / the ESA

158. During the 17-minute trip from the site of the ignition of the fire by ANGEL21 back to the Canberra Airport, Witness D2 was in regular communication with the Canberra Airport’s Air Traffic Control (“ATC”).
159. Those oral communications commenced at 1345 hours:
- D2: Canberra approach, ANGEL21. Pan pan, pan pan, pan pan stop we are currently 17 miles to the south-west, 4800 inbound to the field. Ah, we have had a smoke and fumes incident and potential fire damage to the aircraft. Request clearance for field.
- ATC: ANGEL21, Roger
- D2: ANGEL21 (indistinct) 6000
- ATC: ANGEL21 (indistinct) observed. Are you able to maintain altitude?

D2: ANGEL21. Affirmed. Both engines and everything is currently operating fine. Just, ah, fire damage with potential, ah, damage to the outside of the aircraft.

ATC: ANGEL21 stop and you are clear direct to Canberra at 4500.

D2: Clear direct to Canberra, 4500, ANGEL21 and...

ATC: ANGEL21, advise your POB [persons on board].

D2: Ah, POB is six. ANGEL21

ATC: Just confirming...

D2: ANGEL21

ATC: Anything else that required any sort of fighting fire staff. Was there any smouldering?

D2: No, nothing smouldering. Just looked like I could see-yeah, look like it was, are...

ATC: All right

D2: (indistinct) cabling and there is-rubber had-had melted around it (indistinct)

ATC: ANGEL21, what services would you like at the field?

D2: ANGEL21. Just as a precautionary request, ah, fire services. No issue with fuel. Ah, just as a standby, please.

ATC: ANGEL21, thanks. And at this stage are expecting a normal approach on landing?

D2: ANGEL21. Affirm.

160. The second conversation took place at 1348 hours:

ATC: ANGEL21, are you familiar with Canberra aerodrome?

D2: ANGEL21. Affirm.

ATC: And the Canberra area generally?

D2: (indistinct)

ATC: Copy.

D2: ANGEL21. Relatively. We have been operating in the (indistinct) for the last (indistinct)

161. At 1349 hours:

ATC: ANGEL21, when ready, track directly final to runway 35, then you are cleared for a visual approach.

D2: Yep. Sweet. Track final. We are ready, 35 visual approach. ANGEL21

D2: 12 miles to run. About six minutes.

ATC: ANGEL21 I cannot (indistinct) did you have any dangerous cargo on board?

D2: ANGEL21. Negative.

162. At 1351 hours:

ATC: ANGEL21, do you currently have any smoke or fumes in the cockpit?...

D2: ANGEL21. Ah, there is some smoke and fumes due to potential burning of external part of the aircraft. None from the aircraft (indistinct) at this stage.

ATC: ANGEL21, Roger

D2: ANGEL21. I'll pass those details to the tower and just confirm you are clear for a visual approach and contact our 118-47

ATC: Tower 118, just confirming. ANGEL21.

163. At 1354 hours:

D2: Canberra tower, ANGEL21

ATC: ANGEL21, Canberra tower. Confirm clear visual approach, straight in runway 3-5. And advise if you have any dangerous cargo on board.

D2: Clear visual approach, straight to runway 3-5. Negative, ANGEL21.

ATC: ANGEL21. And, for your information, the firies are in their standby positions shortly.

D2: ANGEL21. Just confirming, once on the ground, where they're gonna want us to be. Are we just going to be on the runway or somewhere else?

ATC: ANGEL21, I got you planned for landing runway 3-5. What's your (indistinct)

D2: We're happy to vacate off, ah, the right-hand side (indistinct) Alpha. There's nothing, ah, outstanding at this stage which I think is going to prevent us from doing that for, ah, pad Alpha.

ATC: Are you happy to go direct pad Alpha then?

D2: ANGEL21. Affirm.

ATC: ANGEL21, clear visual. Go straight into pad Alpha.

164. I note that "PAN PAN" is the international standard acronym indicating an urgent situation that does not pose an immediate danger to life or a vessel. This is to be distinguished from a "MAYDAY" signal, which indicates imminent danger to life or a vessel.

165. As is evident from the extracted conversations, at no stage was any notification provided to the ATC that a fire had been ignited, that it was ANGEL21 that had caused the ignition, the location of the fire and/or that the fire was burning vigorously in the Orroral Valley.

Rationale for Not Reporting the Fire

166. At that stage, as far as the occupants of ANGEL21 knew, they were the only people aware of the ignition and the location of the fire.
167. When questioned as to why the fire was not reported by anyone on ANGEL21 to Canberra ATC, 2-Alpha, the ADF liaison officer in the ESA Command Centre, or indeed to anyone prior to landing at the Canberra Airport, the following responses were provided.
168. Witness D1, who was the pilot of the aircraft at the relevant time, accepted that there was an opportunity to convey the fact that the fire had been ignited by the aircraft both in the exchanges with ATC and in the text which Witness D2 sent to 2-Alpha. He also agreed that he could have required one of the 7RAR personnel on flight to make contact with the regiment or otherwise to report the fire.
169. His explanation for not doing so was that “from the time that I left the Orroral Valley to the time I landed in Canberra, I was considering what is an emergency state. As soon as I completed the emergency state aspect of the aircraft functions, I reported the incident.” He said that he was concerned that the helicopter “could fall from the sky at any moment”.
170. Pressed further by Senior Counsel Assisting, the following exchange took place:
- SCA: I want to ask you: that would you now agree sitting where you are that the failure to communicate with anyone outside ANGEL21 as to the fact you had started the fire and the location of the fire was an error in terms of the consequences?
- D1: At the time the prioritisation was my crew and my aircraft. Communication subsequently were informing ATC of the state of the emergency. Outside of that your point is valid.
- SCA: Would you do the same again?
- D1: I am very satisfied with the actions of my crew that day. If there was an opportunity with which to communicate directly to RFS or AEC or ESA, yes, I would have taken it.
- SCA: You did have the opportunity to communicate directly with 2-Alpha and with the air traffic control. Would you do that differently? Would you convey to, you know either 2-Alpha or - either by text message Signal group chat or would you do it again differently by telling the ATC that you had started the fire and the GPS location?-
- D2: We could improve our communication with ATC yes.
171. Witness D1 confirmed in his evidence that he did in fact have the contact details of the ADF liaison officer within the ESA Command Centre. Whilst piloting ANGEL21 on the

flight back to Canberra may have impeded his ability to make a call himself or send a text message, it appears that he gave no consideration to asking anyone else on the aircraft to do so.

172. Witness D2 was the non-flying pilot on the flight back from the Orroral Valley to the Canberra Airport. He accepted that he could have delegated the task of having somebody on the aircraft report the ignition and the location of the fire, for example, by using their personal mobile phones, but stated that in the context of what was occurring, that was not his priority.

173. Witness D2 was questioned as to why he did not report the fire when speaking with ATC:

SCA: You could have told them at that point that you had started a fire and given them the GPS coordinates at that time, couldn't you?

D2: I was physically capable of, yes.

SCA: Right, and you chose not to do that?

D2: It was not a conscious decision not to. It was in the triage of things I had going on, which was basically dealing with the aircraft emergency. It was lower on my I suppose considerations than the immediate safety of the crew and passengers...

SCA: And I think you said it was not fine but was flyable?

D2: At that immediate point in time, yes. But I was very conscious that the aircraft was not in a stable state and I was dealing with something that could not (sic) potentially become catastrophic in a very short period of time.

SCA: So, it would be fair to say that no part of your thinking from the time that ANGEL21 started the fire, to when you landed there, had anything to do with the fire that you had started, everything was about the aircraft? You were not giving any thought to that at all?

D2: That is correct, and that was not a conscious decision, it was just simply that I perceived, as the aircraft captain, in what was a potentially life-and-death situation, and that is where my attention was directed.

174. Pressed further, the following exchange took place:

SCA: So, surely at the point in time where ANGEL21 ignited the fire, it must have occurred to you that the fact that you had ignited the fire was a very, very serious thing?

D2: Yes.

SCA: And it must have occurred to you that it should have been reported immediately?

D2: At that period of time, with what else was going on, I would agree that it was extremely important, and the reporting of that would be extremely important, but I was managing an aircraft emergency, where there was an

immediate potential at risk to life in the aircraft, to the crew and passengers, and as such the reporting of the fire became second priority to that.

175. Witness D4, an aircrewman/loadmaster on ANGEL21, confirmed that he had his personal mobile phone with him on the mission and that the Signal application was on it. He stated that there was no prohibition on any person on ANGEL21 communicating outside of the aircraft, but stated that if outside communication was to be undertaken, the aircraft captain would do that, unless someone else was specifically tasked to do so.

176. The following exchange took place with Senior Counsel Assisting in relation to reporting of the fire:

SCA: Given the circumstances that prevailed, and I've described them to you - that is, a drought, very high temperatures, bushfires coming in from all sides, and that the very purpose of the Operation Bushfire Assist was to try and prevent fires or to contain them - the fact that ANGEL21 had ignited this fire and that it had spread so rapidly, did you think that it was an important thing to do to report that immediately?

D4: At the time, no.

SCA: And why was that?

D4: At the time, as I am - as I was a member of the crew, we were, I - to my recollection, we were then heading back to-directly to Canberra at the time.

SCA: So the travel time between ignition of the fire and getting back to Canberra was 17 minutes, and I can tell you that because we've listened to the flight recording. After getting away from the ignition of the fire itself and as you headed off, do you believe that there was time to report the fact that you had ignited the fire and the location of the fire? Was there time?

D4: There possibly could have been time, yes.

SCA: Did you assume that the air captain, which is Witness D2, or the pilot, Witness D1, had already done that? Did you assume that they had done it?

D4: I cannot recall if I made that assumption at the time.

SCA: Can you agree with me that, having started the fire in those circumstances, it was pretty important to tell someone as soon as possible?

D4: In hindsight, yes.

177. Having confirmed with Senior Counsel Assisting that he did not take any action to report the fire to anyone, Witness D4 was asked about the fact that other personnel were on the ground that day:

SCA: Now, you were aware that on that day, there were personnel on the ground, both Army and Emergency Services personnel. That is correct?

D4: I was aware that people were being served -serve and extracted, yes.

SCA: Did you know where they were relative to where the fire had started?

D4: Exact location? That they were in the Orroral Valley area, but not the exact location. Another aircraft was looking after that.

SCA: All right. So you knew that there were personnel on the ground in the Orroral Valley. Is that correct?

D4: Yes.

SCA: And you had seen the fire go from quite a small fire underneath the size of the helicopter to one which was quite large in a matter of minutes. That's correct, isn't it?

D4: Yes.

SCA: Did any part of your thinking engage the fact that those people on the ground should be warned that a fire had been ignited and it might be coming toward them?

D4: No.

SCA: You knew after taking off that there was nothing to stop that fire growing and spreading. That is correct, isn't it?

D4: Yes.

SCA: And given the conditions and the high state of alert, this was really a pretty terrible situation. You had ignited a fire in circumstances where you were there to do the opposite?

D4: Well, at the time, yes. It did – it- it could have - it was a bad situation, yes, in hindsight looking back.

SCA: Well, not just in hindsight. At the time, it must have occurred to you, "Oh my God, we've started a fire". Isn't that what you thought?

D4: Yes.

SCA: But no part of your thinking was to tell anyone that you had started a fire or to warn the people on the ground. Is that right?

D4: Yes.

178. In his interview with the police investigators on 3 June 2022, Witness D4 agreed that he and his fellow aircrewman were monitoring the aircraft, conversing with the pilots and looking out of the aircraft for a possible emergency landing site during the entirety of the return trip.

179. Witness D5 gave evidence that he had his personal mobile phone with him and that he had used the Signal application for communication whilst on the helicopter. He was part of a Signal group created to discuss taskings, but the pilots were not part of that group. Witness D5 stated that it was possible for him to use the Signal application to communicate back to his line of command and he had not been prohibited from using his phone for that purpose or at all.

180. Having acknowledged the fire which had been started by the aircraft and the potential for it to spread quickly, Witness D5 was asked:

SCA: So in those circumstances, did you make any decision to contact your line of command through your Signal app?

D5: No.

SCA: Why not?

D5: Put simply, the thought just did not occur at the time.

181. Witness D5 maintained that he gave no thought to reporting the fire during the 17-minute flight back to Canberra. He was asked:

SCA: Did you think that the pilot or the co-pilot would have radioed that in, would have communicated that the fire had been ignited and the coordinates? Did you think that was their job?

D5: Yes.

182. Witness D3, the 7RAR allocated photographer, was not called to give evidence in person at the Inquiry. However, in an interview with police investigators assisting the inquiry on 4 February 2022, he was asked what form of communication was available to him on the aircraft. He stated that he had his mobile phone with him, but he had no radio. He recollected the pilot checking with the loadmaster the condition of the helicopter whilst they returned to the airport. Specifically, he was asked whether there was any conversation whilst on the helicopter about the fire on the ground, and whether it would be reported or recorded or anything like that. He responded "Ah, not between myself or from [Witness D5]. Um, but, yeah, like I said, I think the-the pilots and the loadies, they have their-their own, like, internal channel for comms. So it was, it was my impression that they-the they had been-or they would reported".

183. He did not recall having been spoken to directly about the fire other than for the aircrew to ensure that he was okay.

184. In summary, the two aircrewmen and the two 7RAR personnel on board ANGEL21 appear to have assumed or expected that the aircraft captain would take responsibility for reporting of the fire. The aircraft captain was not the senior officer on board that day, but was the person engaged in communicating both with ATC and 2-Alpha.

Further Communications – after Return to the Canberra Airport

185. On landing, Witness D2 told Mr Russell Mealy, Fire Commander of the Aviation Rescue and Fire Fighting Service at the Canberra Airport, that ANGEL21 had started a fire. However, Witness D2 did not give the GPS co-ordinates of the fire to Mr Mealy.

186. Mr Mealy then despatched a team member to open his Service's fire control centre at the Canberra Airport in order to notify ACT Fire and Rescue, including providing the location of the fire. Mr Mealy followed this up at 1419 hours with a call to the ESA himself.
187. At 1406 hours, Witness D1 called Captain Bryson, OPSO of TU Taipan, and informed him of the GPS coordinates of the fire captured from the meta data of a photograph taken by Witness D5 when the helicopter was orbiting the site of the fire before departing for the Canberra Airport.

Reasonableness of the Failure to Report the Fire before Landing at the Canberra Airport

188. There is no doubt that the situation in which the occupants of ANGEL21 found themselves was extremely concerning and likely very frightening. Clearly, monitoring the aircraft and its occupants and ensuring their safety was quite properly front of mind for the aircraft captain and the pilot, as well as all on board. I accept that this was, as described by Colonel Gilfillan, "a novel emergency", and one which would have required significant cognitive effort. It was entirely proper that Witnesses D1 and D2 focussed on assessing the state of the aircraft, determining whether to attempt to return to the Canberra Airport, and continually monitoring these factors throughout the return flight. They are both to be commended for their professionalism in doing so. The fact that Witness D2 presented as calm in his communications with ATC also speaks to his competence and professionalism.
189. However, just as one would expect any ordinary citizen to report a significant fire to the relevant authorities, particularly in a time of heightened risk, as participants in Op BFA it was incumbent on all ADF personnel to do so.
190. The aircraft captain and those aboard ANGEL21 also had an obligation to consider the risk to the Army and the ESA personnel on the ground, in circumstances where ANGEL21 knew that they were working in the area and there was a real possibility that the fire could progress and endanger those persons.
191. It must have been obvious to any thinking person that a delay in reporting the fire could potentially impact the capacity of the relevant organisations to respond to it with all the obvious risks and actual consequences which may, and in this case did, flow from an uncontrolled fire.
192. It is not plausible, despite the highly stressful situation, that no consideration was given to the significance of the fact that the actions of this crew, inadvertent and unanticipated though they were, had just caused a major fire. It is implausible that those engaged in this mission did not appreciate the need to bring that fire to the attention of those who

may be able to control it. It was absolutely within their means to do so by simply stating to the ATC words along the lines of “fire started in Orroral Valley; alert fire brigade”.

193. The failure of anyone on board ANGEL21 to report the OVF at the earliest opportunity was an error of judgment. This was generally acknowledged by the ANGEL21 crew and other ADF members who gave evidence in this inquiry. Whilst soldiers might reasonably have relied on the officers present to make this decision, Witnesses D1 and D2 must shoulder the responsibility for the error.
194. Lieutenant Colonel Martin maintained that no criticism could be made of Witnesses D1 or D2 for not reporting the ignition of the OVF at the earliest opportunity. Rather colourfully, he stated that: “So it’s really easy to sit in a 1G armchair and criticise a crew but when – you need to – you need to understand how busy they are and what they’re trying to do in the cockpit...when you’re in the heat of it, you have to make decisions”. Lieutenant Colonel Martin was an outlier in failing to recognise the fact that the OVF could and should have been reported via ATC or otherwise during ANGEL21’s 17-minute flight back to the Canberra Airport. I am unpersuaded by his evidence.
195. I am unable to conclude what factors contributed to this error of judgment. Feasible factors include:
 - (a) the crew’s intense focus on the risk to the aircraft and crew;
 - (b) an inability to appreciate the magnitude of the catastrophe about to unfold, including the risk to the people on the ground in the area;
 - (c) despite the witnesses’ refutation of it being a conscious factor, a subliminal desire to avoid reputational damage to the Army (see Lieutenant Colonel Martin’s “Critical Information Reporting Requirement Minute” calling for timely reporting as a factor which may impact on “our reputation”);
 - (d) or some other indiscernible reason.
196. However, whatever the reason, the failure to advise any relevant authority of the ignition and location of the fire at the earliest possible opportunity is properly characterised as an error of judgment.
197. The Commonwealth submits that this finding cannot be made absent expert evidence. This is not a matter requiring expert evidence; it is a matter involving an assessment of the facts, the witnesses and common sense.

198. Efficient communication of the fire emergency would have been facilitated by a clearer directive to communicate directly to the AEC in the event of an emergency requiring action by the civilian authorities. Such communication could have been better facilitated by the provision of the direct contact number for the AEC, although the evidence is that contact was to be made on numbers specific to the individual AEC, which would require knowledge of roster changes in order for the caller to know whom to contact. A direct contact for the IMT would have also readily facilitated early reporting of the fire.

Identification and Location of the OVF by the ESA and Others

199. The, respectfully, obvious starting point for the Territory's submissions in relation to reporting of the OVF is as follows:

Fundamentally, the Territory expects ADF personnel, in the same way as any member of the public, to report any fire ignited or sighted, as soon as possible.

200. Noting that the fire commenced at 1338 hours, the first observation by anyone other than those on board ANGEL21 was an observer at the Mount Tennent Fire Tower, who called in his observations of a large column of smoke at bearing 245, and 5 km from the tower. This call was made at 1347 hours 58 seconds, nine minutes after the fire was ignited.
201. Within seconds thereafter, at 1348 hours 31 seconds, a concerned resident in the Canberra suburb of Kambah called 000, reporting a plume of smoke rising in the Brindabella mountains.
202. The Mount Tennent Fire Tower officer called the ESA Communications Centre again at 1350 hours 17 seconds, estimating the fire being at a distance of 24 kilometres from the tower.
203. At 1352 hours 16 seconds, the ESA dispatched RFS resources to the Booroomba Rocks area. Further RFS units were dispatched at 1353, 1354 and 1356 hours. At that time, the ESA Communications Centre was still speculating as to the location of the fire, at this point estimating its location at the Mount Franklin Road and Leura Gap fire trail.
204. At 1357 hours, the ESA Communication Centre contacted the attending fire crews on the ground, requesting that they stop at the Namadgi Visitors Centre to await further instructions.
205. At 1358 hours, the observer from the Mount Tennent Fire Tower called again, noting that the fire appeared to be in the Bramina area.
206. At 1359 hours, Army personnel from 3RAR called for their scheduled welfare check. They reported that they could not see any smoke or fire at that stage.

207. At 1404 hours, the observer from the Mount Tennent Fire Tower called in, confirming the fire location at 245° and 6 km from his location.
208. Some 30 seconds later within the minute, members of the PCS reported during a call back to the fire management team that they observed smoke coming from the Orroral Valley and, on close approach, observed flames in an area behind the Orroral Valley Tracking Station.
209. At 1406 hours, the ESA broadcasted the fire location to all attending units.
210. This was at about the same time that the grid reference was provided by the OPSO of TU Taipan to the Chief of Staff of the MNRWTG, Major Rodis. He reported by email to the Commanding Officer of the Task group and also to Op BFA.
211. At 1408 hours, one of the PCS crew members attending the fire requested aerial support and was advised that the IMT was actioning this.
212. At the same time, the IMT contacted 2RAR and 3RAR Army crew members, who were on the ground, informing them that they were to be extracted and that the estimated time of arrival for assistance was about 40 minutes.
213. At 1410 hours, Firebird 100, an intelligence-gathering helicopter supporting the civilian bushfire operation, contacted the ESA to advise that they were airborne and en route to the fire.
214. At 1411 hours, attending fire crews requested additional resources, including a bulk water tank.
215. At 1415 hours, 37 minutes after the ignition, Lieutenant Colonel Martin contacted the ACT AEC to advise him of the fire. The AEC advised Lieutenant Colonel Martin that the ESA was aware of the fire and was addressing it.
216. At 1419 hours, on his own initiative, Mr Mealy advised the ESA of the report from ANGEL21 of having instigated the OVF.
217. At 1437 hours, 59 minutes after ignition, Captain Bethany Gallagher, intelligence officer at the JOC, sent grid references via email to ADF personnel, including Lieutenant Commander Withers, AEC.
218. At 2245 hours, 9 hours and 9 minutes after the ignition, Ms Whelan became aware of the cause of the fire, with this information having been communicated to her by Lieutenant Colonel Martin.

Impact of the Delay in Reporting the OVF by the ANGEL 21 Crew

219. At the time ANGEL21 left the Orroral Valley, based on photographs taken by Witness D3, the fire was estimated to be approximately 200m by 200m in size and spreading quickly.
220. In the first 24 hours, it spread across approximately 2,600 hectares. It grew by approximately 5,000 to 8,000 hectares per day over the next three days. Unfavourable conditions saw the fire grow by approximately 26,000 hectares on 1 February 2020, on which date it also spread over the southeastern border of the ACT at Clear Range, and thereafter becoming known as the Clear Range Fire in NSW.
221. In total, 78% of the Namadgi National Park was burnt, that is, 82,700 hectares. Tidbinbilla Nature Reserve was also affected with 1,400 hectares, or 22%, burnt. The Cotter River catchment area, the ACT's primary water supply, was also adversely affected by the fire. Extensive remediation work has been required.
222. However, the evidence from Mr Scott as to the failure of the occupants of ANGEL21 to report the OVF's ignition in a timely manner was, "I don't think it would have made any difference with the – it definitely wouldn't change our response, but I don't think we would've had any opportunity to put the fire out easier".
223. Asked by Senior Counsel Assisting, "Notwithstanding that, you'd agree with me that in normal circumstances, the earlier that the location of a fire is identified, the better chance that you have of dealing with it?", Mr Scott responded, "Definitely... any information we can get as soon as possible, does assist".
224. Through the flight records and the photographs taken by Witness D3, crew members of ANGEL21 were able to identify the exact grid point at which the fire ignited. This information was not relayed to Major Rodis, embedded in the ESA, until about 35-45 minutes later, at the earliest. Logically, the capability to report vital information in an emergency directly to those needing to know in order to respond is important.
225. Mr Scott stated that the situation highlighted the need for there to be communication between all "resources", that is, civilian and military, back into the incident management room.
226. The evidence before me is that the unfortunate delay in reporting ignition of the fire had no significant impact on the response to it, and I so find. The spread of the fire was exponential because of the location of its ignition and difficulty responding quickly to that location.

227. The evidence is that early reporting of any fire is beneficial. Again, that accords with common sense. Failure to report the fire earlier, and failure of the Commonwealth to accept the overarching need to do so, does raise an issue of public safety.

Submissions in Reply to Draft Findings and Recommendations

228. Senior Counsel Assisting made a number of recommendations, each of which was supported by the Bumbalong residents. I have considered the submissions of the Commonwealth, the Territory and Witnesses D1 and D2 as to Senior Counsel Assisting's proposed recommendations.

229. The Territory made no substantive submissions other than seeking greater specificity in the description of Territory agencies involved in the OVF response. These suggestions were incorporated.

230. The Commonwealth submitted that characterising TU Taipan's communication through an ADF liaison officer as an "inadequate" arrangement to communicate "urgent information" in [110] lacked contextuality and could not be supported by the evidence before the Court.

231. The submissions on behalf of Witnesses D1 and D2 detailed similar concerns, and it is thus appropriate to summarise them together.

232. Clayton Utz, on behalf of both witnesses, submitted that it was not open to the Chief Coroner to describe the failure of crew to report the OVF at the earliest opportunity as an "error of judgment" in [193].

233. Such a finding, it was submitted, could not reasonably be made without explicit evidence from witnesses to that effect, expert evidence in support of the finding, or more detailed evidence regarding the practicalities of reporting the incident from within the aircraft at the time.

234. It was submitted by Witnesses D1 and D2 that the evidence supported alternative findings. First, that the crew had complied and acted in accordance with ADF policies and procedures in their handling of the emergency, and second, that there was no opportunity to report OVF in the flight back to Canberra Airport.

235. Witnesses D1 and D2 also submitted that the characterisation of reporting the incident to civilian fire authorities as one "expected as common sense" in [104] was inappropriate where each had otherwise provided honest, consistent and considered evidence in relation to their actions on the day.

236. Witness D1 alone submitted further that the finding in [157] relating to use of the Signal application whilst within the aircraft did not appropriately consider the practicalities of reporting the fire during the flight.
237. As is evident from the findings above, I am not persuaded by these submissions received on behalf of the Commonwealth and Witnesses D1 and D2.

Recommendations

238. I note in making the following recommendations that it is necessary to recognise a number of important principles:
- (a) DACC is an extremely valuable resource to the benefit of our citizenry;
 - (b) not every situation can be anticipated;
 - (c) recommendations must be sufficiently specific as to arise from the circumstances of the inquiry, but sufficiently general, so that they are likely to be beneficial in future circumstances, which will almost never be identical; and
 - (d) recommendations intended to address issues of public safety must be capable of practical implementation.

(i) Risk Assessments

239. Where DACC is sought by the ACT, the ACT should provide the ADF, in an accessible and reproducible format, a briefing as to particular known risks associated with the planned operation, which should be incorporated into mission-level risk assessments. In particular, risk assessments for unplanned landing in bushfire-prone zones should be provided and incorporated as part of the pre-flight authorisation process. Those risk assessments should include ground and environmental conditions provided by the local emergency services agencies. Consideration should be given to the frequency with which these risk assessments should be updated.
240. Consideration should be given to incorporating a procedure for reporting unplanned aircraft landings during DACC operations internally to the ADF and concurrently to the relevant civilian authorities, including whether prior approval is required, by whom and in what circumstances.
241. Consideration should be given by the ACT and the ADF to embedding civilian subject matter experts within the ADF mission crew, where resourcing, safety and space allows.

(ii) Communication

242. When providing DACC, consideration should be given by the ADF to including an emergency procedure protocol in the operation's SOP, which incorporates arrangements for the direct reporting of incidents that create an immediate and obvious risk to the public and to civilian authorities, such as a fire. This may be through an embedded ADF liaison officer (such as the AEC) or to a nominated civilian counterpart or, if unable to contact those identified persons, any person with whom they are able to communicate who is able to relay the information to the emergency services promptly (such as airport ATCs).
243. As part of any fire-related DACC operation SOPs, aircraft captains should be directed to provide the GPS location of any fire that they ignite or observe, in accordance with the above protocol as soon as practicable.
244. To facilitate efficient communications between operational and embedded ADF members during DACC, consideration should be given to establishing a "duty contact" arrangement, whereby the contact details are specific to the role, not the person.
245. The ADF and the ACT should liaise regarding the most effective direct line communication system to implement between ADF aircraft and civilian authorities, whether that be the Signal application or some other arrangement.

(iii) Systemic

246. The ADF should create, or if it exists, ensure implementation of, a process, whereby learnings from review of incidents relating to a particular resource be considered in a service wide context as to whether the learnings have, or are likely to have, application in respect to other resources. If so, those learnings should be incorporated into relevant training or risk assessment documentation.

Conclusion

247. This matter has taken far too long to be finalised. Without demur, I offer my apologies to those affected by the fire and its aftermath, in the various ways in which that has occurred.
248. I note that much consideration has been given by those involved in our community's response to bushfires as to how to address this challenging phenomenon in the future. It is evident that our best response can only be achieved by a united community effort. As a community, we must, and rightly do, have confidence in the excellent and necessary co-operation between the Commonwealth, our dedicated military personnel and ACT

administrative and fire-fighting personnel. Nothing in these findings should be interpreted to suggest otherwise.

I certify that the preceding two-hundred-and-forty-eight [248] numbered paragraphs are a true copy of the Reasons for Findings of her Honour Chief Coroner Walker.

Associate: Maddy Holloway

Date: 13 June 2025