



BLACK SUMMER – HOW THE NSW COMMUNITY RESPONDED TO THE 2019-20 BUSHFIRE SEASON

Research for the NSW Rural Fire Service

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Cover: Bushfire raging at the North Black Range in December 2019. Photo: Ned Dawson/NSW Rural Fire Service.



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EXECUTIVE SUMMARY

BACKGROUND

The 2019-20 bushfire season saw unprecedented, destructive bushfires across New South Wales (NSW). After an early start to the fire season in August 2019, fire activity spread south from the Queensland border to the Victorian border over the course of spring and summer. Tens of thousands of people were displaced by the fires, including residents, tourists and visitors to affected areas. Significant rainfall in early February 2020 helped contain the fires by 13 February and brought an end to the most deadly and destructive fire season in NSW history. Tragically, 26 people lost their lives in the fires, including four NSW Rural Fire Service (RFS) volunteers and three US aerial firefighters. Many more people were affected by smoke, including in regional areas on the south and north coasts and in major population centres such as Sydney, Canberra, Newcastle and Wollongong. By season's end, fires had burned a record 5.5 million hectares of NSW and destroyed 2,448 homes (NSW RFS 2020). Community and commercial buildings and infrastructure were also significantly impacted on. The fires adversely affected many industries including agriculture, forestry and tourism.

RESEARCH SCOPE AND METHODS

The NSW RFS commissioned the Bushfire and Natural Hazards Cooperative Research Centre to undertake research into community attitudes and experiences of the 2019-20 bushfire season. The University of Wollongong (UOW) and Macquarie University were engaged by the Bushfire and Natural Hazards CRC to conduct this research. The NSW RFS Statement of Work identified the following themes and questions for investigation:

Risk communication

- Were people aware of the risk leading in to the bushfire season?
- How did people obtain, understand and respond to information and warnings?
- Were information and warnings useful to people given their personal circumstances?
- How can information and warnings be enhanced?
- How did people interact with others to prepare, respond or recover from the bushfires?

Effect of prolonged and/or repeated exposure to bushfire

- How did prolonged and/or repeated exposure to bushfire threats, smoke and/or media coverage of the bushfires influence or change people's planning, preparation and responses?
- How can communication and engagement with communities be optimised during campaign fires?



- Was there a particular moment that motivated people to take preventative or protective action?

Effect of previous experiences and exposure to bushfire

- Did previous experience and/or exposure to bushfire influence people's expectations, planning, preparedness and responses?

Sheltering practices

- What were people's experiences of sheltering at the individual and community levels?
- Were people aware of Neighbourhood Safer Places? How did they use and experience them?

Experiences of tourists and visitors

- What motivated tourists and visitors to travel during the period of bushfire threat?
- How did tourists and visitors respond to warnings, 'leave zone' maps and bushfire threats?

Awareness and attitudes toward bushfire risk reduction activities

- Were people aware of bushfire risk reduction activities in the area over recent years such as:
 - Hazard reduction burning
 - Fire trail management
 - Bushfire construction measures for dwellings
 - Mechanical works (e.g. Asset Protection Zones)

Building standards

- Were people aware of bushfire protection measures incorporated into the design and construction of their home?
- Did the presence of bushfire protection measures influence people's planning, preparation and responses to the bushfires?
- What were people's expectations of their home during a bushfire?

Community recovery and resilience

- What were people's experiences in the aftermath of the bushfires?
- What was community sentiment, expectation and experience of service provision by the emergency services?
- What programs or initiatives do people think could be implemented in their communities to help them prepare for bushfires in the future?



Investigation and analysis of firefighting responses and building impact assessments were outside the scope of this research.

RESEARCH METHODS

The research involved 202 interviews with people affected by bushfires in NSW during the spring and summer of 2019-20. These interviews were conducted by web conferencing and telephone due to government and university restrictions on travel and fieldwork to prevent the spread of COVID-19. An online survey was also conducted, receiving a total of 1,004 completed responses. Research participants included people who were threatened or affected by bushfire at their primary place of residence or at a secondary residence (e.g. holiday home) or while a tourist or visitor to a fire threatened or affected area. 17 interviewees and 46 survey respondents indicated that they lost a house or home in the fires.

KEY FINDINGS

Risk communication

Key insight – Most people were aware of the heightened level of risk during the bushfire season and used a range of information sources and channels to obtain information about fires. Many people reported that Fires Near Me NSW was not updated frequently enough. Despite this, the participants indicated a strong preference for Fires Near Me NSW as a source of information during bushfires.

- Most people reported that they were aware of the heightened level of risk leading into the 2019-20 bushfire season. Many observed dry fuels, tree dieback and landscape dryness as an indicator of elevated fire risk.
- The substantial number of fires that occurred before or early in the bushfire season, as well as associated smoke and media coverage, also contributed to widespread awareness and concern about bushfire risk.
- Substantial proportions of survey respondents indicated they had read the *NSW RFS Guide to Making a Bush Fire Plan* (57%) or had participated in a local NSW RFS brigade event (44%).
- Most people recalled seeing a fire spread prediction map for their area (86%) and found it easy to understand (93%), sufficiently localised (77%) and useful (85%). Around half of these respondents said that seeing the fire spread prediction influenced their decision to leave or avoid travelling to a fire threatened area.
- The majority of residents indicated they received or obtained warnings with sufficient time (78%) and had sufficient information (71%) to take protective action. However, pre-existing mobile phone blackspots or poor reception and mobile phone and power outages that occurred during the fires meant some people were unable to access timely warnings.
- 94% of primary residents had downloaded the Fires Near Me NSW app, with 39% reporting that it was the most useful source of information



(followed by NSW RFS volunteers as the next most useful source at 13%). While a number of people reported that Fires Near Me NSW was not updated frequently enough there was still a strong preference for Fires Near Me NSW as a source of information, with 78% of survey respondents indicating that Fires Near Me NSW was their preferred source of information in the future.

Effect of prolonged and/or repeated exposure to bushfire

Key insight - The length of the fire season and the repeated threat of bushfire was a significant factor that influenced people's planning, preparation and responses. The extended fire season required many people to adapt to fire as an everyday part of their life, juggling work, schooling and family celebrations with ongoing monitoring, preparation and responses to fire.

- Many people were exhausted by the ongoing nature of the threat and the continual need to monitor and prepare. Some discussed living with the continual 'anticipation of threat' and voiced times where they had wished the fires would arrive and so the experience would be over.
- The length of the fire season allowed many people to engage in considerable planning and preparation. Residents who had not previously considered the risk of bushfire talked about how they made fire plans for the first time, while others had time to hone their preparations.
- The long duration of the fire season influenced some people to change their bushfire plans. Notably, some realised that they no longer accepted the risks involved with staying to defend due to an increased understanding of the likely severity of the fire and witnessing fire impacts in other areas.
- Some people took extended leave from work to remain at their homes and properties during the fires. While some were able to use annual leave or make arrangements to work from home, others described the stress of negotiating with employers who did not appreciate their situation.

Effect of previous experiences and exposure to bushfire

Key insight – People with previous experience of bushfire described a heightened sense of awareness of bushfire risk leading into the season. Many used knowledge gained from past experience to plan and prepare. However, some felt that past bushfires could not prepare them for the scope and severity of the fires that occurred during the spring and summer of 2019-20.

- Past experiences of bushfire motivated some people to make firm plans to leave early if they were threatened again. These people described taking early and decisive action to remove themselves and others from danger.
- Many people were overwhelmed by the number, size, rapid spread and severity of bushfires that burned during the 2019-20 fire season. Some felt



that their past experiences of bushfire could not prepare them for the fires that occurred.

- Some interviewees had reflected on their previous experiences of bushfire and decided they needed to learn more about how to plan, prepare and respond. Some described accessing fire service information, while others sought to enhance their knowledge and skills by joining the NSW RFS or engaging in bushfire safety programs.

Sheltering practices

Key insight – Most people had considered that they might need to take shelter during a bushfire. While there was a range of sheltering options available, such as actively sheltering in a well prepared home under some conditions, or using a formal shelter such as a Neighbourhood Safer Place, many had not engaged in active planning or preparation for sheltering.

- Many people who took shelter during the fire recognised they were not prepared to shelter safely, lacking important items such as protective clothing, eyewear and drinking water.
- A number of people who undertook late evacuations drove through fires and fire impacted areas. Few had planned or prepared for sheltering, with some unsure of where to go and lacking protective clothing and equipment such as woollen or fire blankets.
- Many people were unfamiliar with the 'Neighbourhood Safer Places' term and were unsure if there was a NSP nearby.
- Although many people were unfamiliar with NSPs, many had given consideration to local places that might provide refuge during the fire. People were able to identify cleared, open spaces such as parks and reserves as well as neighbouring properties that might provide a degree of relative safety during the fire.

Experiences of tourists and visitors

Key insight - While most tourists, visitors and those who owned secondary homes were aware of bushfire activity in the vicinity of their travel destination, they did not think they would be directly affected. Continuing with annual holiday plans and wanting to escape smokier conditions at their primary place of residence were the main motivations for people to travel during the bushfire threat.

- Most people who travelled to bushfire threatened or affected areas did so because they wanted to continue with their holiday plans. For many visitors, particularly secondary homeowners and their families, their holiday plans were an annual ritual.
- A smaller proportion of visitors and secondary homeowners reported travelling to fire threatened destinations specifically to assist family or



friends who were threatened by fire to leave or to defend their homes and properties.

- Some tourists and visitors sought assurance from accommodation providers that it was still safe to visit. Others reported hearing local councils and tourism agencies say it was safe to travel. Some felt there were mixed messages about whether it was safe to visit or remain in particular areas, with NSW RFS telling people to leave or avoid fire threatened areas and some local businesses encouraging people to visit.
- Some people consulted fire spread prediction maps prior to commencing their travel. A small number of people said the fact that their travel destination was not within a fire spread prediction gave them a false sense of security in continuing with their travel plans.
- For many Canberra-based interviewees, the perception that the coast offered better air quality outweighed the perceived risk of being impacted by a fire at their holiday destination. There was a common misconception among those staying in localities close to beaches that the fires would not burn to the coastline.
- Around half of the tourists, visitors and secondary residents surveyed recalled seeing or hearing about a Tourist Leave Zone. After receiving this advice, more than two thirds of respondents left the Tourist Leave Zone. The remainder stayed within the Tourist Leave Zone, most often because they were unable to leave. The majority of interviewees understood the purpose and were supportive of Tourist Leave Zones.

Awareness and attitudes toward bushfire risk reduction activities

Key insight – Many people were aware of activities that had been undertaken to reduce bushfire risk, including hazard reduction, Asset Protect Zones (APZs) and NSW RFS community engagement. These activities were, on the whole, viewed positively and were believed to have reduced bushfire risks. Community engagement with NSW RFS brigades was viewed particularly positively and presents a valuable area for further developing community planning and preparation for bushfire.

- Hazard reduction burns were the most commonly discussed risk treatment, with the majority of interviewees supportive of this practice. A small number of interviewees questioned whether hazard reduction burning was an effective method of reducing bushfire risk.
- Survey results indicate that 44% of primary residents participated in a local NSW RFS brigade event, such as a Get Ready Weekend event or open day. These engagements were viewed positively, with interviewees reflecting on how brigade members had helped them to understand and identify local risks, as well as plan and prepare for bushfire.
- Many interviewees identified areas where they believed there had been little or no risk reduction, most commonly a lack of hazard reduction burning.



- Some interviewees expressed strong support for greater use of Indigenous land management practices and cultural burning.

Building standards

Key insight – Around one third of people surveyed were unsure whether their house was built to regulations to reduce bushfire risk.

- One-in-ten survey respondents were aware that their house was built to regulations to reduce bushfire risk, while around half indicated that it was not built to one of these regulations. More than a third were unsure whether their house was built to regulations to reduce bushfire risk or not.
- Some people exceeded minimum requirements to increase the bushfire resilience of their home. This gave them increased confidence that their house might withstand a bushfire. Others were not required to meet bushfire construction standards but had taken action to incorporate protection measures into their homes.
- Some people were aware that their homes were not designed and constructed to reduce bushfire risk, which influenced decisions to leave. For example, some interviewees identified the wooden construction or poor condition of their house as a source vulnerability.

Community recovery and resilience

Key insight – People who were affected by these fires experienced a range of issues in the aftermath. Difficulties accessing services at evacuation centres and finding out whether houses had survived were challenging for many residents. Many visitors and tourists to fire affected areas had trouble returning home due to fuel shortages and the inaccessibility of information about road closures. Critically, COVID-19 compounded the impacts of the fires on many people and has hindered recovery.

- Evacuation centres provided many people with the help and support they needed. However, some were unsure of the services that were available, who was eligible, and the process for accessing them. Some people felt that evacuation centres were overcrowded and did not cater for the needs of older people and people with disabilities.
- Power and mobile phone outages in the immediate aftermath of fires impeded communication and people's ability to acquire food, petrol and other essentials such as medication.
- Many tourists, visitors and occupants of secondary residences experienced difficulty returning home due to fuel shortages and the limited accessibility of information relating to road closures and routes.
- People who left their homes during the fires experienced difficulty finding out if their houses had survived. Some of those who lost their homes were distressed to find out via media reports, images on social media and word



of mouth. Some expressed frustration at the lack of process for notifying residents about house loss.

- The COVID-19 pandemic compounded the impacts of the fires on many people and is affecting their recovery. While lockdowns and working-from-home provided some with an opportunity to focus on clearing properties and their personal recovery, others noted that COVID-19 prevented them from meeting with others and engaging in community activities to support each other and recover.

IMPLICATIONS AND OPPORTUNITIES

The findings presented in this report present numerous opportunities for the NSW RFS, other government agencies and communities to reduce future bushfire risk. The findings highlight the complexities of community preparedness and responses to bushfire and the need for integrated and holistic responses to risk reduction. Bushfire risk reduction is a shared responsibility between governments, fire and emergency services, businesses and communities at risk. Implications include:

- **New audiences for bushfire safety information:** The research found that previous experience of bushfire motivated many people to plan and prepare. The extent of the 2019-20 fires and the sheer number of people affected present opportunities to reach new audiences with bushfire safety information and promote planning and preparation.
- **Managing community expectations of warnings and information:** Community expectations of warnings and information appear to be growing. In particular, many people expect to receive highly detailed and localised information in near real-time. Analysis of interview suggests that people want this information in order to make more 'responsive' or 'timely' decisions about protective actions. Messaging is needed about the potential for disruptions to communications during bushfires, underscoring the need for well-planned and decisive action to avoid last-minute evacuation or being unable to leave a fire affected area.
- **Fires Near Me NSW:** For most people, the Fires Near Me NSW app remains the preferred source of warnings and information during bushfires. People identified ways it could be improved, including by providing more information about the active edge of a fire and where it is spreading and, particularly for tourists and visitors, information about roads and transport. While there are benefits of providing more localised and detailed information about the likely spread and impact of bushfires, there is a risk that this would encourage people to delay their protective action. Those who plan to leave during bushfires should do so long before they are directly threatened.
- **New communications methods:** Fire spread prediction maps and Tourist Leave Zone messages were effective in communicating risk and motivating people to take protective action. Consideration should be given to the circumstances where such methods may be used in order to



prevent their overuse and ensure they are taken seriously by the community. Community members must understand that such communications are based on predictions that, while based on the best available science, are inherently uncertain.

- **Preparedness of tourists and visitors:** Few travelers had prepared for the possibility of encountering bushfire while travelling or at their destination. Tourists and visitors should be encouraged to plan and prepare for bushfire when traveling to and visiting bushfire risk areas.
- **Preparedness of accommodation providers:** Accommodation providers should be encouraged to plan and prepare for bushfire. This should include providing of appropriate information to guests (such as the location of Neighbourhood Safer Places), providing essential equipment such as battery powered radios and torches, and being ready to relay warnings and information. Such measures are likely to be especially helpful to guests in unstaffed accommodations, such as short-term holiday rentals.
- **Neighbourhood Safer Places:** Many people are unfamiliar with NSPs. There is a need for greater community education, advice and dialogue about the role of NSPs as places of last resort. With appropriate support, NSW RFS brigades can play a key role in local conversation about NSPs and other sheltering options, and motivate greater planning and preparation for sheltering as a last resort.
- **Recognition and promotion of brigade activities:** NSW RFS brigades play a critical role in raising awareness of local bushfire risk and motivating people to plan and prepare. Consideration should be given to how brigade activities could be recognised and promoted to other brigades – for example, through brigade profiles, best practice case studies or showcases – to share effective strategies and innovations.
- **Notifying people about house loss:** Consistent with previous studies, this study found that many people who left their homes during the fires experienced difficulty finding out if their house had survived. Some were distressed to find out that their home had been destroyed via media reports, images on social media and word of mouth. These findings suggest a need for a process that provides greater consistency and certainty in how people are notified about house loss. Preventing the sharing of images via social media will be difficult; however, such behaviour may be reduced through proactive messaging from authorities that emphasises sensitivity and respect for fire affected people.



Summary of key statistics¹

Engagement with NSW RFS programs and materials:

- 57% had read the NSW RFS Guide to Making a Bushfire Plan
- 44% had participated in a local NSW RFS brigade event

Response of survey respondent when they felt most threatened²:

- 38% left before the fire arrived
- 6% left when the fire arrived
- 20% stayed and defended house and/or property
- 8% began defending then left
- 15% stayed to defend but the fire didn't arrive
- 4% did not defend but stayed and sheltered inside a house
- <1% sheltered in a structure, vehicle or somewhere outside
- 7% not at home for reasons other than the fire

Fire spread prediction maps:

- 86% recalled seeing a fire spread prediction for their area
- 93% found it easy to understand, 77% sufficiently localised and 85% useful

Official warnings:

- 78% received official warnings with sufficient time and 71% with sufficient information to take protective action

Fires Near Me NSW:

- 94% had downloaded the Fires Near Me NSW app
- 78% indicated that Fires Near Me NSW was their preferred source of information in the future

Neighbourhood Safer Places:

- 44% were familiar with the term 'Neighbourhood Safer Place'
- 72% of those familiar with the term were aware of a NSP in their area

Experiences of tourists and visitors:

- 38% considered it likely that a bushfire could occur in the area they were visiting and 33% considered it unlikely. Just 2% had not considered the risk.
- 27% indicated that a bushfire was already burning in the area they were going to visit.
- 45% of those who travelled to an area where a fire was already burning did so to defend a property or assist family or friends. 26% did not think the fire would affect them and 11% wanted to continue with holiday or business plans.
- 52% had not done anything to prepare for the possibility of bushfire on their trip.
- 47% reported that they were in a Tourist Leave Zone during a period of bushfire threat.
- 34% found out about the Tourist Leave Zone via radio, 13% via television, 13% via social media, 11% from people in the surrounding area and 10% via Fires Near Me NSW.
- 54% returned to their primary residence after receiving notification of the Tourist Leave Zone, 14% went to another location outside the Tourist Leave Zone and 32% remained within the Tourist Leave Zone, mostly to defend property (typically holiday home owners) or because they were unable to leave.

¹ Statistics are for survey respondents who were threatened or affected by bushfire at their primary place of residence ('residents'), unless otherwise stated.

² In recognition that many people were threatened more than once during the fire season, survey respondents were asked how they responded when they felt they were most threatened (e.g. when the fire was closest).



1. BACKGROUND

The 2019-20 bushfire season saw unprecedented, destructive bushfires across New South Wales (NSW). After an early start to the fire season in August 2019, fires spread south from the Queensland border to the Victorian border over the course of spring and summer. Tens of thousands of people were displaced by the fires, including residents, tourists and visitors to affected areas. Significant rainfall in early February 2020 helped contain the fires by February 13 and brought an end to the most deadly and destructive fire season in NSW history. Tragically, 26 people lost their lives in the fires, including four NSW RFS volunteers and three US aerial firefighters. Many more people were affected by smoke, including in regional areas and major population centres such as the north coast, Sydney, Canberra, Newcastle and Wollongong. By season's end, fires had burned a record 5.5 million hectares of NSW and destroyed 2,448 homes (NSW RFS 2020). Community and commercial buildings and infrastructure were also significantly impacted on. The fires adversely affected many industries, including agriculture, forestry and tourism.

The NSW RFS engaged the Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) to conduct research into community preparedness, warnings and responses to the 2019-20 NSW bushfires. The NSW RFS identified eight key themes for investigation, including: (i) risk communication; (ii) effect of prolonged and repeated exposure to bushfire on planning, preparation and responses; (iii) effect of previous experience and exposure to bushfire on planning, preparation and responses; (iv) sheltering practices; (v) experiences of tourists and visitors; (vi) awareness and attitudes toward bushfire risk reduction; (vii) building standards; and (viii) community recovery and resilience.



2. PURPOSE AND SCOPE OF THIS REPORT

This report presents findings from research into community attitudes and experiences of the 2019-20 bushfire season undertaken for the NSW RFS. The NSW RFS Statement of Work identified the following themes and questions for investigation:

Risk communication

- Were people aware of the risk leading into the bushfire season?
- How did people obtain, understand and respond to information and warnings?
- Were information and warnings useful to people given their personal circumstances?
- How can information and warnings be enhanced?
- How did people interact with others to prepare, respond or recover from the bushfires?

Effect of prolonged and/or repeated exposure to bushfire

- How did prolonged and/or repeated exposure to bushfire threats, smoke and/or media coverage of the bushfires influence or change people's planning, preparation and responses?
- How can communication and engagement with communities be optimised during campaign fires?
- Was there a particular moment that motivated people to take preventative or protective action?

Effect of previous experiences and exposure to bushfire

- Did previous experience and/or exposure to bushfire influence people's expectations, planning, preparedness and responses?

Sheltering practices

- What were people's experiences of sheltering at the individual and community levels?
- Were people aware of Neighbourhood Safer Places? How did they use and experience them?

Experiences of tourists and visitors

- What motivated tourists and visitors to travel during the period of bushfire threat?



- How did tourists and visitors respond to warnings, 'leave zone' maps and bushfire threats?

Awareness and attitudes toward bushfire risk reduction activities

- Were people aware of bushfire risk reduction activities in the area over recent years such as:
 - Hazard reduction burning
 - Fire trail management
 - Bushfire construction measures for dwellings
 - Mechanical works (e.g. Asset Protection Zones)

Building standards

- Were people aware of bushfire protection measures incorporated into the design and construction of their home?
- Did the presence of bushfire protection measures influence people's planning, preparation and responses to the bushfires?
- What were people's expectations of their home during a bushfire?

Community recovery and resilience

- What were people's experiences in the aftermath of the bushfires?
- What was community sentiment, expectation and experience of service provision by the emergency services?
- What programs or initiatives do people think could be implemented in their communities to help them prepare for bushfires in the future?

This report presents findings from an analysis of interview and survey data collected from people who were affected by bushfires in NSW during the spring and summer of 2019-20. Investigation and analysis of firefighting responses and building impact assessments were outside the scope of the research.



3. RESEARCH METHODS

3.1 INTERVIEWS

People who were threatened or affected by the 2019-20 bushfires were invited to participate in a semi-structured interview about their experiences of the fires. The purpose of the interviews was to gather precise and codeable qualitative data related to the issues and themes under investigation (listed above).

Invitations to participate in an interview were posted on social media by the Bushfire and Natural Hazards CRC, NSW RFS and UOW. Participants were also sought through radio interviews, newspaper articles and through communications by local governments that were impacted by the 2019-20 fires. This recruitment strategy is markedly different from those used in previous post-fire research, where doorknocking has been a key strategy. Government and university restrictions on travel and fieldwork related to COVID-19 necessitated an online and media focused recruitment strategy. Interviews were conducted via web conferencing and telephone rather than in person. The change in recruitment strategy, in particular, is likely to have produced a more self-selected sample than usual (i.e. more people with a particular interest in bushfire or story to tell). A key advantage of doorknocking is the ability to recruit participants who are less interested or who had more routine bushfire experiences. Quotas can also be used when doorknocking to ensure a good geographical spread of participants across affected areas.

An interview guide was developed, comprising open-ended questions about: awareness and perceptions of bushfire risk; planning and preparation; awareness of risk reduction activities; risk communication (including warnings); responses to the fire; and community recovery and resilience (see Whittaker et al. 2021). Semi-structured interviewing allows interviewees to frame and structure their responses according to their own personal experiences and narrative. The advantage of this approach is that the interviewee's perspectives and experiences unfold as the participant views it, not as the interviewer views it (Marshall and Rossman 2011). This allows each interviewee's unique perspective to come through clearly and can help researchers to identify new issues and lines of questioning not previously considered.

Potential participants received a Participant Information Sheet prior to participating in an interview. A verbal consent script was read to each participant to gain informed consent prior to the interview commencing. Each interview was audio recorded and transcribed with the participant's consent. Four interviewees indicated that they did not want to be audio recorded, so handwritten notes were taken. Interview transcripts and notes were analysed thematically using the Computer-Assisted Qualitative Data Analysis Software (CAQDAS) NVivo 11.

Interview sample

202 semi-structured, in-depth interviews were conducted with people threatened and affected by bushfires in NSW. These included 166 interviews with



people who were threatened at their primary place of residence and 36 interviews with people who were tourists, visitors or occupants of secondary residences in affected areas. Figure 1 shows the geographical distribution of interviews across the state.

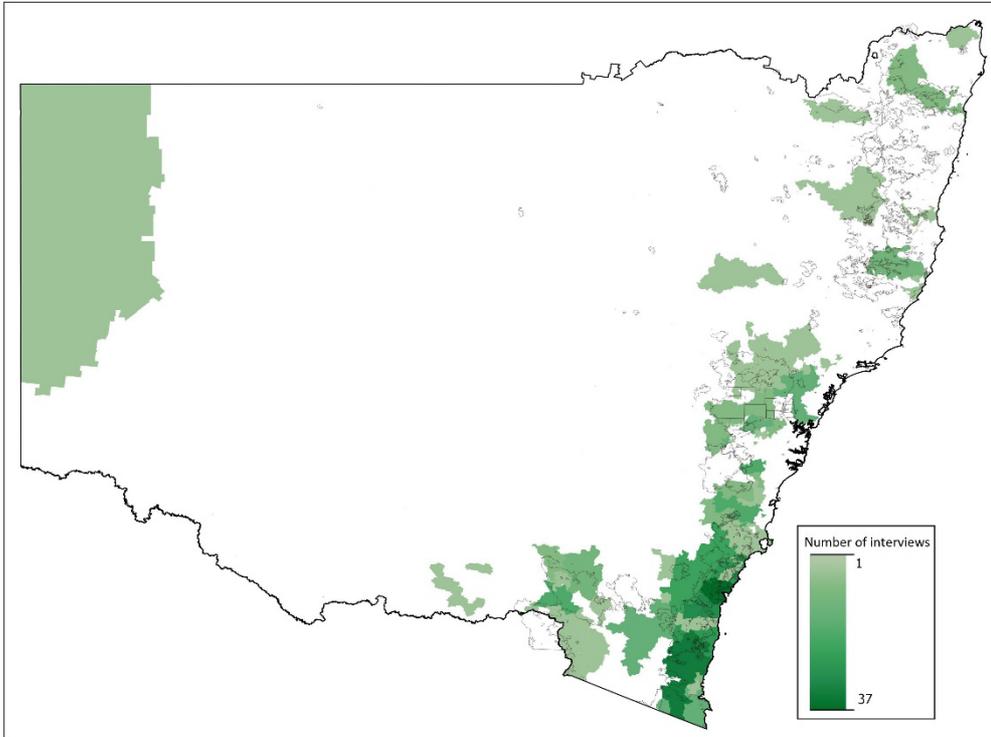


FIGURE 1: GEOGRAPHICAL DISTRIBUTION OF INTERVIEWS BY POSTCODE

202 interviews were conducted with 215 participants. 59% were female and 56% were aged 55 or over (Figure 2).

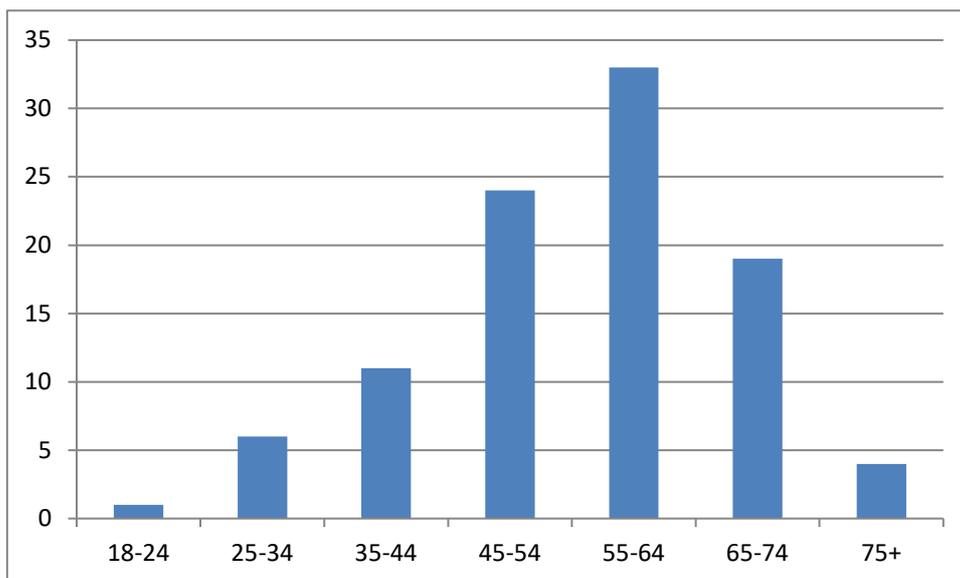


FIGURE 2: AGE PROFILE OF THE RESIDENT INTERVIEW SAMPLE (%)



Survey respondents included a mix of people living in houses or units on a residential block (33%), hobby farms or small acreages (38%) and large farm properties (26%) (Figure 3). Most of these respondents (90%) owned the property, with a smaller proportion in rented accommodation (7%). One-third of respondents had lived at their property for less than five years (34%), less than one-fifth for between 6 and 10 years (16%), one-quarter for between 11 and 20 years (23%) and over one-quarter for more than 20 years (28%).

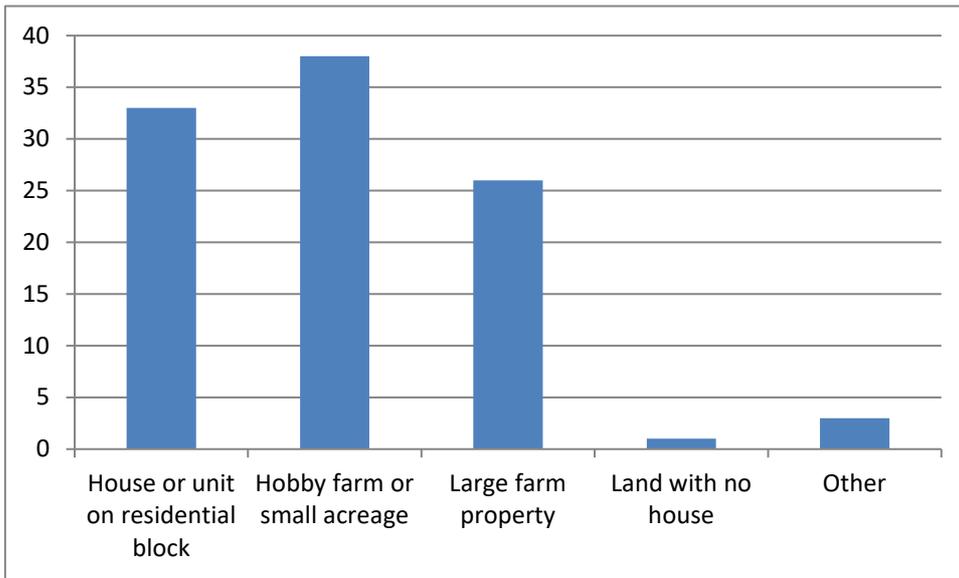


FIGURE 3: PROPERTY TYPE OF PRIMARY RESIDENTS (%)

In terms of household composition, 42% comprised a couple without children or other dependents and 32% comprised a couple with children or other dependents (19%) (see Figure 4). At the time of the bushfire, 25% had a household member registered as a member of the NSW RFS.

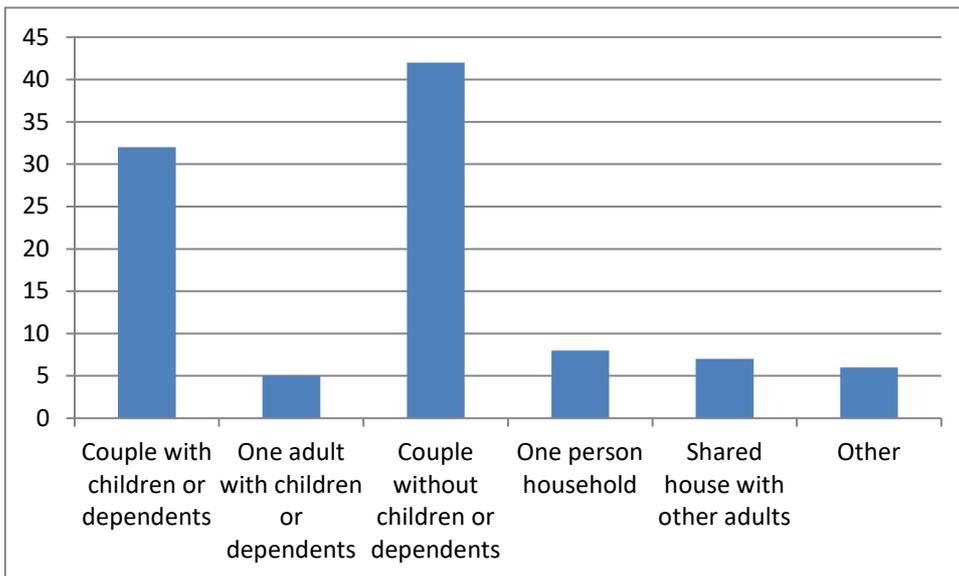


FIGURE 4: HOUSEHOLD COMPOSITION OF THE RESIDENT INTERVIEW SAMPLE (%)



The sample of interviews with tourists, visitors and occupants of secondary residences comprised a mix of ages (see Figure 5). Most of these respondents were travelling or holidaying as a couple (33%) or without children or other dependents (28%). 28% were travelling as some other type of group, including many families in groups with extended family members.

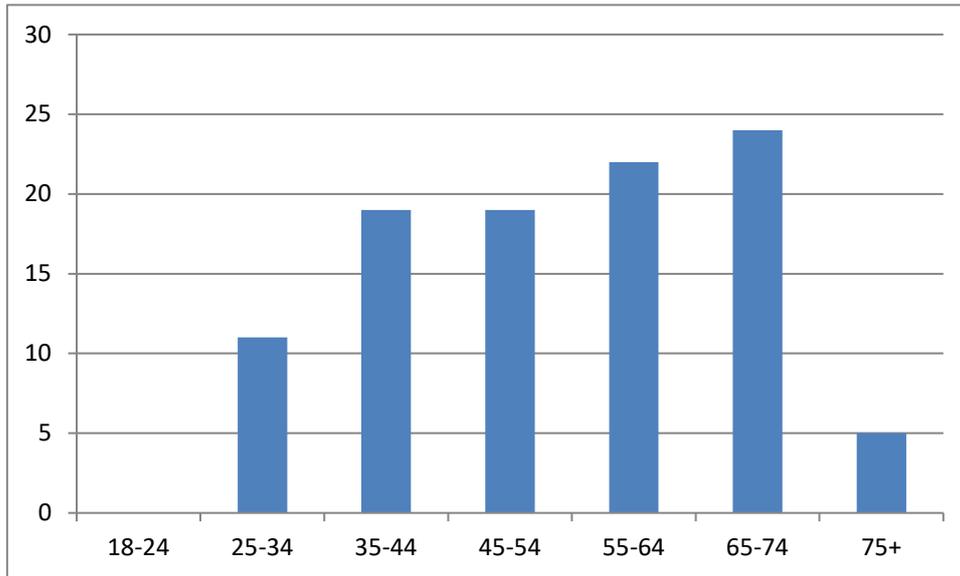


FIGURE 5: AGE PROFILE OF THE TOURIST, VISITOR AND SECONDARY RESIDENT INTERVIEW SAMPLE (5)

17 interviewees lost their homes in the fires, and many more suffered significant losses of other assets including timber mills and commercial buildings.

3.2 ONLINE SURVEY

A questionnaire was developed in consultation with the NSW RFS to survey areas of NSW that were threatened or affected by bushfires during the 2019-20 fire season (see Whittaker et al. 2021). The purpose of the questionnaire was to gather quantitative data on the issues and themes under investigation (listed above). The online survey was conducted using the Qualtrics questionnaire software, with responses collected between Monday 12 October and Sunday 8 November. A total of 1,004 completed responses were received. 773 respondents indicated that they were threatened or affected by bushfire at their primary place of residence and 231 at a secondary residence (e.g. holiday home) or while a tourist or visitor to a fire threatened or affected area. 46 survey respondents indicated that their house was destroyed by bushfire during the 2019-20 fire season. Many more lost other assets and things they valued in the fires. Figure 6 shows the geographical distribution of survey responses across the state.

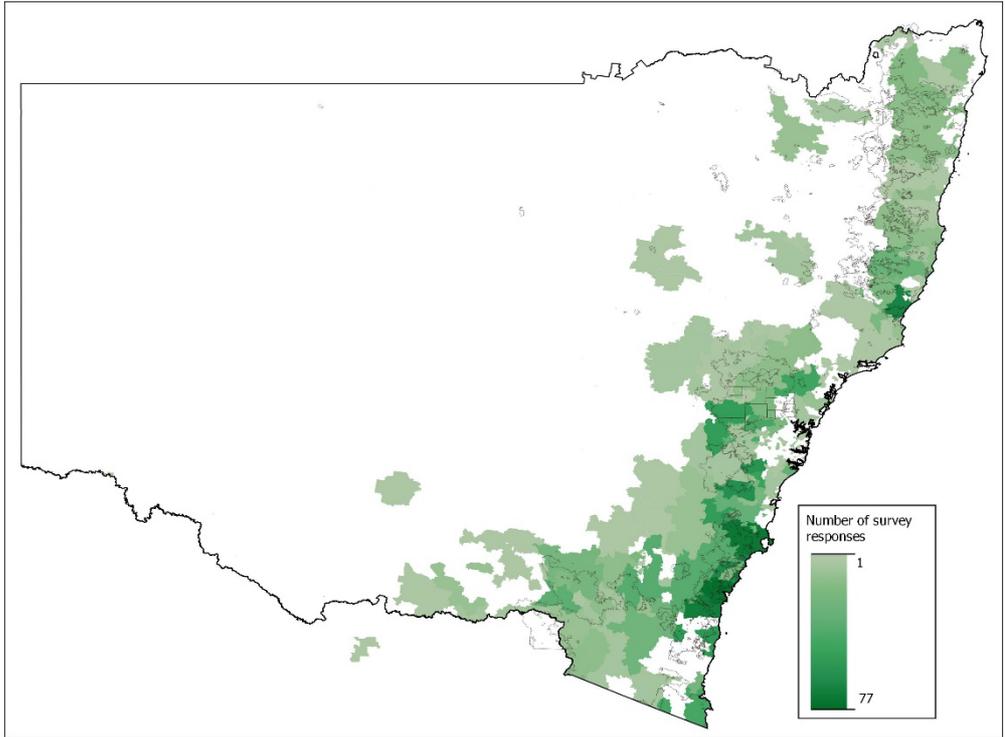


FIGURE 6: GEOGRAPHICAL DISTRIBUTION OF SURVEY RESPONSES BY POSTCODE

3.3 RESEARCH ETHICS

Ethics approval for the research was obtained from the University of Wollongong’s Human Research Ethics Committee (Ethics Number 2019/471). Measures were taken to ensure the safety and rights of participants and researchers, and to ensure participants’ anonymity in any reports, papers, presentations or other publications arising from the research.



4. RESEARCH FINDINGS

4.1 RISK COMMUNICATION

4.1.1 Were people aware of the risk leading into the bushfire season?

The online survey results suggest high levels of awareness of bushfires prior to the 2019-20 NSW fires. Nevertheless, it is important to recognise the possible influences of self-selection bias (i.e. people who are aware and interested in bushfires being more likely to participate in the survey) and hindsight bias (where outcome information influences people’s recollections of their prior knowledge or beliefs) on these results (Bradfield and Wells 2005).

The majority of primary residents indicated that, at the beginning of the previous summer, they thought it very likely (51%, n=397) or likely (29%, n=225) that a bushfire could occur in their local area. The remainder thought it was unlikely (12%, n=95) or very unlikely (6%, n=45) that a fire would occur. Only 11 of 773 primary residents indicated they had not thought about the risk posed by bushfire. There were no marked differences in perceptions of the likelihood of bushfire between women and men. Respondents who lived on residential blocks more often said they thought it was very unlikely or unlikely that a bushfire could occur in their area (25%, n=88) than their counterparts on hobby farms or small acreages (14%, n=39) and large farm properties (12%, n=12) (see Figure 7).

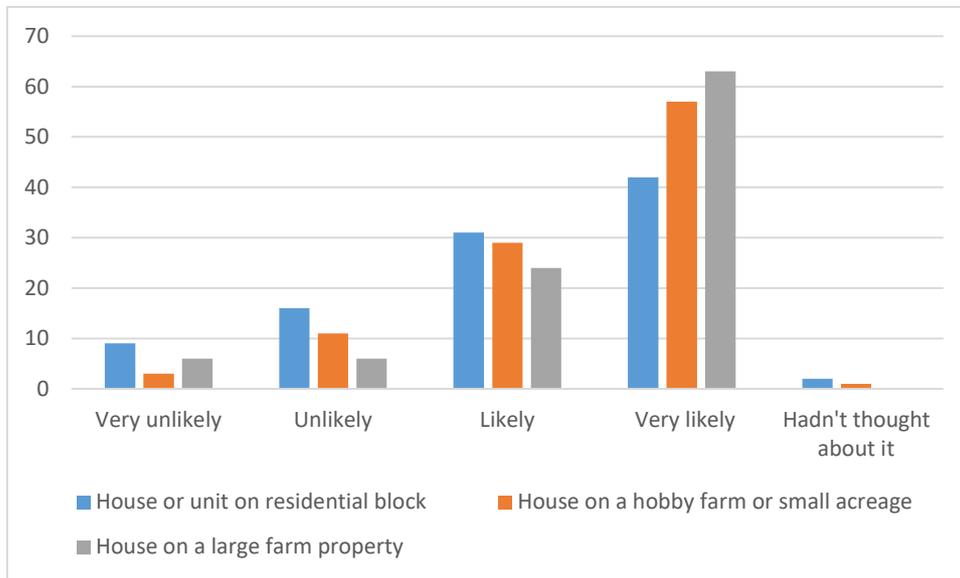


FIGURE 7: PERCEPTION OF THE LIKELIHOOD OF BUSHFIRE OCCURRING BY PROPERTY TYPE (5)

Just under half of the primary residents surveyed rated the threat to their home or property as very high (21%, n=161) or high (26%, n=197). Almost one-third considered the threat to be moderate (29%, n=231) and one-in-five low (14%, n=109) or very low (8%, n=63). Again, respondents who lived on residential blocks more often rated the threat as very low or low (32%, n=117) than respondents on



hobby farms or small acreages (12%, n=38) and large farm properties (15%, n=15) (see Figure 8).

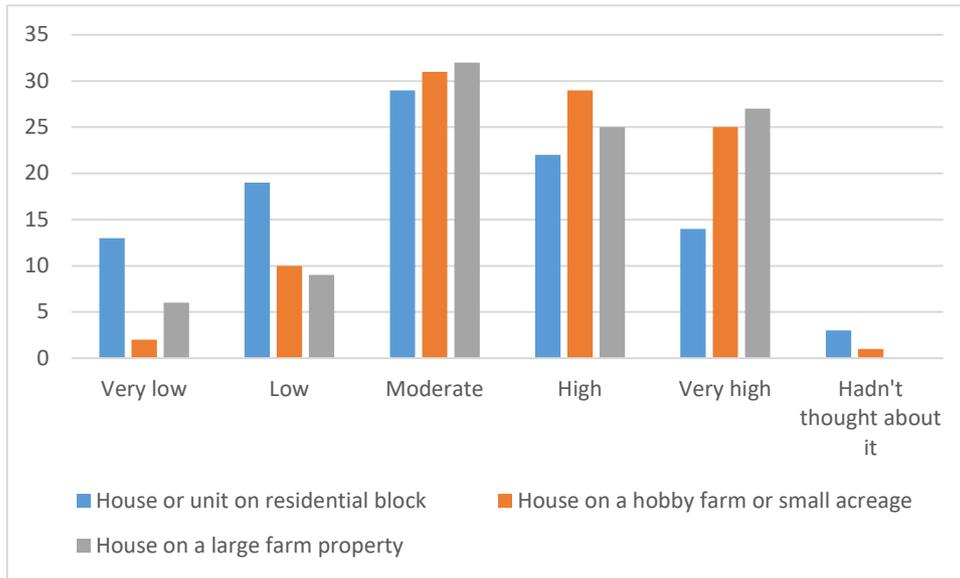


FIGURE 8: PERCEPTION OF THE THREAT FROM BUSHFIRES TO HOME AND PROPERTY BY PROPERTY TYPE (%)

Findings of lower risk perceptions among people who lived on residential blocks are supported by data on planning for bushfire. The proportion of respondents who reported having a ‘firm plan’ for what to do if a bushfire occurred was markedly higher for those on hobby farms/small acreages (63%, n=183) and large farm properties (63%, n=63) than those on residential blocks (42%, n=151).

Analysis of interviews also found that most people were aware of the heightened level of risk leading into the bushfire season. As is the case with survey data, it is important to recognise the possible influence of hindsight bias on interviewees’ recollections. Nevertheless, people we spoke to commonly identified the exceedingly dry conditions as a factor influencing their awareness of bushfire risk. Many observed dry fuels, tree dieback and the generally dry state of the landscape as evidence of heightened risk.

I was well aware of the drought. When you talk about somewhere like Robertson being in drought, it's bad, because Robertson really does have high rainfall and is really green. There had been plenty of news articles about the state of the drought... So I was well aware of that risk, I guess. But no, I don't think anyone thought that it would be as bad as it was. – Robertson

We knew it was bad here. That's why we were prepping; awareness was very high... because the fire season started around July up north and you just watched it coming down... When you're getting reports of rainforests burning, you go, "Shit it's dry"... You'd hear the stories – the gullies normally pull up the fires but they're going straight through it, or you hear the stories of hazard reduction burns actually not even effective... You start going, "God, things must be just so dry and so flammable at the moment,



regardless of what treatment, regardless of what environmental landscape it's sitting in"... **On these mountains here you've got little rainforest gullies; you can see that they're just as brown as the rest of the mountain, and you go "Mm-hm, not good"**. - Verona

Crowdy Bay National Park has quite big fires in it most years and burns quite extensively but I guess we did know that it was different... The drought had been quite extensive and severe, particularly in the hinterland. But last year it really took hold on the coast here... **It was very dry and the forest was tinder dry like we'd never seen it before** – Johns River

I guess we could pretty much see the writing on the wall for many, many months prior. As soon as things started up the north coast, as patches of rainforest were burning, you could look around here and we were so thick in drought that there was whole patches of forest that were dying and trees of varying ages that were dead. So you could really just see the writing on the wall that this year it was going to be massively inevitable really. – Wyndham

Some interviewees also pointed to the accumulation of fuel, in conjunction with drought, as a factor influencing their awareness of the heightened bushfire risk.

We knew it was going to be a bad fire season just the amount of rain that we didn't have and the fuel load, and how dry the fuel load was – it wasn't just dry on the top, it was just dry all the way through the dirt and there was no moisture in the dirt at all so yeah, there was just no moisture in the ground and it was just too hot. – Bilpin

We do a little bit of walking out the back of our property... and that there's just so much fuel on the ground. **I guess all the experts had said that there was too much fuel on the ground...** So yeah, it was always going to happen, I think. – Oakdale

My partner, we had been a lot of preparation because **we knew that this was going to be our year. We'd been experience such a bad drought. For years and years the parks were full of leaf litter.** There was a lot of fuel built up on the ground. And we knew that, well, we were going to burn. – Araluen

There was a lot of fuel on the ground, and it would have been very, very dry. And I was unaware of any fuel load reduction that has been done around our area. I don't think any has been done. **So we were expecting a bad season, [but] nothing like what happened.** And in the week leading



up to the catastrophic fires, it was very obvious that if something did happen, it was going to be really nasty. – Bermagui

The substantial number of fires that occurred before or early in the bushfire season, as well as associated smoke and media coverage, also contributed to widespread awareness and concern about bushfire risk. As the season further developed, many interviewees believed it was not a question of 'if' they would be affected by bushfire, but 'when'.

*Alarm bells started ringing with us when it started it burning in September, up the North Coast, and was just getting... every day, things were getting more intense. **We just knew what was going to happen. It was inevitable. We were going to fight a fire this year, and that was it.** – Araluen*

*We were well aware of the indirect risk of fire from about August... We went up to Queensland – we went up to Fraser Island – and observed as we drove up and back, back in particular, the number of fires that were already going in the landscape in Queensland and northern New South Wales. **That to us was an indication that, in the absence of decent spring rain, we were likely to have fires arrive on our doorstep at some point in the summer.** - Malua Bay*

*We'd been in fire season in Australia since about August in 2019 because there was fires up in the Northern Territory that were unseasonal. When they hit Queensland, it was catastrophic. That's unheard of, that we know of. **We've got no excuse about not knowing what sort of a season it was.** – Merimbula*

*I think through media they saw the fires start in northern New South Wales and work their way south and you didn't have to be Einstein to know what was happening with climate change, with drought, and very heavy fuel loads. **Yeah, it was a bushfire waiting to happen.** – Canyonleigh*

Some interviewees recalled receiving communications from the NSW RFS about the heightened risk leading into the bushfire season. These communications included conversations with NSW RFS volunteers, information provided by NSW RFS and the Bushfire and Natural Hazards CRC's *Australian Bushfire Seasonal Outlook*.

***Our plan was developed in conjunction with the RFS members, our local brigades who came at the beginning of the fire season.** They said it was going to be a dreadful fire season because of the drought and so they had come and talked to us and given us handouts of the sorts of things we should think about in terms of creating our fire plan and not to do it at the last minute. – Bawley Point*



*It was an intense drought, like there's two years of intense drought so it was very, very dry and the area hadn't burned since '68 here so we just knew there's a lot of fuel. Yeah. Who can know, but we assumed it was going to be bad. **RFS did do some warnings about that to tell people it's going to be bad. So that's good. They actually have some good modellers there and they do have a good public outreach.*** – Little Forest

*Interviewee: **There was definitely a heightened awareness of the risk and there was definitely a sense... you know, because I remember seeing the hazard outlook – the thing that the [Bushfire & Natural Hazards] CRC puts out...***

Interviewer: The seasonal outlook?

Interviewee: Yeah the seasonal outlook. And I remember that and just seeing these massive patches of red. – Blackheath

4.1.2 How did people obtain, understand and respond to information and warnings?

Engagement with NSW RFS programs and materials

Prior to the bushfires substantial proportions of people had engaged with NSW RFS materials and programs (see Figure 9). Significantly, more than half of the primary residents surveyed reported they had read the NSW RFS Guide to Making a Bushfire Plan (57%, n=434). Almost half indicated that they had participated in a local NSW RFS brigade event (44%, n=320). The next most common engagements with NSW RFS programs and materials included visiting the MyFirePlan.com.au website (31%, n=219) and participating in a Get Ready Weekend event (28%, n=199). One-in-ten respondents (11%) reported that a member of the household had participated in a NSW RFS school education activity.

Examples of interviewees' engagements with NSW RFS programs and events, and their influence on planning and preparation, are presented in section '4.6 Awareness and attitudes toward bushfire risk reduction activities'.

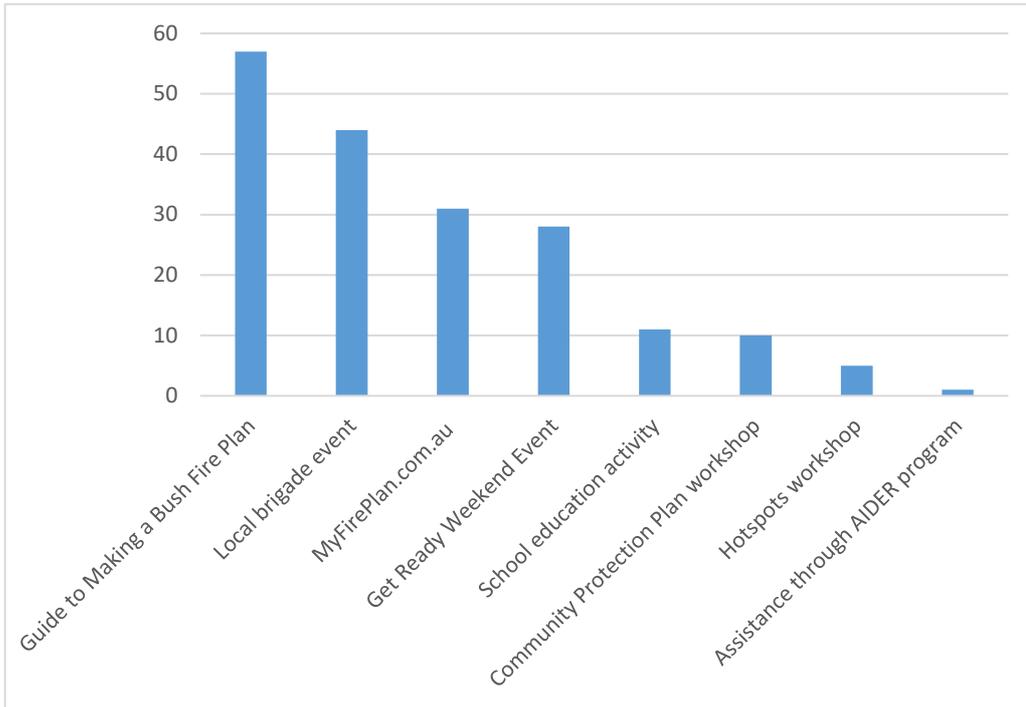


FIGURE 9: ENGAGEMENT WITH NSW RFS PROGRAMS AND MATERIALS (%)

Catastrophic Fire Danger messages

Survey results indicate that half (51%) of the primary residents received a notification from the NSW RFS about the Catastrophic Fire Danger rating for their area. These notifications were largely seen as timely (90%), easy to understand (92%) and useful (88%). In response to receiving the Catastrophic Fire Danger notification, respondents most commonly discussed the threat with family, friends or neighbours (34%), looked for information about bushfires in their area (32%) and got equipment ready to protect the house and property (28%). One-quarter of respondents began preparing to leave (24%) or left for a place of relative safety (14%) (see Figure 10).

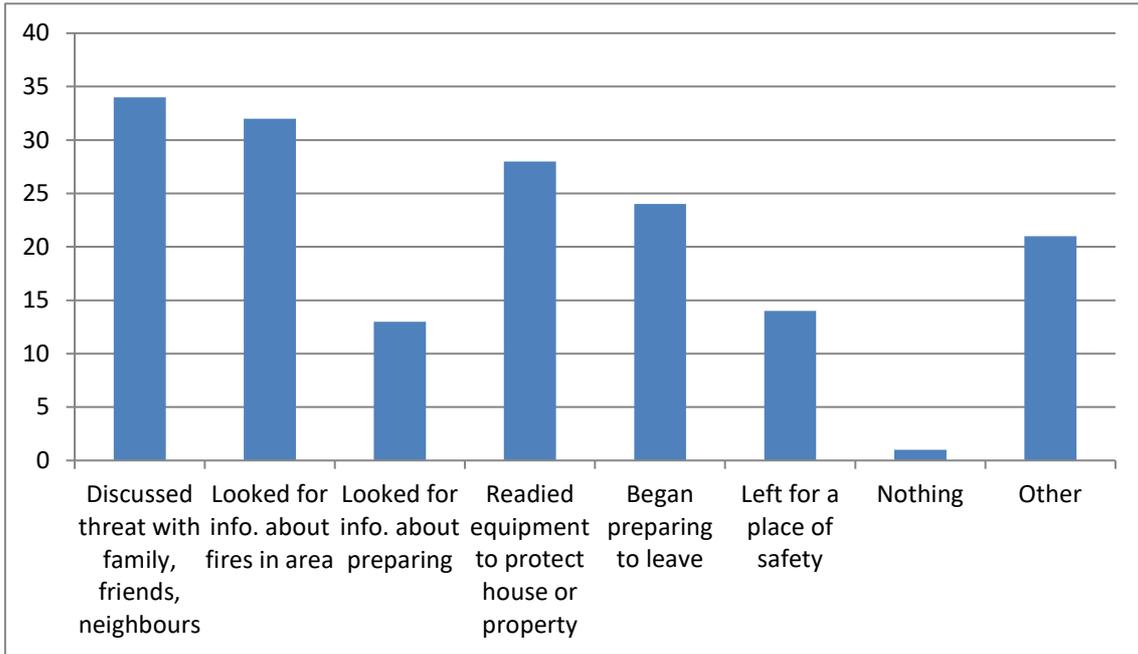


FIGURE 10: RESPONSES TO CATASTROPHIC FIRE DANGER MESSAGES (%)

Interviewees who discussed their understanding and responses to Catastrophic Fire Danger messages described taking the risk seriously and taking early and decisive action to leave before a fire threatened.

*Our triggers were if it was Extreme but there wasn't a wind and there wasn't a fire, then we'd be prepared to leave, but we'd stay for the time being, keeping a very close eye. **Catastrophic, which we got the day before, we don't wait, we just go.** Now, also bear in mind this, there is one road in and one road out of here, and the bush goes to the edge of the road on both sides. So it's not a place to get stuck in. – Wollombi*

***Yeah so on those really bad fire days, and particularly the Catastrophic days, my husband in particular would go round and prepare things and he'd go and just do a double check on the gutters and make sure things were tucked away.** We never put boxes in cars or anything but we had the boxes there prepped, good to go. We sort of had a mental checklist of what we needed to grab. – Singleton*

*I listen to the radio, hear what it is – **I mean if it gets to catastrophic, I know that's definitely "You're out".** I'm very in tune with the radio and television. – Holiday home owner, Guerilla Bay*

In some cases, local NSW RFS members played a key role in encouraging people to leave early:

We'd been drumming it into [the community] very early on, "You've only got two decisions. You either leave early or you stay and defend. We



prefer you leave early". And those days that were Catastrophic, there were probably only a dozen people left in Canyonleigh – they'd all taken off. We got the message through pretty well. – NSW RFS member, Canyonleigh

On the Monday, the day before the Catastrophic day on the 12th of November, I recall two people – one another parent at school and a colleague from work who I saw at Aldi, both people who are RFS volunteers who knew about Gospers Mountain fire – both said to me individually, knowing where we live here, that was the fire to be aware of and to look out for. And so I thought, "These two different people have come up to me, in the space of maybe 90 minutes, separately, and warned me about this fire". I thought, on top of being concerned about the Catastrophic day coming the next day and the preparation for it, I thought, "Oh, maybe we need to find out more about this fire". **We just continued to plan for leaving for the Catastrophic day and we left very early that day, didn't we? Yep, we took the advice very seriously, so those Catastrophic days when they said, "You should go", we did.** – Lower Portland

When asked what they would do if they received a message about Catastrophic Fire Danger in the future, similar proportions of primary residents said they would leave before there is a fire (28%) or get ready to stay and defend (27%) (see Figure 11). One-third said they would wait until there was a fire before leaving (16%) or deciding what to do (18%).

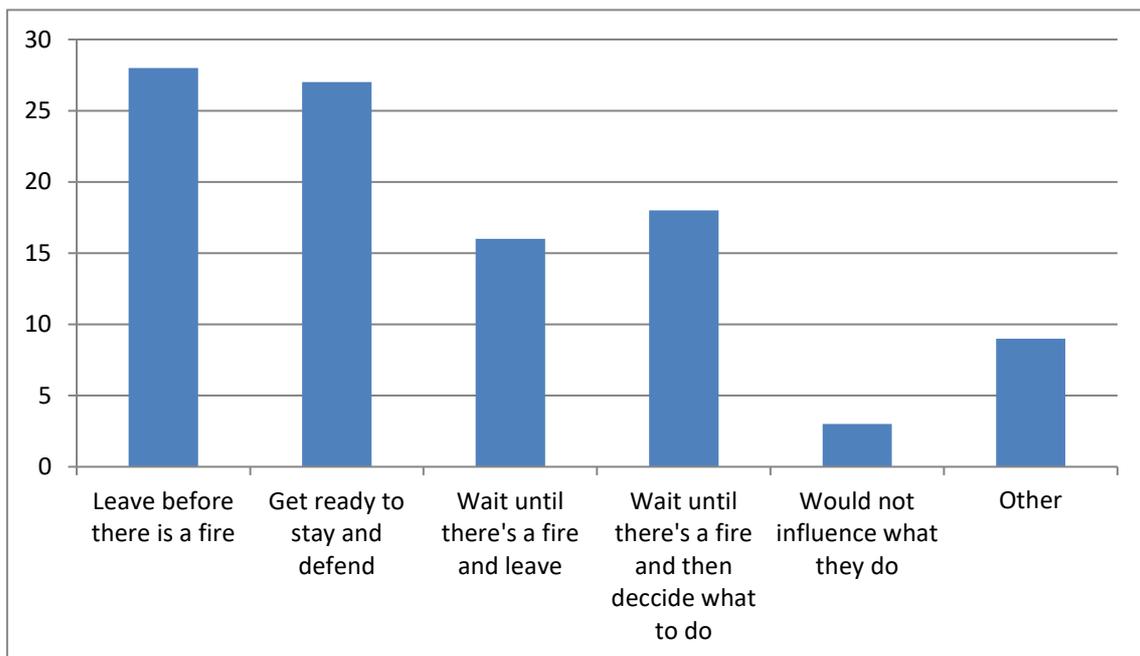


FIGURE 11: INTENDED RESPONSES TO FUTURE CATASTROPHIC FIRE DANGER MESSAGES (%)

Fire spread prediction maps

Most residents recalled seeing a fire spread prediction map for their area (86%). The majority of respondents found these maps easy to understand (93%), sufficiently localised (77%) and useful (85%). Around half of these respondents reported that seeing the fire spread prediction influenced their decision to leave (34%) or avoid travelling to a fire threatened area (20%) (see Figure 12). One-fifth said it influenced their decision to stay and defend (21%). The remainder reported that seeing the fire spread prediction map did not influence what they did (23%).

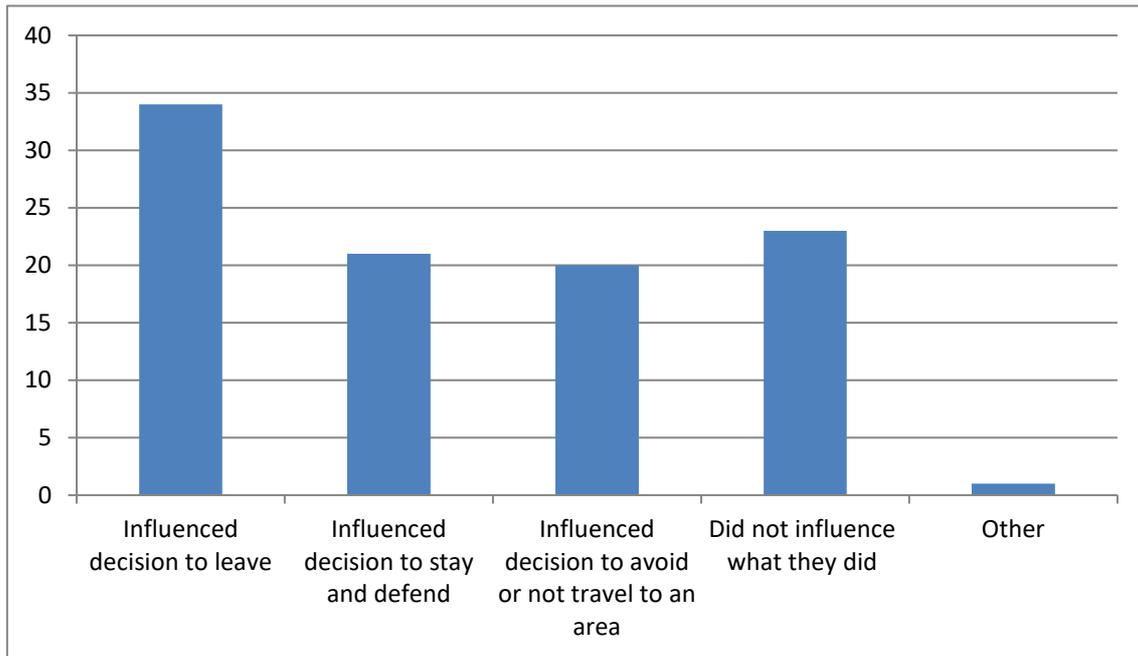


FIGURE 12: INFLUENCE OF FIRE SPREAD PREDICTION MAPS ON DECISIONS (%)

Some interviewees noted that the fire spread prediction maps were a useful tool for making a decision to leave an area that was predicted to be impacted. Others explained that the predictions played a key role in changing their mind about staying to defend and ultimately encouraged them to leave. Not being within a fire spread prediction area gave a small number of people who were affected by bushfire a false sense of security.

*I knew the fire was coming, so I was constantly checking the app and I knew that it was going to be a really bad day. I'd got to the position where the first thing I did when I woke up every morning, before I even got out of bed, was look at the Fires Near Me app. I looked at it at about 7:30 in the morning, or 8:00 and I saw that the fire spread zone for down south in Mogo and Moruya, Cobargo, that the fire had already reached where the fire prediction spread ember attack was going to be by the end of the day. It had already reached that by 8:00 o'clock in the morning. So I saw that alert. I hope you don't mind but I'm going to swear – there'll be some language. I thought, "Shit, this is really, really bad" because I knew that the ember attack map for where I'm located in Conjola Park, people said that it wasn't on there but **I saw an ember attack map that included the edges of Conjola Park as coming under ember attack that day. That***



was the predicted map, so I figured if down south around Moruya and Mogo and all that the ember attack had already hit them by 8:00 o'clock in the morning that weather, that wind, was coming up the coast and so I knew we were stuffed. I knew that we were going to get burned that day.
– Conjola Park

The third time, we left because RFS put out a risk map, which was the first time we'd really seen one – Bemboka

It was probably the day before, so it must have been the 30th [of December], that maybe there was an inkling that stuff would happen, or we would be a bit more concerned. Then **the fire prediction maps came out, and it had Rosedale as not impacted at all**, like not even... So they had the red bit, which I'm assuming is where they expect it will be burnt, and then there was the red-dotted area which they said to be for ember attack, **but Rosedale wasn't covered by either of those areas, so we were quite relaxed.** – Rosedale

We were certainly very keen to look at the prediction maps... **I certainly found them to be very useful, and we used them... But personally I didn't feel under threat from those fires.** It was a fair way away. – Malua Bay

Another interviewee described the fire spread predictions maps 'terrifying' and anxiety-inducing, and was conflicted about whether they had helped her during the fire:

Interviewer: Did you see any of the fire spread prediction maps?

Interviewee: Yeah, I did.

Interviewer: Did you use that information at all?

*Interviewee: Not really. **I just find them pretty terrifying actually. For me personally, they actually made me really anxious and I don't usually get incredibly anxious but I didn't feel that they helped.** I suppose in terms of realising that you needed to be prepared and that kind of thing, they helped on some level but yeah, on the whole I just found them really scary.*
–Wyndham

Nevertheless, most people found the fire spread predictions to be a useful source of information on which to base decisions about whether and when to take protective action.



First awareness of fire

People most commonly found out a fire was threatening via Fires Near Me NSW (29%), an official warning (17%) or from family, friends or neighbours (8%). 14% of people found out a fire was threatening after seeing or smelling flames, embers or smoke.

Sources of official warning

Survey data indicates that most people received or obtained an official warning from the NSW RFS about the threat of bushfires, and many received multiple warning messages from a range of sources. Residents most commonly accessed official warnings via the Fires Near Me NSW app (74%) or by receiving a SMS (59%). Other sources of official warning included ABC Radio (40%), the NSW RFS website (31%), other local radio (19%), television (19%) and landline telephone (15%) (See Figure 13).

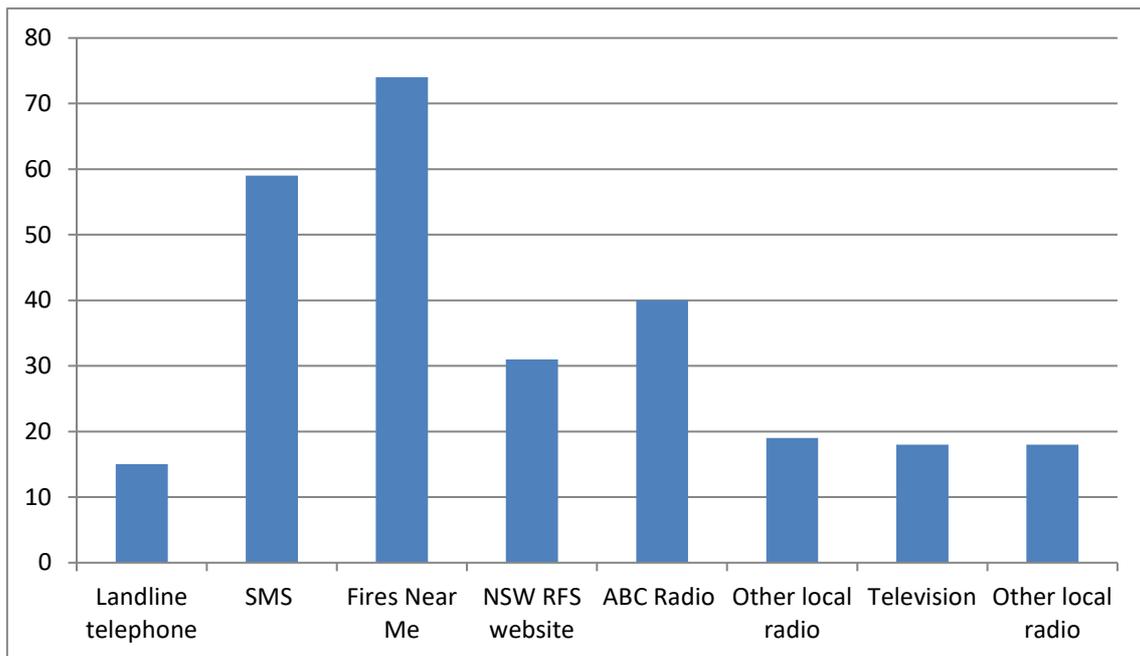


FIGURE 13: SOURCES OF OFFICIAL WARNING (%)

Interviewees described receiving official warnings about the fires via a range of sources. Some remarked on how accurate the warnings were and described taking timely protective action in response.

We knew the bushfires were coming. We had very good advice from the RFS and from the local brigade... We were told that the fire would hit us on the 4th of January at about eight o'clock. **They were that precise.** They were good because it hit it a quarter to eight. – Kangaroo Valley



Well, on the 31st of December, it had been very smoky and we knew there were fires in the area. **I had the RFS app on my phone. So I received a warning, a text.** It was ... So that was the 31st. That was the day before New Year's Eve. So it was actually that night, in the wee hours of the morning of the 31st that I received a text saying that people in ... There's an area called Coolagolite, which is maybe eight kilometres from where I am. And it was telling people from there to evacuate. **So I thought, "Well, we better leave. It's not all that far."... And then I received a call. And it must've been, I think about 6:00 AM on my landline. And it was just a recorded call that had a siren and just someone saying, "Get out, get out, get out." So at that point I had to yell at my sister, "You have to try and run." So we made it into the car at that point.** – Bermagui

Others felt that warnings did not apply to them because they were in a safe location or because there was insufficient information to ascertain whether the fire was really a threat. For example, one interviewee felt safe due to their location near the beach, while another felt more information was needed about the fire to make a decision about whether immediate protective action was really necessary.

A text message came at six o'clock in the morning, which woke me and saying that it was a fire emergency and to head east to the beach. Now, we are east at the beach so I thought, "Okay, well we're at the beach so don't really need to do anything." Got up, went outside in my pyjamas, just to see what was happening... And I watched all the neighbours leaving. Watched people put children in cars, "Yeah, we're going here, we're going there," people going discussing out the front on the road going, "Okay, what are we doing?" We're staying, that's what we're doing. – Broulee

In all honesty, I think it would still come down to a combination of sources of information. I'm not just going to listen to one warning. The way I read it is "It might be a good idea to leave now if you're worried about it" but if I can then look on a map and see that it's nowhere near me, if I can then sense that it's been kept contained at a certain point, if I know that the vegetation in between me and there is... whatever it's like – **there are so many different factors that you have to consider**, like how many different routes of access do I have to leave, how many different potential exit points do I have, in what direction would it have to move before those exit points are cut off from me. Do you know what I mean? **All of those things weigh on decisions about "When do I leave?"** Instead of just like "It's somewhere roughly in your geographical location, potentially well-contained, and not with any thick vegetation between you and it, and the weather's looking favourable for the next few days but they're saying to you "Leave early", I'd be like "I'll give it 24 hours. Let's just see". – Longbeach



Fire Near Me NSW app

The vast majority of residents (90%) accessed information and warnings via the Fires Near Me NSW app or the NSW RFS website. Most people used Fires Near Me NSW to look at maps of the fire's location to tell how far away it was (85%) (see Figure 14). Smaller but substantial proportions looked at detailed written information about the fires (65%), received information about dangerous fire conditions (59%), looked at maps in another area to see if it was safe to travel (58%) and clicked on links to find more information (55%). Fewer respondents clicked on the 'share' button to share information with others (23%).

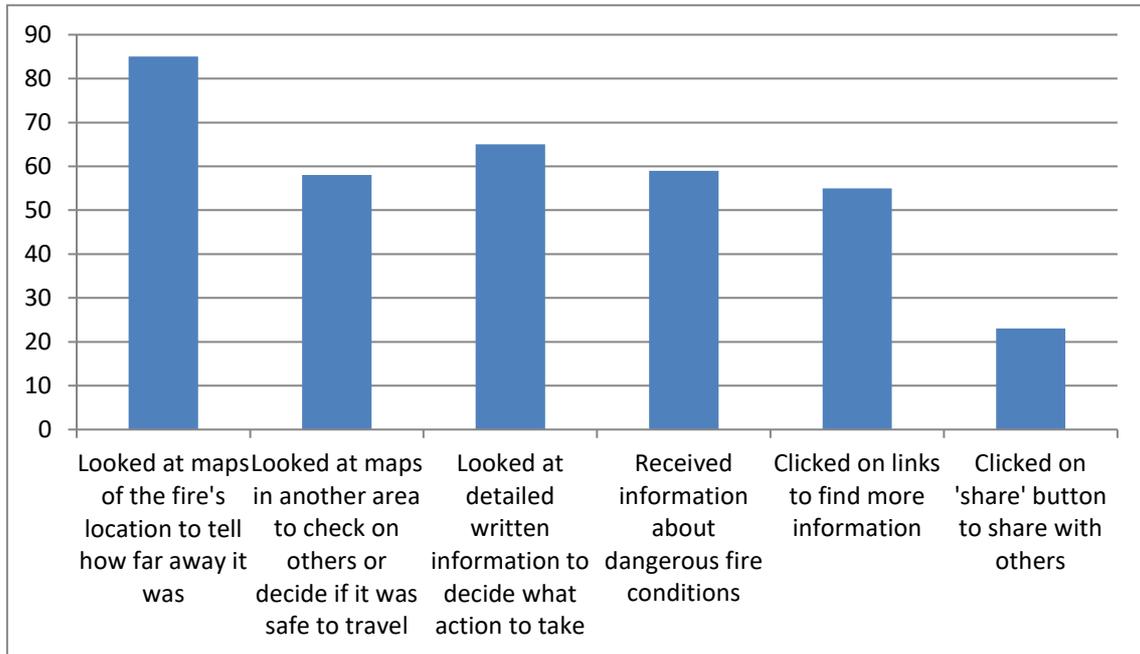


FIGURE 14: USES OF FIRES NEAR ME NSW (%)

Most residents thought Fires Near Me NSW was easy to understand (89%) and useful (88%). Over-two thirds thought information on Fires Near Me NSW was sufficiently localised. However, less than half believed information on Fires Near Me NSW was up to date (47%).

Analysis of interviews reinforces that Fires Near Me NSW was a useful tool for people to monitor the fires and to receive warnings and information throughout the fire season. Some people noted that it was useful to have multiple 'watch zones', particularly if they had a holiday home or family members in another bushfire risk area. As one interviewee noted, 'So long as you had phone coverage, it was great'. The NSW RFS had identified issues with Fires Near Me NSW, including the timeliness of maps due to the large number of fires and the speed of fires spreading, and these issues were reflected in many community interviews. Many interviewees discussed how information on Fires Near Me NSW was not updated frequently enough, which meant the app was not useful for them. This was particularly the case for people impacted and directly threatened by fires on the south coast between New Year's Eve and January 4th. A number of interviewees recalled that areas that had been impacted by fire were not yet showing on Fires Near Me NSW.



I was a big believer in the Fires Near Me app, up until this experience. And now I cannot tell people more highly “Use it, use it. Great, have it. Fantastic, but do not rely on it. Do not think that that will give you information because it let us down”. Even at 6:00 am, it hadn't moved, at 2:10, hadn't moved at all – it was still at 21 ks, at 6:00 am, slightly moved, but nowhere near. **Mum and dad's house was gone and burned and it still wasn't saying the fire was even near us.** – Surf Beach

We thought we had time in the morning because when we went to bed at 11:30, the Fires Near Me app said the fire was still out at Tuross which was 40 kilometers away. We now know that it hit the edge of town at 1:30. We're to the east of Cobargo, but no way would it have travelled that distance in two hours. **So obviously the Fires Near Me wasn't up to date.** – Cobargo

One of the things that was hard is they say to check the Fires Near Me app and all that on your phone but they are not updated all that frequently. So you could be looking at something and it wasn't the current situation; we would look at the map of our place and it was just “ember attack” – that actually didn't get updated so it was always just an ember attack and when it got worse, that still wasn't updated on the app. – Nambugga

Some interviewees explained that Fires Near Me NSW was useful up until the fires got close, at which point it did not provide the ‘fine-grained’ information that was needed to make decisions about what to do:

It was [useful] up until things got close and then it wasn't fine-grained enough to give us the kind of detail that we needed, and obviously it was glitching and suddenly the fires would disappear and then they would reappear; you'd look at it and it would show no fire in the Grose Valley and it's like “What?”. **It became too unreliable; I definitely would not have been using that to make decisions about whether to evacuate, which is a real risk.** – Blackheath

[Fires Near Me NSW was] Not particularly useful. It wasn't updated quickly enough. The reason for that, the fire front was significant and **to give every little village specific information was just beyond their resources,** and after all, they were fighting a fire... It's not meant to be a criticism; it's a recognition that you needed people bringing information from wherever they were getting it, updating the app, and clearly they struggled with that, both in terms of looking at the map and also looking at the words – **it was not really up-to-date. You would not have chanced your arm and your life on it.** We had people moving around in the community... that were far more up-to-date because they were getting their information from the fire crews coming in. – Bawley Point



Over the previous days we were just driving around trying to map the fire out ourselves because the Fire Near Me app wasn't very accurate we were finding, so we would go for a drive, see some flame, pull out the topographic map, and measure and sort of plot ourselves where the fire was so then we could prepare the hoses. – Sassafras

Some people complained that they were receiving too many notifications over the course of the fire season, which led them to turn off notifications or delete the app. A few interviewees discussed the problem of having a local watch zone (e.g. 5km radius) set up and receiving notifications for a fire that was a great distance away.

*Fires Near Me is problematic. Shall we say? I set the perimeter for alerts at five kilometres and the problem with Fires Near Me was that something would... They'd get an emergency **warning or something would happen in the hot spree in Colo Heights or something and I'd get an alert for it because it was all Gospers Mountain fire, even though I'm 100 kilometers away. So it got to the point where it was like the boy who cried wolf, "Oh God not Fires Near Me again."** When it had nothing to do with us, which said to me, there's a problem with Fires Near Me and there's a problem with how they're naming fires. – Lithgow*

Interviewee: I have taken that Fires Near Me app off my phone because I can't live with that again. That was just doing my head in.

Interviewer: Could you explain that to me a little bit more?

*Interviewee: **Because it just "bings" all the time so it's just this constant anxiety, you're just constantly checking** and it's actually not real-time, and I have no criticism – I know there was lots of criticism about the app not being up-to-date. Well, shit, **if you want it up-to-date, get out there and have a look yourself** because you're asking people who are risking their lives to help us to do more. I found it very stressful so I just stopped looking at it. – Reedy Swamp*

The Fires Near Me app, we had, when we went into summer, we had a... I forget, it was a 20 kilometre radius – by the end of summer, I'd put it down to five kilometres because I couldn't stand it. It was so stressful, I was just getting these emergency warnings constantly and I was at work and I was trying to work out, "Well, where is the fire in relation to us because it's Lower Portland", and you know, you'd get news about "Lower Portland, there's a fire, the Gospers fire, it's this, that, and the other", but you know, you can't always work out where it is in relation to you, and you get emergency warnings to "Evacuate now" because Lower Portland is on the other side of the river as well as here, so we'd have to try and work out "Well, does that mean us, does it not?" And, in the end, by the end of summer, I'd turned it down to a five kilometre radius. Our neighbour, he



turned his off and he lives alone but he couldn't stand it anymore. – Lower Portland

Some interviewees acknowledged that, while Fires Near Me NSW may not have always been up to date, it was still better than what was available in previous fires.

*It was good in a respect, but sometimes it tended to be a little bit maybe ambiguous or not specific enough.... In saying that, **I mean compared to the 2001 [fires], I mean, quite good because we had nothing at that stage** – all we could do was see where the smoke was coming from. – Orangeville*

*Interviewee 1: **But it's better – if you look back on all those other years, we've had much more information this time than we ever had before.** That's probably why the 2002 fire was so difficult in a lot of ways because, aside from the ABC, listening to the radio, we didn't really know where the fire was up to, when it was coming...*

Interviewee 2: Yeah, it's got better over time, for sure. – Lower Portland

Some interviewees were aware of the potential limits to Fires Near Me NSW (and other communication channels) during an emergency; however, others expected that highly detailed and localised information would be provided in 'real-time'. Analysis of interviews suggests that some people may want real-time information in order to make more 'responsive' or 'timely' decisions about protective actions. For example, the potential for more accurate and up-to-date information about a fire's location and spread might influence a decision to delay leaving in order to undertake more preparatory or defensive actions. Similarly, people could monitor information to reduce uncertainty associated with leaving and reduce the risk of unnecessary evacuation. There is an inherent risk in this strategy that, if communication is impeded, people may be over-reliant on information and not have sufficient time to take appropriate protective action. This could lead people to undertake late and dangerous evacuations or become trapped at a house or property they are unable to defend. Such unintended expectations and uses of Fires Near Me NSW may undermine longstanding messaging and advice about leaving early.

4.1.3 Were information and warnings useful to people given their personal circumstances?

The majority of residents indicated that they received or obtained warnings with sufficient time (78%) and had sufficient information (71%) to take protective action. Despite many reporting that Fires Near Me NSW was not up-to-date, primary residents most commonly identified Fires Near Me NSW as the most useful source of information as a whole (39%), followed by local NSW RFS volunteers (13%) and Facebook (11%). Responses were widely distributed across a range of

response options due to the individual circumstances and preferences of people during the fires.

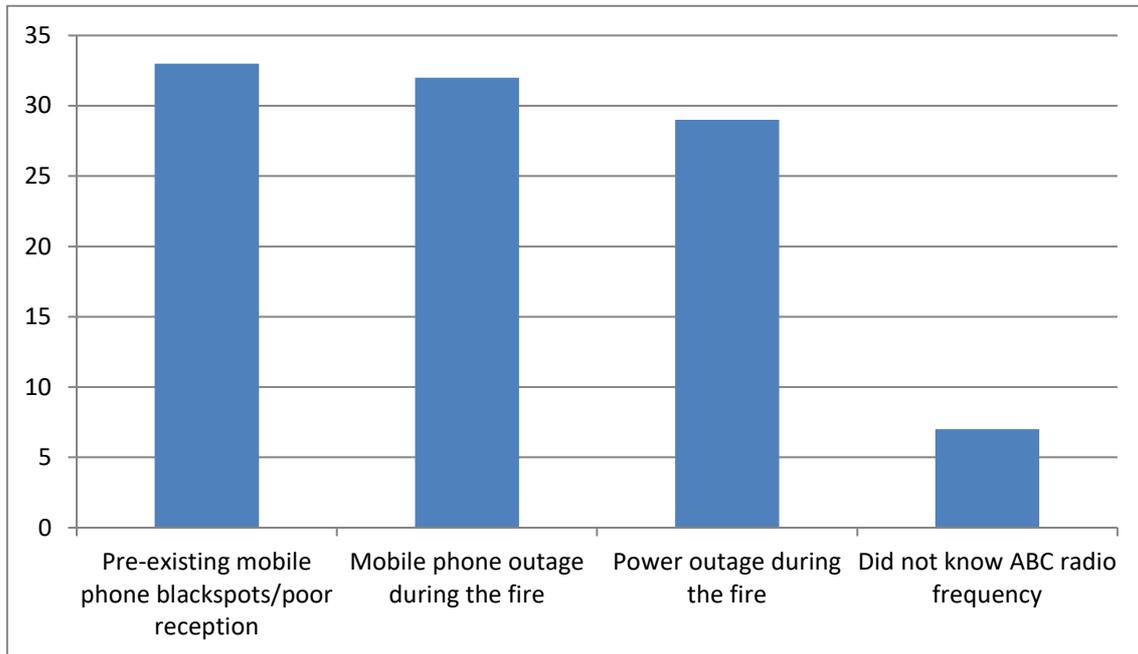


FIGURE 15: DIFFICULTY ACCESSING WARNINGS AND INFORMATION (%)

Many primary residents indicated they had trouble accessing warnings and information due to pre-existing mobile phone blackspots or poor reception (33%), mobile phone outages that occurred during the fire (29%) or power outages during the fire (29%) (Figure 15). This was supported by interview data, which highlight the role of mobile phone and power outages in impeding the communication of warnings and information. As a result, many people relied on ABC radio for information. Some expressed frustration at repeated advice to look for information on apps and websites, which they were unable to access due to the outages.

Once that fire came through, we had no comms because the power went, then the mobile phones went, so only people that had one of those little portable radios were getting any sort of news about what was going on. So that was probably one of the biggest issues, I suppose, because once you lost power, then you lost phone signal. And then those ... because most people were relying on their phones, there wasn't much communication at all. – Malua Bay

In the days leading up we were getting information, because we have satellite TV, so we were still getting information that way and the cell phone tower was still up, but as soon as that cell phone, cell tower... Oh, I can't even speak now, as soon as the tower went, that was it. There was no communication, because we had no power either. So we didn't have any idea how close it was, or what direction it was going in, or anything like that. – Clarence



So we had nothing on New Year's Day. We had no communication at all, internet, phone, nothing. So one of the ladies here had been through the Canberra bushfires and she was very stressed by it. And she wanted to know where the fire was and she couldn't find out. None of us knew where the fire was. So she went to the local police and they didn't even know where the fire was to the north... **What we saw was people around the town were sitting in their cars because the only way we got information was listening to ABC Radio...** and [the ABC's] information too was only as good as the input that was coming in, which was coming in from people who had phones, who were able to ring in. – Tuross Head

When asked about their preferred source of warnings and information in future fires, primary residents most commonly selected Fires Near Me NSW (78%) and SMS (71%), followed by radio (31%), Facebook (24%) and recorded landline telephone messages (12%) (see Figure 16). These findings highlight the value people place in Fires Near Me NSW and SMS messages as sources of warning and information during bushfires.

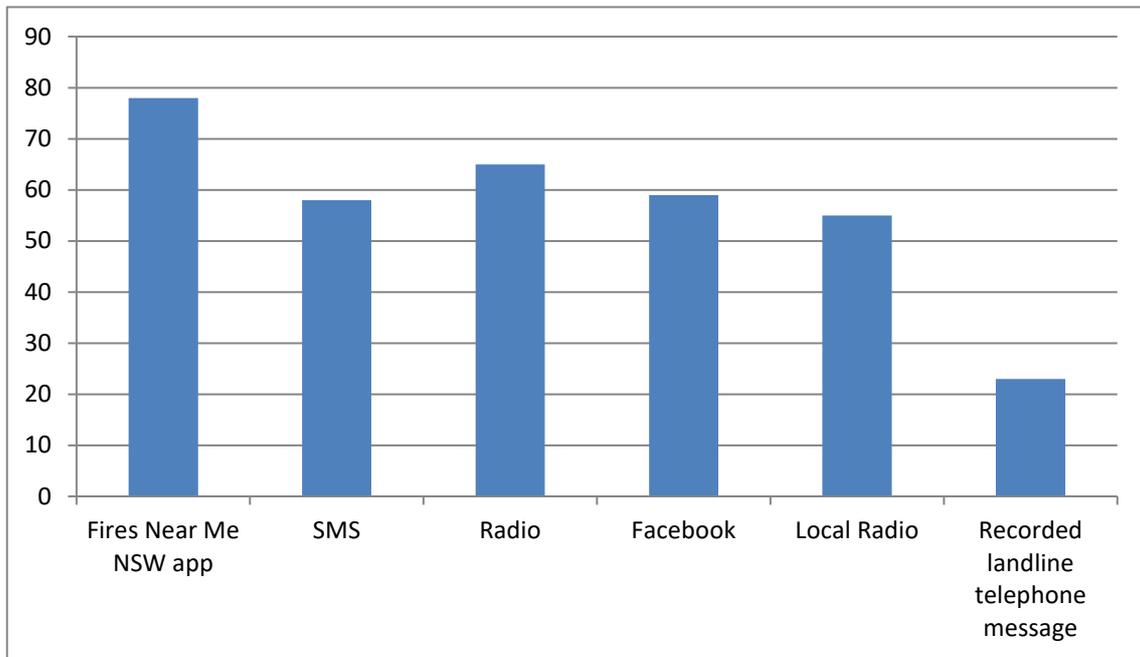


FIGURE 16: PREFERRED SOURCES OF WARNINGS AND INFORMATION FOR FUTURE FIRES (%)

4.1.4 How can information and warnings be enhanced?

As noted above, survey respondents indicated a strong preference for Fires Near Me NSW as a source of warning and information. When asked to select the three types of information they would most like to see on Fires Near Me NSW, more than three-quarters of respondents indicated they would like to see identification of the parts of a fire which are most active or where the fire is spreading (79%) (see Figure 17). Around half indicated they would like to see information about places to go in the event of a fire (54%), areas that might be impacted in the future (fire spread predictions; 49%), and roads and transport information (45%). Others felt it would be useful to see weather (27%) and air quality information (20%) on Fires Near Me NSW.

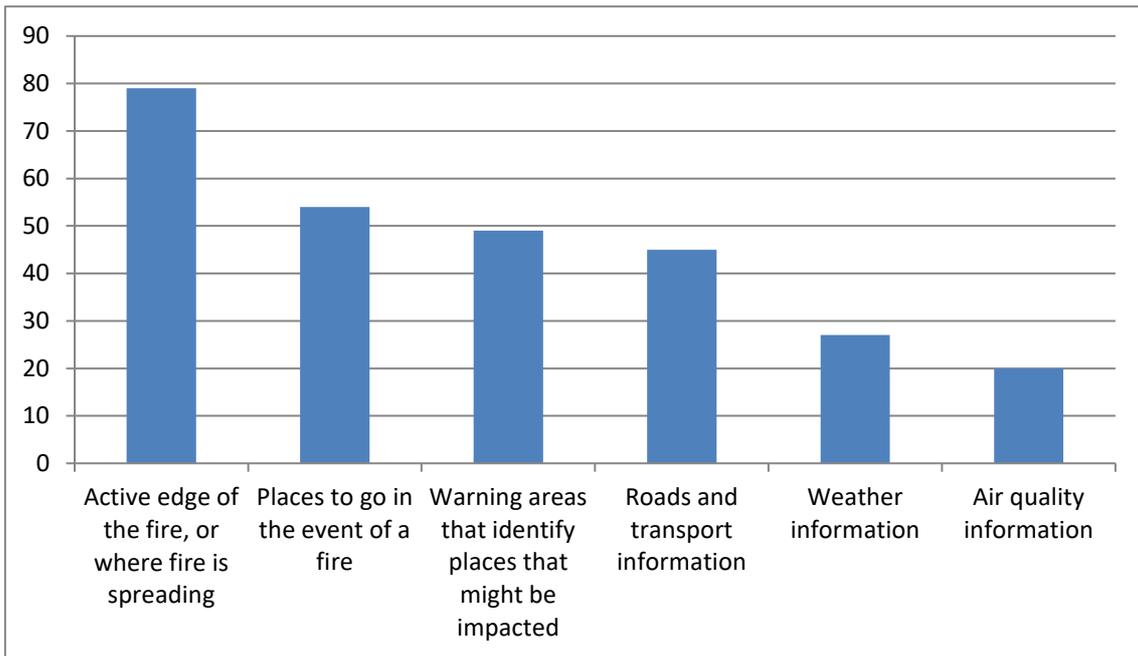


FIGURE 17: INFORMATION PEOPLE WOULD LIKE TO SEE ON FIRES NEAR ME NSW (%)

4.2 EFFECT OF PROLONGED AND/OR REPEATED EXPOSURE TO BUSHFIRE

4.2.1 How did prolonged and/or repeated exposure to bushfire threats, smoke and/or media coverage of the bushfires influence or change people’s planning, preparation and responses?

The length of the fire season and the repeated threat of bushfire was a significant factor discussed by many interviewees. For some, due to the unprecedented drought, bushfire had been an ever-present danger since 2018. Some felt that the continual threat of bushfire had become a constant in their lives. Interviewees spoke about how the ongoing threat, and the continual need to keep monitoring and making preparations was exhausting. Many spent weeks preparing for the bushfires and some needed to evacuate on several occasions. Some discussed waking multiple times a night for weeks to check on the fire’s location. In some cases, people evacuated from one property to another, only to then have to prepare and evacuate again. This was an especially large and significant undertaking for people with livestock and machinery. They discussed living with the continual ‘anticipation of threat’ and some mentioned that there were times they had wished the fire would just arrive, as then it would all be over. They also discussed how the ongoing media reporting of the fire impacts across QLD, NSW and Victoria did increase their awareness and preparation, but also added to their stress. Interviewees spoke directly about how they felt the extended fire season had directly impacted on their mental health, and many spoke about various levels of anxiety that remained with them.

We lived with the anxiety and the fears and lots of the impacts of it in different ways for months and months – we lived with it till February from, I think it was October... [My partner] woke up one morning and she said to



me, “I wish the fire would just come. It needs to just come and just burn the Goddam house down” and I thought, “Actually, that would probably be better in some respects because this waiting... for the imminent threat was just too much... – Lower Portland

I think it was exhausting and there was that sense of expectation all the time and you kept having this... I don't know, it's hard to explain. **I know people would say, “Oh God, I wish it would just bloody well hurry up and just get here”... I think it was just that sense of never knowing quite when something might blow up and when it might happen.** Also, you're constantly seeing all this footage and hearing things of other people who have experienced it and I guess that's sort of playing on your mind the whole time... – Wyndham

There was actually fire here from the 29th of December till about the 1st or 2nd of March. I was very worried about the fires the whole time and **I used to get up every night at least a couple of times just to check it, especially when there was any wind... it was a very long, long time to be worried about it...** It was very tiring... – Bodalla

So, what I found was really difficult with that planning was, you're on high alert. **You're actually constantly on tenterhooks.** It's not like something happens, it scares you, and then the threat goes away. The threat is always there, and it's still coming, you just don't know when... **The threat's just looming. You don't know when it's coming. So, you have to constantly be in the mode to fight or flight.** It's not good. – Mangrove Mountain

Influence on planning and preparation

Despite the mental and physical fatigue of the extended fire season, many interviewees discussed how the heightened risk and lengthened time frame had enabled them to prepare very well. Residents who had never considered bushfire planning talked about how they made fire plans for the very first time. Preparations in some cases were described as ‘textbook’, with interviewees discussing preparations around their home including a complete overhaul of their gardens and removal of mulch, and flammable species, clearing trees, vegetation and all litter, to new sprinkler systems, generators, pumps and hoses. Despite the stress of the continual threat, residents appreciated that they had more time than usual to prepare. These discussions are in stark contrast to many previous post-fire community surveys where only a small minority of people have undertaken such extensive preparations prior to being directly threatened by a fire. These preparations are directly related to an acute awareness of a heightened and personalised sense of risk.

*Until maybe a week or two before that, we hadn't really had a plan but **there'd been so much publicity about the need to have a plan that we did***



seriously talk about it and we wrote it up on the plan that you can print out from the website and so on, and we'd decided that we would evacuate... – Bawley Point

Before New Year's Day I went to Bunnings and threw a lot more money on my credit card and bought extra hoses and bought the soaker hose and the squeeze jet thing with the hose. I couldn't afford it but I thought "I'll need this. I can't not have it". We bought the masks, the P2 masks – I didn't buy my full kit of firefighting equipment, but I listened to what we were being told and I went and did it. – Conjola Park

For the last almost 10 years, we'd been a little bit lazy; we hadn't brought the fire pump out for ages... **We started in about November just preparing the place – that's kind of where it started for us and I think just that watching the fires slowly moving down and then also coming up from Victoria, it felt like we were the last area where the fires hadn't got to and it gave us a lot of preparation time.** So it was this really long, slow build-up. – Wyndham

We just knew what was going to happen. It was inevitable. We were going to fight a fire this year, and that was it. And we did. We just, every day that we had spare, we would write a list every morning. We'd analyse things, we'd strategise... Between ourselves, we had to really reinforce ourselves, each other, that we could do this. And it was a real team effort from us to do it, because we didn't have any outside support. **So we just worked tirelessly at our preparation.** We went to extremes, the absolute extreme as we could with what we had. – Araluen

Those who intended to leave if threatened by fire discussed how they had ample time to hone their planning and preparations.

*In a weird way I feel like you're better off... **We are so expert now at packing an evacuation bag – we are so good at it.** That's one of the things actually – how many people don't even know where their passport is? How many people don't actually know where that precious jewellery is or whatever? We now know where all those things are... The thing is that we now, you know, any day of the week, any time of year – could be given five, 10 minutes – and we could get out of our house with no regrets.* – Long Beach

Actually, that very first time especially, we just left really – packed up the house as best we could and just left. It's the first time I'd ever evacuated from anything so I really just grabbed my computer that I knew had back-ups of stuff on and we grabbed a couple of guitars and that was pretty much it. But then, each time, we refined what we would take; we took



slightly more things sometimes and then go, "I don't really have the space for that". **I guess we gradually got better at the whole evacuation process and deciding what we were going to take and what we weren't going to take.** – Wyndham

One issue with the prolonged preparations was that some residents discussed how they would prepare their personal protective equipment kit, but would then begin using it for other tasks in-between higher fire danger days. They discussed how they would then need to continually check and update their kit to ensure things like batteries were charged and water containers were full. Similarly, some interviewees discussed the need to keep their cars full of fuel over the course of the fire season, in case they needed to leave on short notice.

*We got really good at making sure the fire box was in the right car for where the cars were being stashed. And because we used some of the gear out of our firefighting boxes... Like, we got out the masks. We were using lots of batteries. So, we had to keep that updated. And sometimes we'd check each other, "Have you still got those gloves in there?" We would have come home and done something that might need gloves. And we would restock and make sure we were keeping that up. And that sort of stuff, I knew that we could get exhausted from just little things about keeping things going. **So, we both put a lot of effort into prioritising those things, and not slackening off as we got used to it and putting up with that. We tried to keep on top. And it got harder bothering to do that as time went on. But we also knew that we were silly not to.*** – Mogilla

*I've never lived in a situation where there's been multiple fire fronts over an extended period of time. So that just when one is dealt with and taken care of, then another is part of it... So it was very relentless in terms of just week, by week, by week, the same thing. The severeness... **There was very much a sense that it was just very, very constant. Always having everything in preparation, always having your buckets of water filled. Checking the generator worked, checking the fire pump was operational. Checking that the tank you're going to use for water was always full. Making sure the ladders were... All those little things all the time. Day after day, after day, after day, week after week.*** – Araluen

However, in some cases, the ongoing and repetitive nature of the 2019-20 fires contributed towards a sense of complacency in households, with residents becoming comfortable with fire that remained at a distance for many weeks, assuming it would not impact them.

I think we got very blasé because that then burned for five weeks up in the national park, then it turned around and came out and I wasn't there for it – my daughter was and the fire front hit them on two sides. And so when this came and they only said it would be ember attack, we probably weren't expecting it – it wasn't an ember attack, and I don't think anyone was expecting the fire to be what it was. It was just a fireball.



You know, it just creates its own weather system and just explodes. If we had known that, we probably would have emptied the house with a lot of personal stuff, which we didn't. – Numbugga

Influence on responses

The majority of interviewees who were threatened for prolonged periods or multiple times were able to implement their fire plans. However, the long duration of the fire season saw some people undertake different actions to those they had originally planned. Some of those who intended to leave got tired of repeated evacuations, and found they had time to prepare and stay. Others who had planned to defend decided to evacuate due to exhaustion from the preparation and waiting. Some also realised that they no longer wanted to take the risks involved with staying to defend, due to an increased understanding of the likely severity of the fire, and witnessing vicariously the impacts in other areas. One resident, who had always planned to leave due to the enclosed nature of their bush property and the lack of safe egress, reflected on how exhausting it is to meticulously prepare and how, after making these preparations, they would not have had the energy to stay and defend:

*We ended up evacuating five times in total... I guess that was **one of the decision-making parts as well is like "Well, if the fire did hit now, we're exhausted because we've been running around preparing and so we don't have the energy to actually fight it now if it did arrive"**. – Wyndham*

Another resident discussed how, as the fire season progressed, their plan to stay and defend changed to one where they would evacuate on Catastrophic fire danger days and then to one where they would evacuate on Severe days. The main influence on their change of plan was witnessing the severity and speed of the fires in neighbouring areas. They discussed how fear began to spread through the community. Although, they considered themselves to be well-prepared, they had also factored into their plan that the NSW RFS would be able provide support if needed. In early January, with fires approaching on multiple fronts, they were told that residents who decided to stay would be on their own. They also discussed that once they had made this decision it was very difficult to work out where they would actually evacuate to as they had horses to care for and there were fires burning all around them.

*That's something we changed; we ended up deciding that we'd actually evacuate on Severe fire days as well after... There was a meeting with the RFS... **I think we also always thought that there'd be likelihood of there being RFS or some extra support around if we needed it and that was something that was made really clear that because things were so stretched in that week in early January that that was just not going to happen... We had a week to think about it and I remember [partner] and I came back from that meeting and we were really in a... yeah, it just suddenly dawned on us that we had to evacuate but we didn't quite know where to go at that point – we were sort of unsure about what to do***



just because there were so many fires. By that stage there were fires everywhere. – Wyndham

Interviewees discussed how making and then re-making these difficult decisions over the course of the fire season was incredibly challenging, with many discussing conflicts within families about the right thing to do. In some cases, residents discussed how they moved their belongings to storage and spent the summer living at another home – second residences and the houses of friends or relatives. Repeated and extended evacuations were most challenging for those with children and other dependents, animals and livestock. With some making the decisions where they could to leave animals in other, safer locations – although this was not an option for all. Also, evacuating animals elsewhere, or being evacuated from your animals, usually then necessitated another journey to ensure they had water and food.

We just kept going back and forth up to the farm every couple of days, just to keep maintaining around the shed and everything, and making sure that water was topped up for the cows, in case they needed extra water and we couldn't get in there for a few weeks. So, we got extra water tanks, and all this sort of stuff, to ensure because we might not be able to get back in if the fire did go through, that they at least had something to drink that wasn't contaminated. – Mangrove Mountain

Exposure to smoke compounded these issues, with people also making decisions on where they could go to get away from it. This was especially challenging for those who had children with asthma. Some chose longer-term evacuations, traveling to areas further north that were no longer at risk, interstate and in some cases overseas. However, although the safety of family members came first, longer-term evacuation was difficult for some who felt an obligation to their animals and also to their local communities who worked for weeks to keep spot fires under control. Landholders, in particular, felt they had a responsibility to stay on their properties and support each other.

One issue discussed with repeated evacuations and the long timeframe to prepare was the inclination to take more and more belongings that were not required, especially in cases when fire was threatening for extended periods of time.

I almost find it easier and less stressful to have 20 minutes to get out of here, because the longer we have... because we had a couple of months of it being a problem, we kept bringing stuff to our families – our family is only 35 minutes away, and they're still in the bush as well but they were safer this time, or seemed to be safer so we kept filling our suitcases with bullshit, you know, stuff that we don't really need but we thought, "Oh well, we've got another day so we might as well pack a..." I hate that... – Lower Portland



Some interviewees recounted how they interpreted signs and cues in the environment to determine their actions and responses. They had experienced multiple black, smoky days in preceding weeks with falling embers, and expected this to occur when a fire was close and they needed to evacuate. They were therefore caught unaware when the fire front suddenly arrived at their house with little smoke and falling embers and the sun still visible.

*I was thinking, like on the fire Catastrophic **day I was expecting everything to go black and the ash to start falling and the dead leaves to start falling, but because of the way it was and the speed, and just I suppose the conditions then, it never went black. By the time I got in the car and left, I had still bright sunlight in front of me;** there was no blackout, there was no blackness. The embers that were falling on the Catastrophic day were probably five times more than what was falling on the day of the fire... So I think people were caught unawares. – Conjola Park*

For many, particularly those in the mid and southern areas of NSW, their responses were mediated by the extended fire season that had increased their awareness and preparations. However, this was not the case for those in the north of the state who were among the first to be impacted. Their stories mirror those of previous fires, where people are caught unaware and unprepared. As noted by the interviewee below, it was these accounts from QLD and northern NSW that provided the forewarning to people further south.

*It's a wonder more people didn't die in the fires actually, you know, because it came through so suddenly in a lot of places. I've heard a few stories of things and I think "Oh my God" – people tearing along roads with the flames around them and all sorts of things. It was a bit different here for us but that Friday night was horrendous, absolutely horrendous. Yeah, **so I don't know, I think the unexpected nature of it – how do you prepare yourself for what could be, you know, for that? And maybe these things happened up here and it gave the south coast a little bit of forewarning, didn't it, about how devastating and rapid it could be.** – Johns River*

Impacts on work life

Interviewees discussed the challenge of balancing commitments to work with fire preparation and response over the extended fire season. This was particularly problematic for those who travelled for work or commuted long distances. Interviewees discussed monitoring fires and road closures on a continual basis in order to plan journeys to work and also ensure they could return home. Some interviewees discussed how they took extended leave from work in order to prepare their properties, look after families and to ensure they were home when the fire impacted. Some had leave that they could use or were able to negotiate additional leave or work from home. Others described a stressful situation where they were negotiating with employers who they felt did not understand the situation they were facing. Some interviewees discussed worrying that they were going to lose their jobs in addition to their homes. Challenges were perhaps



greater for those who were casually employed and for whom working at home was not an option. If they did not go to work, they would not be paid.

I ended up taking quite a few weeks off work... you never knew when the fire was actually going to get to you. So I ended up taking quite a few weeks off work just staying at home just in case and travelling into Wyndham and travelling into the RFS, just to find out what was going on.
– Wyndham

The other part of it was our places of work probably didn't really understand the level of stress we were under. So, we had to take annual leave to go, and prepare, and protect our animals. Then I had to take unpaid leave. They wouldn't allow us to have special leave, or anything like that. You know how some businesses were letting the RFS off for three weeks to go and fight fires- I think it'd be a really nice gesture, or a suitable scenario to be able to say, "Your house is in an impacted fire area. You're about to be impacted by fire. Don't worry about work today. Get the hell up there and sort out what you need to save."... So, just to be able to have, not to have that pressure about, **"Far out! Am I going to lose my job in the middle of this as well?"** – Mangrove Mountain

I was a casual, I didn't really get any support from [my employer] entirely but the full-timers, they got \$200 – they called it "\$200 fire wage" or something like that where they got an additional \$200 in their pay packs to say "Thank you so much for putting up with it, and this is for you guys not being able to work for these four days where we were closed" essentially, kind of thing. **I didn't get any of that because I wasn't a permanent staff member.** – Moruya Heads

I was driving back and forth, through the national park, every day, seeing the fire trucks whizzing back and forth, and having to check Fires Near Me and Live Traffic every day before I could head home. And you were just tense all the time, wondering. And colleagues would go, "Oh go home. Go home now. They're going to close the road. You won't be able to get home. Go now." **So living with that for months on end is really tense. You try to do what you have to do, which is your normality of you've got to earn money, you've got to go to work, but not actually knowing if you're going to get home because you're not five minutes from home, you're having to commute back and forth.** And that's the reality for so many people. – Robertson

Living a 'fire normal' life

In addition to the impacts on their professional lives and employment, interviewees discussed the huge impact on their families and home life. Life was completely disrupted, for many this was a new 'fire normal' that they lived for



months. Even those who were not directly impacted by fire but suffered from smoke exposure found their lives were severely disrupted. However, many also had to live with an ongoing threat, continually prepare, evacuate and defend homes. Interviewees described the challenges of how they negotiated work, children's schooling, Christmas and family celebrations, and everyday life while still continuing to monitor, prepare and respond to fires. Some had to negotiate road closures to attend important medical appointments in Sydney or Canberra and others had to visit sick relatives, attend funerals and weddings. This fire season, unlike any other, challenged people to adapt, negotiate and live with fire risk. A dominant undercurrent in many interviews was that longer and more brutal fire seasons were likely to be something Australians would need to learn to live with. While some realised this was something they could do, and would be able to do again, others discussed plans to move to less fire prone areas or closer to their children's schools and employment.

One couple with young children articulated very clearly the challenges of living with a fire threat for three months while having to navigate work, school and the semblance of some kind of 'fire normal' life. They discussed continually having to travel through the fire affected area for work and school and every day wondering if they were doing the right thing, or if this was going to be the day it all went wrong for them. One parent commuted some distance to work, which added an extra challenge. While their plan was to evacuate – and they had a well-developed plan, they could not stay away from home the whole time. They discussed how they tried hard to protect the children from the anxieties of what was going on but this was difficult due to the continual smoke, embers, heat, helicopters and sirens.

I think another thing that is relevant to this story as well is the impact of the fire on our kids and the difficulty of trying to manage your own anxieties when you've got young kids and not project your own anxieties on to those kids. I think we did as well as what we possibly could in all of the circumstances but we couldn't shelter them from the reality of the situation when they couldn't see out the window to the horse paddock for example, and the water was black...the helicopters were constant, the sirens were constant...It was just so relentless and the heat was so relentless, and the smoke – just the constancy of it, because it was a fire like no other that just went for so many months, and so they were constantly exposed to it. – Parent 1, Portland

Because the fire went on for so long, there were many days when we'd been to work and I'd picked the kids up from school and we were coming home and we were still driving – what looked to be driving into the fire, because we were driving closer to the fire than we were going away from it which is counter-intuitive – and so, so many times I'd just be trying to act normal in the car with the kids even though I was scared shitless, driving back to our house, driving closer to the risk and closer to the fire but because of... you know, it wasn't a fire that lasted for a couple of days, so we had to keep doing our normal things... – Parent 2, Portland



Drought and lack of water

Some residents also discussed the impact of the drought and extended fire season on their water supplies, which affected their plans and ability to prepare and defend properties. In some cases, those who planned to stay and defend decided to leave. Some of those who had sufficient water supply felt guilty about using such a precious commodity.

*We don't have a lot of water. We've only got a very small tank – it's 23,000 litres, which is quite small in tank-land. **I would only ever put it on if we absolutely had to, because that's the only water that we've got.** – Lower Portland*

Interviewer: When you left those times, did you have the sprinklers running?

*Interviewee: No, we didn't because we're on tank water. **We've only got a limited amount of tank water so, without a fire directly there, chances are we would have just run out of tank water before the fire actually even hit anyway.** It's really kind of a last line of defence but if we were in the house or trying to defend the house from here, we would use it but we'd probably use our entire water supply within three or four hours. – Wyndham*

***We've got a dam here and it dried up for the very first time since 1995 in December last year. So we had no back-up water for fires either.** We're on town water but we've also got really low pressure, so we just know that if anybody else in the neighbourhood turns on a tap, you lose your pressure basically. So you can't rely on the mains water; we've got a static water supply in front of the gate but the dam was empty, there was nothing in it so that wouldn't have been any use either. – Surf Beach*

4.2.2 Was there a particular moment that motivated people to take preventative or protective action?

Interviewees discussed a number of triggers that made them sit up and realise that, in the context of prolonged and/or repeated exposure to bushfires, they needed to take action. People often relied on their own senses and sense-making to navigate bushfires, with people often becoming aware of danger through sensory engagements. However, due to the extended fire season and continual smoke that blanketed much of NSW, these fires were unlike others where people were first motivated to action by seeing or smelling smoke. In some cases, people became accustomed to smoke and falling embers and even to fires burning in nearby bushland. Therefore, some people became complacent:

*You had to mentally be prepared for any contingency, and yet, live life normally in the meantime, for months. Yeah, I mean in one sense it does and in another sense you just get used to the new normal. We just live in a smoky, hot, dusty place with fire bombers overhead, you know. How long can you be on high alert? **Your body and your mind have to come to terms with it and just say "Oh well, this is how it is". It doesn't mean I'm under immediate threat, which makes it hard when you are under***



immediate threat to get moving because you're used to switching off the alarm bells. – Colo Vale

However, despite some complacency, the majority of interviewees described a number of environmental triggers that first alerted them to danger and prompted them to enact, or ramp up, their fire plans and actions.

Smoke

Despite the smoke impacting on much of NSW, people distinguished between that more 'general' smoke and the more 'localised' smoke that indicated danger nearby. For example, one interviewee described the moment that they realised that the smoke they could smell was from a fire burning nearby. Some described how the smoke enveloped them and others saw distinct plumes of smoke in the distance over fires. Seeing pyrocumulonimbus clouds was also a phenomenon that alerted people to immediate danger.

*And I go, "No, no, it's Gosper fires. It's a long way away. There's nothing here. We always check. We've got our Fires Near Me app and everything." And they were saying, "There's a lot of smoke around." I said, "Yeah, yeah, sometimes it blows down," very reassuring. And so, they went out shopping. They came back in the afternoon. **And by the time they came back, we had already realised that there were actually fires near us, because we saw the smoke as localised smoke. And so, they got back and we said, "Pack up. You're leaving,"*** – Mogilla

*Probably on New Year's Eve when **I saw the pyrocumulonimbus cloud over the top of my house and over the south of our house** – just really far in the distance you could see another pyrocumulonimbus cloud starting to form over the Bega area. You couldn't quite see it but you could just see the slight tinge of smoke in the area down there and over our house there's like a triangle **and it's like "Shit, I'm really concerned", and my partner is like "All right, we'll go soon. We'll go soon"*** – Moruya Heads

Changing colour of the sky and bushfire sounds

Many also discussed how it was the sudden red or orange glow in the sky that alerted them of the need to take action. Associated with this visual cue was falling ash and burnt leaves turning day to night. Some interviewees also talked about the extreme heat, while others identified the noise of the fire as a trigger for action.

Well, that's when I didn't need to be told we needed to leave. It was very, very obvious. It was fire red. First thing in the morning, it was bright, bright, red and orange. You couldn't see the beach and the beach is, well, from my balcony you can see all the way up Merimbula Beach, you couldn't



see...And that was before the announcement that tourists should leave.
We had made our own decision. – Pambula

You couldn't see the actual flames, but you could see the reflection in the sky. So it's orange, like in the west. To the west, it's orange, and that's highly unusual at dawn, and the heat was actually coming in waves... So then I said, "They've got to go." – Rosedale

And I had opened the door to go outside and it was boiling hot. And **there was just this glow and I just went, "Oh my God!" And I came back in and I said, "[Husband's name], this is really serious."** – Broulee

The whole sky was just as red as red. And the roar from what was the fire that was coming was just insane. – Cobargo

Sudden realisation of the severity of the fire

Many interviewees described learning about the impacts of the fires on friends, relatives and other communities. For many, this helped them personalise the risk and realise the need to take protective action. For some, seeing the impacts of fires on others influenced them to change their plan from one of staying to defend to leaving.

We woke up in the morning to hear about the fire going through Cobargo...We'd gone from being "Okay, we're quite prepared and we're feeling okay" and we were going to stay and defend the place that night and that suddenly changed everything for us... And also the speed at which the fire started to the north of us; we went and spoke to the neighbours up there over the next couple of days about how the fire behaved. From then on, from that point on, until the fire... the next couple of months, it just changed how we reacted and what we were doing. – Wyndham

I mean, I'm looking at the window, exactly where I would have sat and defended but this year, **because of what I saw happening in Balmoral,** and hearing the stories after, especially from the potter, you know, who bunkered down, **I just sort of thought, "That's too big. That's too big. You don't stay. You don't stay in that situation"**. – Penrose

Community meetings

Residents discussed the influence of community meetings where the NSW RFS provided information and advice on what to do. Some recalled NSW RFS members telling them the fire was coming and firefighters would likely not be



able to assist them. Many described these meetings as ‘the moment’ that motivated them, and for many, the reason they took protective action.

When I sat there at the second meeting, they had all the maps up and everyone was asking questions and there was this bald guy, standing up there and he goes... I think it was after the fires had joined and he goes, “It’s not a matter of whether it will be here; it will be – it’s just when” and he said, “It could be three weeks and it could be three days”. That was it.
– Kulnura

*But that Long Beach meeting actually had some dire warnings in it saying that, you know, “We’re trying to contain it” ... “If it jumps this line, we can’t stop it. It’s going to make its way to the sea and anything in its way will be impacted”. **Their predicted impact zone took in our area. That meeting just sent everybody cold – we took that very seriously.*** – Long Beach

*The RFS called community meetings at the local hall. They were all pretty scared and gave us basically that impression that’s like “We don’t want to be here, if we didn’t have to we wouldn’t, so you guys probably shouldn’t either”... **It was basically the recommendation of the RFS saying to us “We’re completely under-resourced; we’re a massive area – conditions look horrible. Please leave”*** – Wyndham

*The town meeting, and **the local mayor came to Bermagui, and just told everyone at that meeting to evacuate, that the town could not be defended. They had no resources to defend the town and to evacuate now**, so that prompted it. And as what would be a normal reaction, everyone tried leave that same... This was a two o’clock meeting, I think it was. Everyone tried to leave that afternoon.* – Bermagui

Knowing the fire had got to a certain location

Hearing the fire had reached a certain town, road or location motivated some people to take protective action. For example, many people on the south coast of NSW discussed how they knew they were in danger and began to enact their plans once they heard that the fire had reached Mogo. Other geographic features such as the fire crossing rivers and major highways was also a trigger.

On New Year’s Eve, a text message came through for Mogo to say that they needed to evacuate; Mogo is about... as the crow flies, it’s probably about, I don’t know, 15-20, 15 kms from here. We took that as probably a good time to pack the car. I’d already mentally packed. We had suitcases down. My daughter was visiting from New Zealand so we just packed what we needed and my daughter and I and the dog, went down to the beach. – Surf Beach



*I looked at Fires Near Me, and I saw that the fire had jumped Mogo and **once it had jumped Mogo, I knew that was an indicator that we were in trouble.** – Surf Beach*

*We'd been watching the news and the Fires Near Me app basically, looking at the spread of the fires from the north of us. Once the Currowan fire jumped the Kings Highway, moved across the Kings Highway, **we'd basically used that as a bit of an indication that if it jumped the Kings Highway, the chances are that fire would end up on our doorstep at some point** so we were watching that fire in particular. – Malua Bay*

*Well, we'd originally thought it would hit on New Year's Eve, because it came close. I think it actually crossed the Shoalhaven River on New Year's Eve. I might be wrong. But it didn't actually hit us. **But we knew by the 4th that it had crossed the river, and it was going to hit us.** – Kangaroo Valley.*

4.3 EFFECT OF PREVIOUS EXPERIENCES AND EXPOSURE TO BUSHFIRE

4.3.1 Did previous experience and/or exposure to bushfire influence people's expectations, planning, preparedness and responses?

Survey results indicate that around two-thirds of resident respondents had some past experience related to bushfire (Figure 18). Around a quarter of residents reported they had previously left early or evacuated due to bushfire (24%) or had defended a house or property (23%). Some had used fire as a tool, including for pile burns (24%) or prescribed burning (e.g. hazard reduction; 13%). 22% had experience as a volunteer firefighter and around 10% had property destroyed or damaged by bushfire. One-third (32%) had no prior experience with bushfire.

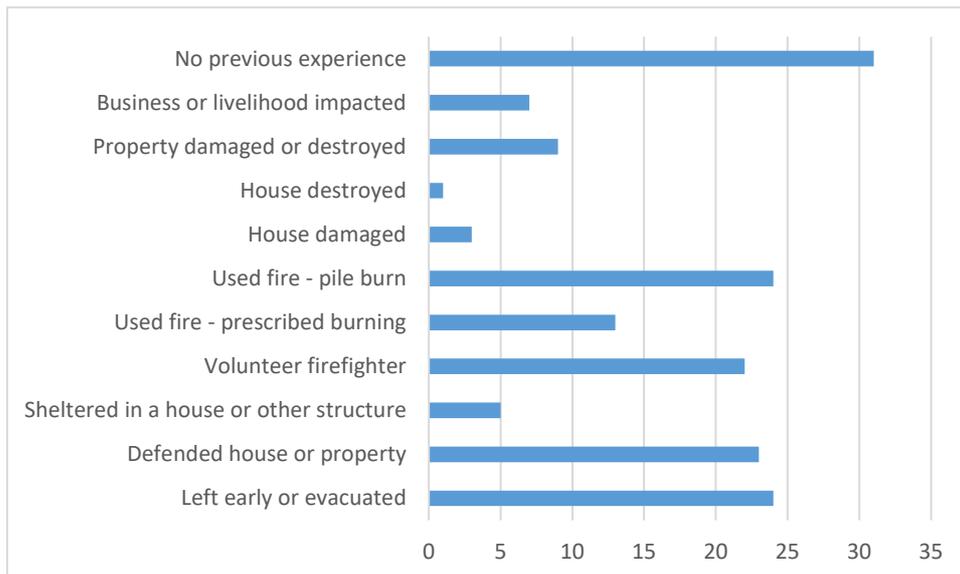


FIGURE 18: PAST EXPERIENCE WITH BUSHFIRE (%)



Influence of previous experiences on expectations

A number of interviewees with previous experience and exposure to bushfires described their concern about the heightened level of risk leading into the 2019-20 fire season. Their past experience of fire influenced their routine planning and preparation for fire each year. Nevertheless, they could not anticipate the number, size, rapid spread and severity of the fires that would burn over the course of the season. Their past experiences could not prepare them for the fires they would soon experience.

I've lived through two Ash Wednesdays now. And this was a fire like I've never seen before. The speed of it, the ferocity of it, the unpredictability of it. It was just... I want to say amazing, but it's probably not a good word to say. But as I said, I've lived through two Ash Wednesdays and I've been evacuated from my home [twice] and that was a piece of cake compared to this one. – Batemans Bay

*Even though we know how fire works here, and even our big catastrophic fires that we've had before, fire tends to run in certain places... and run slow that way and fast that way. **This fire didn't do that. It did almost the complete opposite of anything you could possibly have predicted.*** – Martindale

*We've had fires start in that wilderness before... Every other fire that we've witnessed has taken hours to reach us or even sometimes days, and then quite often had gone out... **How extraordinary it was that it travelled that far in such a short time. So we all just switched into extremely high alert.*** – Quaama

*We had enough knowledge of the behaviour of fire historically, to know how we go about dealing with it, and containing it, and controlling it because we've done it before. We have literally contained fire, controlled it, and it's got nowhere near our house. But there's no way you can control fireballs flying through the air, erupting. And it went on for hours, they would just erupt out of nowhere and take out whole paddocks... **We were equipped to be able to contain it as we had done in the past, but not this time. It was just like nothing we'd ever seen before what happened that day.*** – Forbes River

Awareness of the number and extent of fires across NSW and the heavy demand on firefighting and other emergency services also influenced people's expectations of the support they would receive. A number of interviewees explained that they did not expect to receive the services they might expect in a 'normal' bushfire season.

We had an awful lot more [support during the 2001 fire]. We had community liaison people. We had community meetings, and we had



information. This time around, we didn't. We actually expected that... **They said, better to leave early... "Don't expect an individual fire truck to every individual house. Don't expect air support." Normally, we would expect air support.** In those [previous] fires, we had four or five helicopters here every day for a month, bombing this fire because they'd be dipping out of our dam. – Martindale

Influence of previous experiences on planning and preparation

Some interviewees discussed how previous experiences and exposure to bushfire had directly influenced their planning and preparation for the 2019-20 bushfires. Actions to plan and prepare for bushfire were motivated by past experiences of property and asset loss, as well as experiences of successfully defending property against fire.

Three years earlier, we got burnt out on a different property. We lost 2,000 acres there. **I didn't want that to happen again, so I was desperate to keep it out of the grassland areas.** I didn't want to lose grass again. – Bungendore

So I'll prepare ahead knowing again what happened in 2013. **It made me rethink about where I lived... I think we were a better prepared community because of it.** Unlike in 2013 the fires just came from nowhere, it was so unprecedented, within a few hours, over 200 homes were destroyed. – Blaxland

The one in 2001 erupted right beside the house and was quite scary. **I think having been through that one, maybe gave us – me especially – a little bit more confidence of what we were capable of doing now; having the gear ready and being able to...** you know, pumps everywhere, pumps in pools, pumps in dams, I mean, you name it, we had it. – Orangeville

[Interviewer] how well prepared did you feel for the bushfires?

[Interviewee] Extremely, and we weren't smug. **We fought the '94 fires and we took on every possible thing that we were told to do and we've always been told,** we've always done our own clearing, we have tanks, we have two dams, we had water. – Surf Beach

Some interviewees who had previously been exposed to bushfire felt a heightened sense of risk and had made firm plans to leave early if they were ever threatened again.

Ever since that experience, I'm even probably more heightened than regular people would be for anything bushfire-related... **Since the Holsworthy fires, I've actually had my grab-bag at the front door with**



everything in it; that just goes with me everywhere. I don't tell that to a lot of people because they'll probably think I'm mad but it's there, ready to go. – Surf Beach

Since then, we know what we're going to take and we just have it in a box and we have it either by the door or in the cupboard by the door and **we just know what we're going to do and we're prepared to leave everything else behind.** – Lower Portland

We didn't want to go through that again. So, we wanted to remove ourselves from the threat earlier rather than later. Certainly, the Canberra fires, I think, made us more cautious about the summer and we didn't want to go through the same experience again... – Malua Bay

Others who had previously experienced bushfires prepared themselves and their properties for disruptions to services that could occur. This included actions such as getting extra cash out, filling cars with petrol the day before Catastrophic fire danger days, and buying power banks to charge mobile phones.

One of the things that I used as a direct experience of what happened in Canberra, and that was, there were many stories of people in Canberra, literally in suburbia, who all ran outside, grabbed their garden hoses all at once and tried to spray down their houses, but they literally drained the reservoir, faster than it could be replenished. And so, they had dribbles coming out of their hoses when they needed the most... **And what I did in the days leading up to the fire as it seemed to be approaching was, I filled that water tank, but so that I wouldn't put a sort of undue demand on the local supply. It was just being filled very, very, very slowly over a couple of days.** – Batehaven

We have sprinklers on the roofs, we have fire pumps here, we have fire pumps there, we have the houses set up with generators – **they're all things that we learned after the 2001 fire because in that particular situation, when power went from the house of course we lose all of our pumps.** – Orangeville

Some interviewees had reflected on their previous experience of bushfire and decided they needed to learn more about how to plan, prepare and respond. Some described accessing fire service information about bushfire planning and preparation, while others sought to enhance their knowledge and skills by joining the NSW RFS or engaging in programs such 'Hotspots' and 'Community Fire Units'.

We've used the RFS so many times to save us in the past that we joined for that reason... And it's been a wonderful thing to do. But we didn't join expecting to have to do what we did over last summer, which was virtually a full-time job... **We've had five major fires on or threaten our property in**



the 18, 19 years I've lived here. So I've had a lot of time to hone it, but I never had the skills to fight a fire, the confidence, or the equipment... After the '17 fires I joined [NSW RFS] as well. And now I have the skill... I'm now in a position where I would never evacuate again. I'll never leave. – Frasers Creek

[Since 2001 fires] we've been preparing and getting things ready for it because like everything else, we know it's going to happen again. And I had only just recently finished a Hotspots fire course. – Orangeville

*In the 2003 Canberra fires we were told to evacuate several times because we back onto a large bush reserve... And because of that, **we joined what in the ACT is called a Community Fire Unit. So, we could be a little bit different in the way we responded because we've undergone fire training with the ACT Emergency Services.** – Visitor, Broulee*

As was the case following the 2018 Reedy Swamp Fire (see Whittaker et al. 2020), some interviewees talked about how knowledge of past bushfires had influenced their planning and preparation. References to the 2009 Victorian Black Saturday bushfires and the 2003 Canberra fires were particularly common.

*We'd been preparing for fire at the property for the 15 years to 20 years. **When we saw what happened with the Black Saturday bushfires... that was when I really went, "I don't want that to happen to us."** – East Lynne*

*There's quite a lot of information that was written that came out of the [Black Saturday] fires in Victoria... **We read quite a lot of information that came out of that** and there's quite a bit of research about, you know, just the sort of things that seemed to work and didn't seem to work and probably some stuff from the RFS. We did a lot of reading on the internet. – Wyndham*

*Some of those stories that came out [the **Black Saturday** fires] and the documentaries and things that we watched... **A lot of the people that were killed were people that were trying to leave at the last minute or ended up sheltering at home. That impacted my plan to get out early because I didn't want to be caught in that position.** – Wingello*

One interviewee explained how he had conducted extensive research into bushfire bunkers after Black Saturday and had constructed one on his property. With a limited water supply due to ongoing drought, he felt it was imperative to remain on the property in order to turn the sprinklers on at the optimal time.



After the Black Saturday fires in Victoria, 2009, we had built a bunker. Took about three years to complete, but we had that all ready and prepared.
– Kiah

The importance of previous experience with bushfire for future planning and preparedness was highlighted by one interviewee, who observed:

*While we can look at all of the infrastructure and the engineering, the way that people react with fire is also kind of important. And it's almost as if we would like them to have seen this before. **Obviously the ideal is for people to join the RFS and do a little bit of firefighting... But even for people who are not prepared to do that, exposure to fire would be valuable.*** – Upper Landsdowne

Influence of previous experiences on responses

A number of interviewees commented on how their previous experience with bushfire helped them respond effectively during the season. Many of those who chose to stay and defend their houses or property commented on how their previous experience and preparations equipped them to deal with the threat of approaching fires:

I think that we were very calm about it. We were quite ruthless about it because we'd had a plan and we knew what bushfire plans needed to look like but also because we had been through the Canberra fires, ***we'd done that fire training and we were very reasonable about our own capabilities.*** – Broulee

Similarly, a number of interviewees reflected on how their previous experiences and subsequent preparation helped them to leave in a timely manner. Some spoke of how their experiences and memories of previous bushfires acted as triggers to respond during the Black Summer fires:

So the trigger actually for packing up early was actually instigated from fires previously and what we had learnt. The major trigger then to say, "Okay let's just leave for the night, let's see what happens," was actually then seeing the proximity of the ridge ahead and seeing the red smoke – Blaxland

*It wasn't saying [we] must evacuate now, over the radio or anything like that. But when I went outside, **because of the Canberra fires, and when I saw it go blacker and saw these leaves were coming across, that gave me the sense of urgency that we had to go*** – Tourist, Sunshine Bay

Overall, analysis of the interviews highlights the influence of previous experience and exposure to bushfire on people's planning, preparation and responses. It is



clear that past experiences of fire motivated and informed planning and preparation and in many cases helped people to take effective protection action. Nevertheless, experience with typically smaller, less severe bushfires was not always an accurate guide to the fire behaviour and conditions that many would experience in 2019-20.

4.4 SHELTERING PRACTICES

Survey data indicate that three-quarters of residents (76%) had identified a place to shelter as part of their plan. Just under half of the resident respondents (44%) were familiar with the term 'Neighbourhood Safer Place'. Of these respondents, 72% were aware of a NSP in their area.

One-fifth of those who stayed with their house or property reported needing to take shelter during the fire (21%). Sheltering locations included: in a vehicle (28%); in a house in a room other than a bathroom (28%); on foot, in an open area such as a paddock, reserve or oval (18%); on foot, in an area with lots of water such as a beach or lake (4%); in a bathroom (4%); in a garage (5%); shed or other building (7%); basement or cellar (4%); bushfire bunker (1%); swimming pool (3%); and in a water tank (1%).

Of those residents who left their homes and properties, one-in-ten reported needing to take shelter during the fire (11%). Sheltering locations included: on foot, in an open area with lots of water such as a beach (30%), in a vehicle (27%); on foot, in an open area such as a paddock or oval (14%); in a shed or other building (8%); in a room that was not a bathroom inside a house (8%); and in a bathroom (one respondent).

4.4.1 What were people's experiences of sheltering at the individual and community levels?

Interviewees described taking refuge from the fires at a range of different places, including evacuation centres and Neighbourhood Safer Places, various informally designated community places of shelter, as well as at personally identified safer places in their homes or on their own or nearby properties.

Sheltering at the community level

At the community level, many interviewees sought refuge as fire approached at open spaces and near water, believing this offered them a point of retreat where the fires could not get to. Some interviewees sought refuge before the main fire front arrived, particularly on being prompted by emergency warnings. Others were delayed in leaving or initially stayed to defend their properties and then sought shelter at community spaces when fire conditions overwhelmed them and they felt it had become too dangerous for them to stay and fight. In some instances certain members of the family sought refuge early, while other members stayed to defend and then joined them later at an agreed location.



Some interviewees described how they were directed to particular community spaces of shelter by emergency services personnel:

*And then, the next thing we know, **there is a police car out the front with one of their little sign things that just says, "Follow me, follow me, follow me."** Out the front going, "Are you coming?" And we're like, "What are we doing?" And we grabbed the dog, took two cars, my son went in his car and my husband and I went in our van... **And we ended up going down the street down to the beach... we just kept following the police car.** – Broulee*

Seeking shelter at the local beach or surf club was a common experience for residents in many of the impacted coastal communities. Many people found the experience of sheltering frightening.

*We all went to the beach with the cats and the boxes and the pram and the bike trailer and all that sort of stuff, put wet blankets over them all. We hid behind the rocks because the heat was becoming really intense at this point... it started to get really, really, really dark and really, really, really hot. That was quite frightening. We saw the flames go up at Broulee and we saw flames going up at Malua Bay from our vantage point on the rocks... The fire had crossed George Bass Drive near the community centre and we heard explosions, which were the gas bottles going off. And look, we just sheltered in place ...We all had masks on and wet gear. All the kids in the street were basically huddled together with their teddies. It was pretty horrible. And then it got really black and really, really hot. And so we figured the fire was coming really close... And then the southerly hit and it was like the clouds parted, and there was all this brilliant white light from the south. And it was icy cold and really severe... **We were this little bubble with fire all around us. We stayed there at the beach for a while until the RFS said that it was safe to return to our houses.** – Tomakin*

*We'd packed the car with a bunch of essentials, and we'd had a plan to go to the beach, down to the main beach at Malua Bay. And so, we went down there, parked the car up on the grass... **We were one of the thousands of cars down there, and just sat and waited and watched. And then, as it became increasingly close in there, right behind the shops, and it was burning those houses in there, everyone moved to the beach. We sheltered on the beach.** – Malua Bay*

*We all got in our cars and went to go down to Pretty Beach, which is a very small little beach where not so many people were but we drove down there and the whole headland and beach was on fire. **So we turned around and went to Malua Bay Beach and we actually found somewhere to park our car. But by this stage people were running and crying and yelling...They were panicking. And on the beach children were crying, mothers were crying, people were collapsing in the sand... It was really scary...** There was constant explosions and then the beach caught on*



fire... And people were backing into the water because they were frightened... There was so many little kids and there were horses and goats and dogs as every animal you can possibly imagine. – Malua Bay

About 10:30-11:00 there was fire on three sides; we could see it over on the south side to Rosedale and it was all around Malua Bay. So we all retreated to the beach. I decided to go on the north side against a cliff... I was carrying my dog, six month old dog. I stayed there. Most people were at the other end of the beach. I don't know why. They had horses and dogs and cats and everything. **And then, about midday, there was this huge... it was like a fire storm but the southerly wind came so there was a change in wind – it was a huge, ferocious wind and I had no protection. It was really, really terrifying.** I was fairly near the water; I wasn't feeling like I was going to lose my life, I don't think, but I was feeling very terrified because it was so hard to handle and I got a bit dizzy. When the wind died down a bit, I just carried my dog for what seemed like an eternity, to the surf club and I stayed there. – Holiday home owner, Guerilla Bay

The following morning, I thought, "I'm out of here". I'd had my emergency bag packed **and I decided to go down to Mollymook Surf Club car park ... And as the day went on, it was like the end of the world was happening; we were just hit by fires on all fronts except the ocean and then just this mass onslaught of people just started piling into the car park** – North Mollymook was evacuated, Village Drive was evacuated and I thought, "Oh thank God I did what I did", because I felt safe because I had people around me, and the ocean was right in front of me. Yeah, it was pretty horrific but everybody made the most of it. – Ulladulla

Other community spaces of shelter used by interviewees included boat ramps, public pools, parks, community halls and fire station sheds. Like surf lifesaving clubs, these were typically nearby places that people visited or used their day-to-day lives and were therefore familiar with. The expectation that other community members would also have gathered in these places also influenced people's decisions to travel there.

Well, I just drove down... about 400 metres down the Currajong, there's a place, a boat ramp, and I can't remember the name of the street but **it's about 400 metres from my place**, directly down to the lake and there were about 20 cars parked there, so basically we all drove down to this little spot and then we sat it out.. – Conjola Park

We packed up the animals and everything and **we went down to our local fire station which is just down the road here and it's in a fairly clear sort of area and there was a lot of people gathering down there.** We stayed there



pretty much for about 15-16 hours, I would imagine, and in that time we watched it come over the ridge behind our houses. – Cullen Bullen

We went to the swimming pool which was a sort of an informal evacuation place; *they'd opened it up. We could sit on the bleachers with the pool to our north and then this wide river, the Moruya River, is probably 150 metres wide and then there's all this agricultural land, and we had a really good view – we could see what was going on. – Guerilla Bay.*

Interviewees reflected on a number of difficult aspects of their sheltering experiences including exposure to smoke and heat, lack of access to amenities and not being able to communicate with family and friends to let them know they were safe. A number commented on being unprepared for the conditions in terms of having no protective or warm clothing, masks or eyewear, water or provisions for their animals during the period of sheltering:

I didn't have any masks which I was kicking myself about... *We ended up later on the beach ripping up a towel to try and protect the kids... – Malua Bay*

The thing I didn't have was something to cover my eyes – *there was soot, and smoke, and grit, and sand. – Guerilla Bay*

A lot of people had just come to the beach in shorts and t-shirts, *so they were freezing. So we handed out towels and sarongs and whatever we had that we could share. – Tomakin*

I wish I'd brought a dog-carrier or something, *something to protect my dogs in, because they were regularly exposed to the elements and I'd packed shirts and things like that so I had to cover them up. So I wish I'd had a way to keep them more protected... We had to hold them in our waists the entire time. Hours. Six hours, and they weren't [happy about it]. They didn't have their leads... I feel like they weren't protected enough. – Lilli Pilli, Batemans Bay*

Many of those who sheltered found it difficult to find out what was happening and relay information to others due to the lack of loudspeakers and other means of communication. Many of those who arrived at beaches and other places of shelter also experienced difficulty negotiating traffic and finding somewhere to park their car.

By the time we drove down here, that beach evacuation area was already full of people. So we went to another... *the next suburb back and there was hardly any people and we just parked there near a boat ramp... There was a little beach there and there wasn't very many people there*



so we decided we could stay there quite comfortably because we always had the water to go to. – Malua Bay

We ended up going down the street down to the beach. Now, it was New Year's Eve and Broulee is a really popular place for Canberra people for New Year's Eve. **So there were hundreds of people around and cars everywhere, the road was blocked... Cars parked along the road, because everyone had been told to go to the beach...** And we drove along there and we were able to just pull into a spot... And then the next thing we know, right in front of us, the dune just caught on fire - the tree right in front of where our car was parked. And we couldn't move because there was so much traffic that we couldn't get back out into the traffic to get out. – Broulee

In addition to issues of vehicle access, there were concerns raised about the potential for parked cars to catch fire and endanger people sheltering nearby.

[The message] that hit us when he came back again was screaming at us not to go near the cars... **And then it dawned on us that the fear was the cars are about to go up, there were grass fires starting underneath all the vehicles...** I wasn't even looking at the kids – I was trying to work out how quickly I could run with them down to the south end of the beach, away from the fumes from the cars exploding. Because if one went up... they were side-by-side, you could barely open the doors between them and I'm going to guess there were 300 vehicles there. – Malua Bay

In addition to the difficulties of their sheltering experiences, some interviewees also recounted stories of community members helping each other under very trying circumstances, for instance by sharing resources and looking after vulnerable people. Those who sheltered at beaches or surf lifesaving clubs often reflected on the role that members of surf lifesaving community played in helping direct crowds and manage parking, relaying information and distributing resources:

The only people that took control were the Batemans Bay surf lifesavers that were down at the surf lifesaving thing down on the beach, and they were fantastic. [They were] walking around checking that people were okay and they'd get a megaphone and stand on the roof and try and calm people down. There were thousands of people down there on the beach, all terrified, and they did an incredible job. – Malua Bay

The surf lifesavers had taken control of the parking so they were frantically trying to cram as many cars onto the grassy area that's there as possible. They didn't have enough people to do that; they did have some out-of-town surf lifesavers who were helping them which was good, and **they did a really good job – we were really impressed with their level of organisation on the day.** – Malua Bay



*The surf club guys got their barbecues out and were cooking up sausages and bread for the community, kind of thing. **And that was pretty good** – Malua Bay*

Sheltering at the individual/household level

While most interviewees did not intend to shelter as their primary response, many who stayed to defend had identified places in their homes or on their properties or neighbouring properties where they could seek shelter if they were overcome by fire. These were often rooms in their home that they felt offered the greatest protection and options for egress or cleared areas on the property or in the nearby area, such as paddocks or lawns. A few interviewees also described plans to shelter in water tanks, dams, lakes, rivers or swimming pools as a last resort. However, relatively few described making active preparations for sheltering, although some had wet towels, filled buckets and set aside wool blankets and protective clothing.

One interviewee did shelter from the fire in a purpose-built bunker that he had built after the 2009 Victorian bushfires had raised his concerns about living in an isolated, high fire-risk area:

*We had built a bunker. Took about three years to complete, but we had that all ready and prepared. I stayed in there for about an hour and a half. I'd left the light on over the kitchen sink and the bunker has a tiny little window. It's three layers of ceramic glass and an insulated steel frame. So, I was able to see the light was on. At times, I couldn't see it because the smoke was so thick... **The plan was to stay in the bunker and we had tested the bunker. It's gas-tight.** – Kiah*

Most interviewees who sheltered at the household level described retreating inside and sheltering in spaces in their homes when fire conditions became overwhelming, often waiting for the main fire front to pass. A number noted how they actively monitored fire conditions while sheltering, electing places that enabled them a view of the fire.

*And then all of a sudden, it just turned black, black as midnight in a matter of probably a couple of minutes, a deafening roar – I couldn't even shout to my dad who was a few metres away. We set up the hoses on to the stand-pipes that he'd made previously just to point at the house, just to douse the house with water and we just retreated inside. We thought that was the end... Dad was sitting down, sort of letting his mind wander is probably a way to put it. I was keeping busy walking around, trying to keep busy... So we had no idea what was going on; everything was on fire - we were just literally surrounded by fire. Dad had thought it had all passed, and I said, "No", that glow below us to the north east where Tianjara fire was is getting brighter, so I thought the fire was coming up... I can't remember how long it was... half the house can be essentially sealed off because that's just the other bedrooms and bathroom can be sealed off, so we sealed that off, **closed all the doors and windows but***



turned every single light on. Every single window, we kept closed. Where the combustion heater is, the fireplace, was our refuge point because that's thermally insulated the best, just because it has to be. We had a bucket full of wet towels so if it did get a bit hectic, we can at least wrap a wet towel, a sodden, wet towel over us. That's sort of where the lounge room is... It's all glass, so **we had quite a good field of view from our safe point of the Currowan fire coming over the hill, the garage, and on the other side of the house, the Tianjara fire coming up the hill. So we had quite a good vantage in that location.** – Sassafras

At one stage when the actual front came through, it sounded like a jumbo jet... And we actually ran inside and this cloud of, I don't know what it was – burning gas, ash, something – just went over the house and visibility went down to about zero. **We were inside the house for a couple of minutes and then we went out again and it was sort of easier after that...** I mean, I knew that we shouldn't be exposed to radiant heat or direct flames or anything like that but I had never seen anything like what came at us. Because we're on the top of a hill, the fire came up towards us very fast and the grass in the paddock was dry but there was just this cloud of intense heat and probably ash that came up and it was coming up really, really fast. And I just knew we shouldn't be in it so we ran inside. I hoped that the house wasn't going to catch fire but I didn't really know. It didn't so yeah, I guess it was gut more than intelligence. – Maragle

Some interviewees made the decision to remain at their property and take shelter rather than evacuate with other family members. For example, an interviewee described how his wife and daughter left when the fire arrived, but he decided to stay behind and shelter in the house:

I got them out and then I waved them off and closed the door to the garage, and I went back inside, and went to see what happens... I sat there through the fire. It was very exciting in the middle of it... It was enormous fire storm. Many of the windows actually cracked but did not break in. The solar panels on the roof melted. That's a thousand degrees. That's a good fire. When my workshop lit up, actually the steel frame didn't melt but it basically turned into spaghetti. That was everything in the shed, everything in the workshop melted down and so forth. I waited until the worst of it was past, and then I put my gear on and went outside... – Malua Bay

As well as waiting out the main passage of the fire front, some interviewees sought shelter, particularly from radiant heat, for brief periods while fighting the fires. For example, a resident of Maragle described how she sometimes sheltered in or behind her car:

For a couple of minutes there it was sort of bailing into the car... On two or three occasions when it sort of really blew right up, that it was sort of, yep,



like get into the shelter or just into the car for sort of a second type of thing. Or behind the car door type of thing. And then back into it. – Maragle

Some interviewees who evacuated at the last moment had to make decisions about where to seek refuge while driving through fire impacted areas. One interviewee described trying to decide where to shelter in her car after evacuating with her daughter. After 'circling' her car to avoid flames, she was eventually convinced to follow other cars to a nearby farm and shelter there:

*We couldn't see what was in that road; there were about half a dozen cars on that T-section, just stopped and wondering what to do. The flames from there were coming down Pointer Road really, really fast, as fast as I'd seen them in the valley, just flowing with the wind really fast. **And so we were just circling our car round and round and just trying to move away from where we thought the flames were coming...** And I said, "Well I'm in a kind of a T-section" – there was a lot of tar around me and short grass and things like that and I thought this is the safest place to be, to stop.* – Conjola Park

While there was general awareness among interviewees of the need to give consideration to plans for sheltering as a last resort, few had made preparations for sheltering. Few had considered where they might take shelter in the event of a bushfire or had woollen blankets or fire blankets in their cars.

4.4.2 Were people aware of Neighbourhood Safer Places? How did they use and experience them?

Despite general recognition among interviewees of the value in identifying safer places to shelter from fire, knowledge and awareness of Neighbourhood Safer Places (NSPs) was not widespread among interviewees. Some interviewees were unfamiliar with the term:

[Interviewer]: Do you know if there are any Neighbourhood Safer Places near you? Do you know that term?

[Interviewee]: No, just repeat that sorry.

[Interviewer]: Neighbourhood Safer Places.

*[Interviewee]: No, don't know it...Yeah, no, **I haven't heard of that term at all.*** – Surf Beach

[Interviewer]: Do you have of any Neighbourhood Safer Places? Do you know what would have been your closest Neighbourhood Safer Place?

*[Interviewee]: No. **Sorry, I don't even know what that is.*** – Conjola Park

[Interviewer]: Are you familiar with the Neighbourhood Safer Places?

*[Interviewee]: **No.***



[Interviewer]: You've not heard about what a Neighbourhood Safer Place is?

[Interviewee]: No. – Surf Beach

Nevertheless, some people were familiar with the term and had taken the time to find out where their nearest NSP was.

*I check this out everywhere I go... and I know Broulee quite well... Even when we've been up to mid-North Coast and stayed in new places, I find out where my Neighbourhood Safer Place is... **Black Saturday... it made us pay a lot of attention to the outcomes from that Royal Commission, and adapt our approach to bushfires, in our family. And so, through that, I'd learned about the concept of the Neighbourhood Safer Place.** – Tourist, Broulee*

*I was talking to some of the fireys and I was asking whether the Safer Place was okay. And they said, "Yeah, look, if your local fire brigade has identified it as safe, it's probably fine." And I made sure I memorised them all for the area. Made sure I drilled it into my family members as well. **Look, the bowling club in Bodalla is a Safer Place, the beach in Broulee is the Safer Place... I got it from the Neighbourhood Safer Place... It was the website.** RFS website. That's where I got the fire plans, our survival plan too. – Lilli Pilli, Batemans Bay*

Some interviewees commented that while they were aware of local Neighbourhood Safer Places, these were probably located too far away to be helpful to them as a place of last resort. They suggested they were more likely to make use of closer, personally identified spaces on their own or neighbouring properties:

*Closest would be in town, would be the oval, where they have all that show and stuff. But that's not ... 15 Ks away. **Given that we had probably the most open paddocks, we probably were the best spot anyway.** – Kangaroo Valley*

*Blackheath has a neighbourhood safety place or area of last resort, which is the Blackheath cricket ground, which is quite a large open area. It's a long way away from us. **It wouldn't have been practical for us to go there.** We could have just gone into the middle of the paddocks, which we had mowed and would have been okay – Blackheath*

Some of those who were aware of NSPs recognised that sheltering at these locations might still entail significant risk and decided they would not go there.

*So, I'd actually gone and checked where they all were, not just the local one, because **I was conscious I might not be able to get to my local one,***



or I might not ... the local one doesn't look very safe, to me. **I would call it a, "Barely safer place."** But anyway, I'd made the decision it wasn't safe enough for me, so I was going somewhere else. – Tourist, Broulee

I was aware they were there, but **I was also aware how close the showground was to the bush, so I didn't think I'd go there.** – Verona

[Interviewer]: And were there any Neighbourhood Safer Places that you were aware of in the town? Or in a nearby town?

[Interviewee]: ... We sort of live in a village by the sea and there's a little bridge that goes over an estuary and then you're into another village called Mossy Point. And they told us an area in Mossy Point to go to. So yes, we were aware of that... **It is covered in trees. So the idea of going into Mossy Point as a safe point was not inviting whatsoever.** – Broulee

In some cases, interviewees took refuge from the fire at a local NSP without knowing. For example, an interviewee took shelter at the Malua Bay Beach Reserve, observing the tendency for people to 'naturally gravitate' there:

[Interviewer]: Did you ever receive any notice of a Neighbourhood Safer Place or anything like that?

[Interviewee]: Oh, no, I don't think we did. I mean everyone ... I think everyone just went to the beach because it was the place away from the fire... I don't think there's a sign up that says evacuation point or anything like that. But **I think people just naturally gravitate to that spot because it was the surf club.** – Malua Bay

Despite many people being unfamiliar with NSPs, discussions revealed that many people had given consideration to local places that might provide refuge during fire. These included cleared, open spaces such as parks and reserves as well as neighbouring properties that were situated in lower risk locations and well prepared.

We'd looked around, **there's a big park at the top of our street. And that's one of the sort of neighbourhood go-to places in case of fire...** We don't own a car, we both have bicycles. So, because of that vulnerability, we were sort of a little bit more aware of what we would do. – Blackheath

Immediately around our area we have suggested to neighbours about particular properties being the safest... We certainly point out that some properties are much safer than others... **There's a couple of houses, they're down the bottom, they're flat, they have what I call, "the shaved earth policy" so just lawn on five acres, and they're actually probably well-protected.** – Matcham



*For the people of Conjola Park, **our safe place was down at the lake** in that little boat-ramp car park area but that was just by fluke. **No one organised that; we just went there because we knew it was a reasonably safe place to go.** – Conjola Park*

*We knew from the early December experience that's where people in our area went to. It's literally about 100 meters up the road. **It's a big open area between the road and the sea, and that's where they went. We were just aware that that's where we should go if... Maybe it's a designated safe area. I'm not sure. I think it is, but yeah, that's where we were saying, well that's where we're going to go if things go bad.** – Bawley Point*

These findings highlight that while some people were unaware of Neighbourhood Safer Places, on the whole people were able to identify safer locations within their communities that would provide a place of refuge from the fires.

4.5 EXPERIENCES OF TOURISTS, VISITORS AND OCCUPANTS OF SECONDARY RESIDENCES

A total of 231 survey respondents (23% of all respondents) and 36 semi-structured interview participants (18% of all interviewees) identified themselves as non-residents of an area threatened or affected by bushfires. Non-resident respondents included occupants of secondary residences (e.g. owners of a holiday home), tourists and visitors. Many visitors in areas threatened or affected by fires were the adult children, relatives or friends of residents and were staying with residents at their homes at the time of the fires.

4.5.1 What motivated tourists and visitors to travel during the period of bushfire threat?

Most non-residents surveyed were in bushfire threatened and affected areas for a holiday (50%), to visit friends or relatives (23%) or for business (3%). Before their trip, 38% of tourists, visitors and occupants of secondary residences considered it likely that a bushfire could occur in the area they were visiting (Figure 19). One-third (33%) considered it unlikely and 2% had not considered the risk. 27% indicated that a bushfire was already burning in the area they were going to visit. Most tourists, visitors and occupants of secondary residences who travelled to an area where a bushfire was already burning did so to defend a property or assist family or friends threatened by the fire (45%), because they did not think the fire would affect them (26%), because they wanted to continue with their holiday (8%) or work (3%) plans or for some 'other' reason (15%). Just one person was unaware at the time that there was a bushfire. 52% of tourists, visitors and occupants of secondary residences reported that they had not done anything to prepare for the possibility of bushfire.

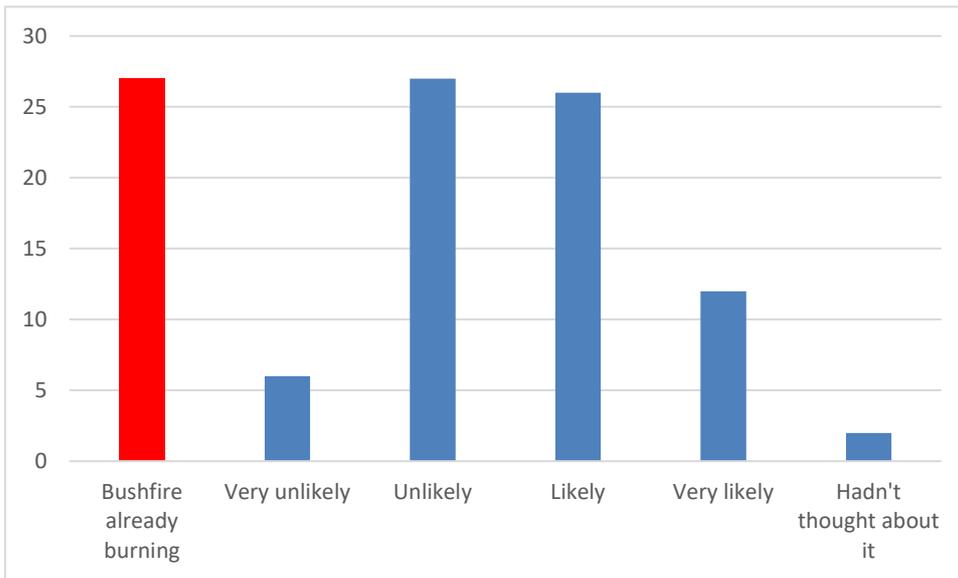


FIGURE 19: PRE-TIP PERCEIVED LIKELIHOOD OF A BUSHFIRE OCCURRING DESIRE TO CONTINUE WITH HOLIDAY PLANS

The motivations for travelling during the period of bushfire threat were diverse. However, for most tourists, visitors and occupants of secondary residences interviewed, the desire to continue with already laid holiday plans was central to their decision to travel. For some visitors, particularly occupants of secondary residences or the adult children of residents, their holiday plans reflected an annual ritual, where extended families converged at a holiday home or as guests at the home of a resident. Several interviewees had been in the fire threatened area for up to two weeks before they were directly threatened.

We go down the coast every Christmas for a holiday for one or two weeks. We always kind of travel to the same area. So we had a house booked at Malua Bay for two weeks and we arrived on Saturday the 28th. It was just my husband and I and we've got three little girls that were aged nine, six and four at the time. Also, my husband's auntie and uncle arrived the following day so they were going to stay with us as well. We got a nice house close to the beach. – Visitor, Malua Bay

Interviewee 1: I didn't have a sense of doom or expectation that the house would be subject to fire.

Interviewee 2: No, we really went down because we go down every year over the Christmas/New Year [period]...

Interviewee 1: We weren't going down to rescue the house or anything; we were just going down for a few days. – Holiday home owner, Broulee

*We bought it 15 years ago. And then the kids... were early teenagers... And now they've gone scattered to the winds, but Easter, Christmas, it's a place where we can all gather... that's a nice part of it. **You just go down***



there and it's family and friends and relaxing and take it from there. – Holiday home owner, Rosedale

Advice that it was safe to visit

Most interviewees were aware of the bushfire risk before they began their trip. Several interviewees who had booked visitor accommodation or holiday rentals described how they contacted accommodation providers for advice on cancelling their travel plans and were assured that it was still safe to visit and stay. Some interviewees reported seeing or hearing reports from local councils and tourism agencies in areas of high fire activity that it was still safe for people to travel and stay in those locations.

*We kept watching and we rang the real estate agent. **We said, "Look, should we come? There are fires in the area."** "Oh yes, yes. We want you to come." And so we thought, well, okay. And as I said, for the first couple of days, it was fine.* – Tourist, Manyana

*On the day, I was just ... Kept saying to my mother-in-law, "How are we here? Why are we here? Why did we bring the kids down for Christmas? Like, I don't ... I'm an idiot, why did I do this?" And we still ... Yeah, I don't know, **I guess the authorities were like, "Yeah, go down, we need your business, it's okay."** And then it was not okay.* – Visitor, Broulee

*We started by travelling to the south coast to go camping for a week. **We followed the best advice that we had, which was it was open and safe on the south coast and we should travel there.*** – Tourist, Tathra

*We and another family had booked to go and stay at a caravan park at South Durras from Boxing Day, for one week. And we telephoned the caravan park a couple of weeks before Christmas because they had had a fire already go through, which was part of the Currowan fire that had crossed the highway. **And the caravan park said that the bush immediately behind them had burnt out, and that we would probably be safe from fires from that direction.** So on that basis our two families decided that we'd go down and stay at South Durras.* – Tourist, South Durras

One tourist, staying in a private rental property, reported continuing with their holiday plans as they did not want to lose their deposit:

*We wanted to go down because we spent four grand on this holiday house and we didn't want to lose our money. And they were warning saying, "Oh, don't go down. Don't go down." And we kind of shrugged it off with thousands of other people. **The warnings were there not to go, but we went anyway just hoping not to lose money and start our holiday***



thinking that we weren't going to be really affected by it. – Tourist, Malua Bay

Some visitors reported that they would have cancelled their travel plans and not travelled into what became a bushfire impacted area had there been a clear directive from authorities. Some commented that if the Tourist Leave Zone (discussed further in the next section) had been announced in the days or week prior to the fire's impact they would have cancelled their trip. Some people believed there was 'mixed messaging' about whether it was safe to visit the south coast.

It got a bit confusing at times where some people, the rural fire people, were saying "Holidaymakers stay away from the south coast", and you had the commercial business people saying, "Come to the south coast and spend up." – Holiday home owner, Benandarah

One of the decisions for us deciding to still go to the coast and still go camping was the media release that said the south coast is open and open for travellers. And, everybody wanted to go and support after what had been a shitty time already. So we took that advice, we've been told it's open and safe and we can go. And in hindsight, they'd already had a devastating uncontrollable fire through the north of there, through Pretty Beach area. And the same thing happened further south really and there was active fires burning at the time. So the decision, which was a local government I think, decision for tourism, had that not have been said, I believe our decision would have been different. – Tourist, Tathra

We were aware that there were fires around, but our understanding of how serious they were just wasn't ... ***We just didn't have any information to say, "Maybe you should head home. Any tourists."*** We were quite happy going on our merry way. – Tourist, Sunshine Bay

Escaping smoke in Canberra

Many Canberra-based interviewees reported being aware of the bushfire risk when deciding to continue with their holiday plans to the coast but decided to go ahead with their plans due to the severity and prolonged exposure to bushfire smoke in Canberra. Their need to escape the smoke cloaking Canberra and a perception that the coast offered clearer conditions outweighed the perceived risk of being impacted by a fire at their holiday destination.

Canberra was completely engulfed in smoke, really poor visibility, and the pollution levels were out of the roof... honestly, the levels were something you never seen before so we were extremely concerned. ***And the fact that we had booked a holiday on the seaside came as a bit of a blessing because we knew the air was much better over there.*** – Tourist, Broulee



We thought it was going to be okay, and **because the smoke in Canberra was so bad, you had trouble breathing outside and it was like a fog. So we thought going down the coast, that's got to be healthier and much more pleasant.** At least we can go for a swim, all that kind of stuff. And of course, everything went, first week was fantastic, then everything goes to hell in a hand basket. – Holiday home owner, Rosedale

We were living in the smoke in Canberra anyway. And the smoke was pretty strong. And it was really hot in Canberra too. We live in a comfortable house and it's got a pool, but it's not quite like being at the beach. **So, you get down there, and you're in the north easter, which is the predominant summer breeze. You're out of the smoke, primarily, and the ocean to swim in. It didn't play quite through that way, you know?** In the end, we probably would have been better off staying at home. But yeah. When we left, the multi-day forecast was certainly pointing to the hazard for New Year's Eve. I guess we were just willing to play the risk on the side of the uncertainty. – Holiday home owner, Malua Bay

We were keeping a close eye on the fires prior to New Year. We had not had a break for some time, particularly because we had also been affected by bushfires here. **And so we were looking for a bit of a break from the smoke at the time.** And we had an opportunity to go to Merimbula with some friends of ours at their place. – Tourist, Merimbula

Assisting family or friends to defend property

A smaller portion of visitors and occupants of secondary residences reported travelling to fire threatened destinations specifically to assist family or friends threatened by fire or to defend assets. Two interviewees reported their primary residence and secondary residence being simultaneously under threat by fires.

We had to decide what do we do now? **We thought that Broulee was still in danger but we also thought Canberra was in danger and it's our biggest asset.** And we felt a community obligation as well to come back for the Community Fire Unit. So, we drove in the middle of the night with our camping trailer, got home at about half-past four in the morning. We drove up over the Bombala-Cooma Road to get home. And then we turned around and did the same thing here where we filled our gutters. We'd already cleared the debris from this house, but we filled our gutters, filled buckets, did all of that here. – Holiday home owner, Broulee

One interviewee described making multiple trips between through fire threatened areas as they evacuated livestock and machinery from their rural secondary home to their primary residence.

We probably went into a little bit of a panic, because we had all our animals there. We live in Sydney, and work in Sydney, so we couldn't be



there. The soonest we could be there would be within an hour. So, if there was a fire, and because it's not our primary place of residence, they said, "If there's a fire, you won't be able to get back in unless you live here," and all these things. So, we were going in, spiralling internally, my partner and I. We were just like, "You've got to be joking! What the hell are we going to do?" So, we started moving more stuff back until we literally moved everything out of our farm except the animals. We took every, single bit of machinery we had. It was like we had just moved in, the very first day; got the keys, and it was empty. We had emptied out everything... **It was a very stressful time because we had to evacuate two properties, and be at briefings for both areas to even get updates.** – Owner of secondary property, Mangrove Mountain

Belief the fire would not impact on them

Most visitors were aware of bushfires burning in the broader vicinity of their travel destination but did not think they would be directly affected.

We thought once we got here, we'd be safe. We were worried because we knew that they had been closing the road between Nowra and Batemans Bay because the fires, which are the north of the Clyde River at that point. **So we thought once we got down past Batemans Bay, everything was okay because there was no fire down here as far as we knew at that point, or the fire was too far to the south.** It wasn't going to get here. They were way away from us. – Holiday home owner, Tuross Head

Who knows? Stupidity? The she'll-be-right attitude? Just needing a holiday? Yeah. I mean, it was smoky in Canberra, it was smoky down the coast. **No matter where we were, we were going to be smoke-affected. Didn't realise we would be fire-affected.** – Tourist, Lake Conjola

Really that crossover between wanting your summer holiday and the good times that come with it, and being able to push the risk away a little bit, because you really just want to have that good time, rather than really be involved in an emergency. **"That can't happen, look, we're on holiday. There's just no way." But of course, there was.** – Holiday home owner, Malua Bay

There was a common misconception among those staying in localities close to beaches that the fires would not burn to the coastline. Interviewees described how many of the fires that threatened and impacted towns had been burning in remote bushland for weeks.

To be frank, I just didn't think it would really burn right through to the coast. And in our instance, it didn't. But it did for a few hundred meters either side of us, burn right to the coast. – Holiday home owner, Malua Bay



There were fires around at that stage and there was advice not to go down to the south coast but we actually didn't think the fires were going to hit that far south so we decided to go anyway with a load of other Canberrans. – Tourist, Malua Bay

Others believed they would not be impacted as fires had already burnt out the area around their destination, creating what they believed was a protective buffer from further fire activity.

*The main factor was that South Durras had already been burnt. And that we could see that where we were going would be protected from all of the typical directions from which fires would come... **We thought it was about a less than 50/50 chance, on that basis we said we'll go. And with hindsight we shouldn't have gone, we just shouldn't have gone.*** – Tourist, South Durras

*Some people have questioned beyond that saying, "Why did you go down when the fires had been down there for so long?" But having a look at the fire's spread, it seemed to be progressively moving north, not south. **And I thought the prevailing winds would have been pushing it north, and that the highway and the burnt areas themselves would have provided a fire break in themselves.*** – Holiday home owner, Malua Bay

We felt at the time that Bawley had had its turn. There'd been big fires in early December. Nothing left to burn. *The Currowan fire was going north, and then it was going south, but it wasn't coming west, and there wasn't really a lot to burn in our area, we thought.* – Holiday home owner, Bawley Point

Several interviewees explained how, in making their decision to continue with their travel plans, they had assessed the available information from NSW RFS and judged that the area they were staying in would not be impacted. Some visitors reported seeing fire spread prediction maps prior to commencing their holiday and deciding to continue travel plans to areas under threat as the maps did not show these areas as being impacted by fire or embers.

*So I mean, we used them, and that was one of our decisions when we went down, was, **"Ah, it's not predicting to hit Lake Conjola at all."** Which I mean, it's the best prediction you can make.* – Tourist, Lake Conjola

*I was looking at them. Yeah. I think I saw them in the news and stuff prior to going down to the coast. They were always in my mind the worst scenario, because they always give you that and a lot of the time actually it's not that bad. But yeah, **I'm pretty sure that they had predicted it could spread right down to the coast. Maybe not as far as where we were.** But yeah.* – Tourist, Malua Bay



*I could see there was a lot of judgement of people who were on holidays or whatever and people who weren't down there were like "You know, you guys are really selfish" and that kind of thing. It's like **"Well actually, based on the information we had going down, it was an appropriate and a socially acceptable thing to do"**. – Tourist, Tuross Heads*

Some interviewees described disagreements or arguments with family members about whether to continue travel plans to the coast.

*I actually didn't go down for our usual holiday period because I was concerned about the fires. And then it was a couple of days beforehand, I kept monitoring all the fire stuff on My Fires and all the rest of it... I delayed our holidays, which was a huge thing. To say to my husband, **"You are not taking our children to the coast", and him going "Well, I'm going anyway", it was a huge argument about him going to the coast and then me relenting and going down there with the kids. I would never have gone had I thought that it was going to end up that way.** – Holiday home owner, Tomakin*

*Well basically there were fires all around, and we knew about them. And every year, our entire extended family go to the coast for New Year's Eve. And my nephew went and booked a place, as we always do, and **we all said to him, "No, we shouldn't go. It's not safe. There's a threat all around, and it's not a good idea." But my nephew being my nephew said, "No, I'm going",** and he was taking my little nieces. Everyone else said, "No", they're not going to go. And I said to my husband, "Look, I can't stand the thought of those kids being down there. If something goes wrong, we need to be with them, at least to help them out with the little ones." – Tourist, Malua Bay*

4.5.2 How did tourists and visitors respond to warnings, 'leave zone' maps and bushfire threats?

People most commonly received or obtained official warnings via the Fires Near Me NSW app (73%) and by SMS (49%) (Figure 20). Other sources of official warning included ABC Radio (44%), the NSW RFS website (28%), other local radio (19%), television (23%) and landline telephone (8%). The majority of tourists, visitors and occupants of secondary residences indicated they received or obtained warnings with sufficient time (79%) and had sufficient information to take protective action (63%).

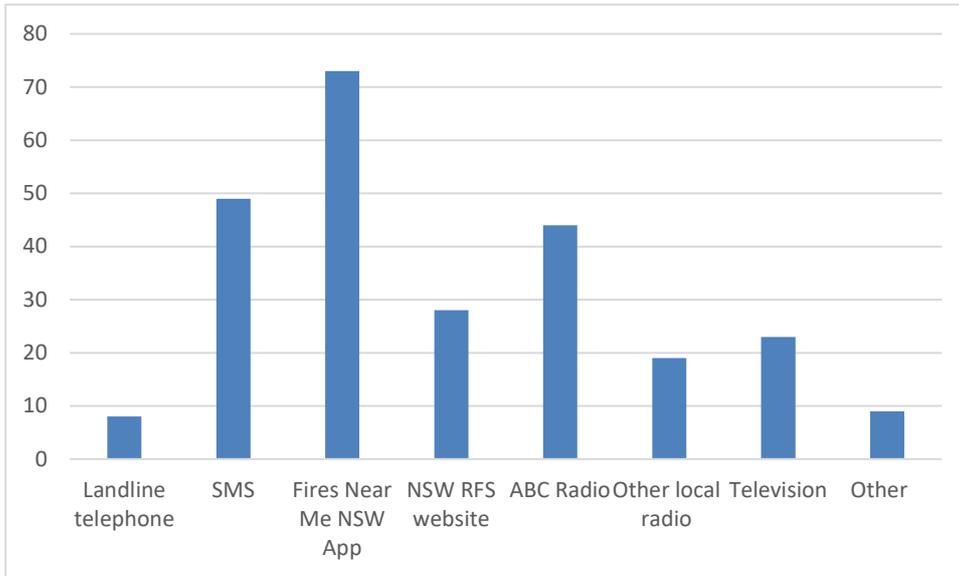


FIGURE 20: TOURIST, VISITOR AND SECONDARY RESIDENTS' SOURCES OF OFFICIAL WARNING (%)

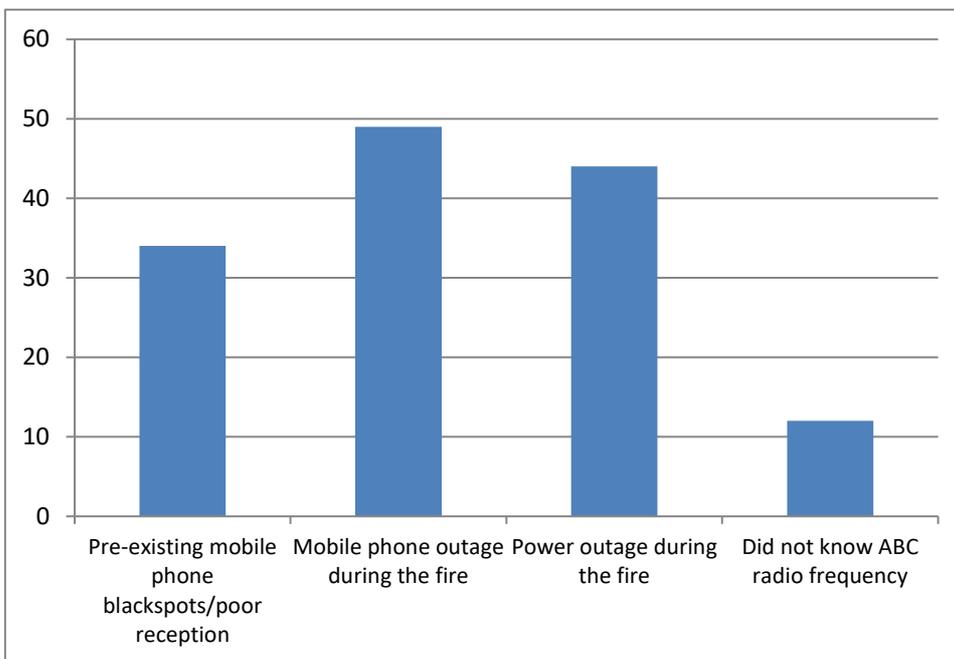


FIGURE 21: TOURIST, VISITOR AND SECONDARY RESIDENTS' DIFFICULTY ACCESSING WARNINGS AND INFORMATION (%)

The majority of tourists, visitors and occupants of secondary residences (85%) accessed information and warnings via the Fires Near Me NSW website or app. Most people used Fires Near Me NSW to look at maps of the fire's location to tell how far away it was (82%). Smaller but substantial proportions looked at detailed written information about the fires (58%), looked at maps in another area to see if it was safe to travel (58%), received information about dangerous fire conditions (52%), and clicked on links to find more information (50%). Fewer respondents clicked on the 'share' button to share information with others (Figure 22).

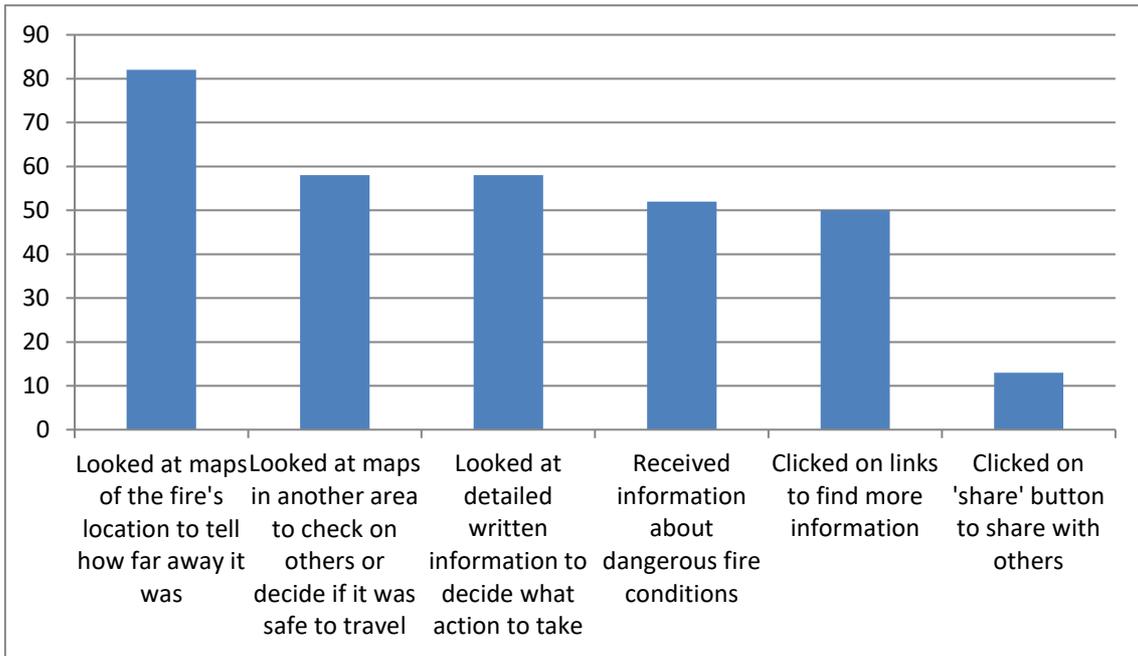


FIGURE 22: TOURIST, VISITOR AND SECONDARY RESIDENTS' USES OF FIRES NEAR ME NSW (%)

Most tourists, visitors and occupants of secondary residences thought Fires Near Me NSW was easy to understand (93%) and useful (93%). Over-two thirds thought information on Fires Near Me NSW was sufficiently localised (71%). More than half believed information on Fires Near Me NSW was up to date (61%).

As was the case for residents, tourists, visitors and occupants of secondary residences expressed a strong preference for Fires Near Me NSW as a source of information. 44% reported that it was the most useful source of information (followed by local radio at 17%) and 87% indicated that it was their preferred source of information in the future (followed by SMS at 66% and radio at 50%).

Most tourists, visitors and occupants of secondary residences recalled receiving warnings of escalating fire threats in their location in the days prior to impact. Many had started to consider a plan to leave the fire threatened area. However, most did not act until they received an Emergency Alert telling them to evacuate. Others observed the fire for themselves, by which time it was too late to safely leave the area.

*And then the day before the fires, which must have been the 30th of December, there were a lot of warnings put out saying that the New Year's Eve was going to be a very bad day. I suppose halfway through that day, we had decided to work out a plan of what we're going to do if things turned bad. By lunchtime, we had come up with a plan that we were going to go south because we figured that that was away from the fires and that was going to be okay, and head to Narooma and then wait to see how things went. If things turned bad around Batemans Bay, then we'd go home. If not, we'd go back to Malua Bay. **By mid-afternoon on that day, all those routes were already blocked. So, we were effectively stuck where we were.** – Holiday home owner, Malua Bay*



We had the Fires Near Me app. We were monitoring that on a pretty regular basis and we did get a message the night before... **Actually we might have even got a message a couple of days beforehand saying, "If you're in a position to leave, you should," but at that stage we didn't.** – Visitor, Rosedale

We were very cautious and kept an eye on the Fires Near Me app and noted that over the course of two days more fires began to start up around us. And we're very aware that the bush that we're in, we were camped at, very close to Bega. And we're very aware that there was a lot of timber, fallen timber around there, and it was extremely dry and **we did feel a little unease, but we kept our eye on things until some more fires started.** – Tourist, Tathra

And then we got a text. We got one at 6:00 AM and one at about 8:00. We got three emergency texts from that emergency line, but none of them mentioned Broulee. I've got the texts still on my phone and the first one said, "You must leave ..." I think it said "Mogo" or whatever. And the other one said, "You must leave Malua Bay." **But Broulee and Rosedale, we weren't mentioned in the texts. Then so I got the first text, we went outside and then we thought "This is really serious".** – Holiday home owner, Broulee

Upon perceiving an immediate bushfire threat, most non-residents sought to leave the fire threatened area. Some were successful in leaving the area prior to the fire's impact and arrived at their primary residence with little incident. Several occupants of secondary residences described sending guests home but remaining in the fire-affected areas themselves.

So then we were having a cup of tea, and then all our phones went off at the same time. It just said there was an emergency warning for Mogo, which is just the other side of the hill, and we're like, **"Okay, all right, we've got to get out now."** So me and my partner, we left and managed somehow to... Although we had to go pretty much all the way up to Sydney to then come back down [to Wagga Wagga], we didn't encounter any road closures, which I understand lots of people did. – Visitor, Rosedale

I got up early the next morning, at about six o'clock and listened to the news and now people were leaving. I still hadn't understood that we've been asked to leave and I don't think we had been, or certainly hadn't heard, but **I woke up the friends from Sydney quite early and said, "I think you better go there's a glow in the sky, you can feel the heat coming through".** And when they saw that they just quickly packed and left and they drove straight back to Sydney. So driving north that didn't have any



issues and arrived home a few hours later. – Holiday home owner, North Rosedale

Most tourists and visitors described following the direction in the emergency warnings to seek shelter at a place in the local area.

The morning of New Year's Eve we got the message on all our mobile phones, very early, to say, "**Evacuate now. Evacuate to the beach.**" And we were pretty close to the beach, and we grabbed the kids and we raced straight down to the beach. And when we got to the beach, it was all happening. It was huge. It was fast, and it was a lot going on. – Tourist, Malua Bay

Yeah, six o'clock in the morning we got the text message that for anyone, residents in Mogo to immediately leave towards the beach, something like that which I was very concerned, and in the house were my family of four plus my in-laws, an extra two people and now I was like, "**It's time to go. We need to go.**" And everyone was like, "**Oh no, it's not for us. You know, we're right near the beach, we'll be fine.**" ... And anyway, eventually I went to the front door and opened the front door of the house and felt the fire, the heat from the fire. And I knew immediately that it's time, we have to do something. **And we were listening to the radio and it was saying either to go to Moruya or to go to Batemans Bay.... So yeah, kids and I jumped in the car and we made our way to Moruya where we went to a car park there.** – Visitor, Broulee

And then six o'clock on the morning of New Year's Eve we got a text message which is a bit unusual because down there our mobile reception is terrible. **So we did actually get a text message to say that the fires were approaching Mogo, which is really not that far from us at all and that we needed to [leave]...** Well we needed to make a choice, it was either stay and defend or we needed to go to an identified emergency place, and I think we had left, we packed up the car and we'd left by 07:30, and probably by quarter to eight we were in Moruya. – Holiday home owner, Rosedale

Several occupants of secondary residences stayed to defend homes and properties. Some interviewees recalled observing tourists staying to defend rental properties.

We felt a little bit of an obligation to our neighbour, who was 70 and there on his own. **We felt an obligation to all of our permanent neighbours that if they are there doing their bit, we didn't want to be the weak link in the chain.** – Holiday home owner, Broulee



*They had a rental, but my brother's son-in-law was a plumber and they'd jerry-rigged a large sprinkler on top of the roof and put that on and in between and the firestorm, when it's slowed down, they'd rush back to the house, put out the embers that were caught in the house and burning the house. **So they saved the rental property.*** – Holiday home owner, Rosedale

Following the passage of the fire, there was considerable confusion about safe routes for leaving fire affected areas. Power and telecommunications outages restricted access to information and several people recounted how they were unable to access or pay for fuel they needed to be able to leave the area once roads reopened. Many people did not anticipate that they would not be able to get fuel once the power went out.

*I just wanted to get out of there as soon as possible. The issue we, my husband and I had with the two cars was that **we didn't have enough fuel in one car to be able to get all the way home to Canberra.** And we'd heard, we knew that we couldn't go north and we knew that we couldn't go south or we had to go the really long way south, but we didn't have enough fuel to get there.* – Visitor, Broulee

*I just, you know, you would have to be deaf, dumb and blind, not to know what was going on. So they should have gone to fill up with fuel. **So three of them were stranded, driving around, trying to get fuel,** no electricity, no fuel and the second night we stayed there... **It really wasn't as much value to us having the radio. It didn't really provide any of the information we wanted, which was where can you get fuel when will fuel be coming in.** And on the morning of the third day, I put a lot of pressure on people to leave in a Land Rover Discovery, which could seat seven.* – Tourist, Broulee

*We'd had the blow-up day, had the calm day, and we knew it was going to blow up again. We knew the weather forecast was bad and we knew that the road was open and also, **the very clear messaging of "Get out of the whole south coast area", when they just said, "If you don't have to be here, go", we were more than happy to do that – we just needed fuel.*** – Tourist, Tuross Head

*At that stage, because we'd been sort of running around a bit, **we didn't have enough fuel to get back to Canberra. And we made a couple of attempts to get fuel, but the queues were just going to be ridiculous,** so we didn't. Then, we heard that there was going to be fuel at the sort of station at the end of the Kings Highway, and we got up at, I think, half past 4:00 in the morning, drove there, joined the queue, got fuelled up, came back, pick up everyone else and then headed down through the Brown Mountain way.* – Holiday home owner, Malua Bay



Tourists and visitors to fire affected areas reported experiencing difficulties finding information about road closures and openings – many reported following the anecdotal advice coming from other travellers on the road who were calling in to ABC Local Radio. Several interviewees reported driving in a direction to see how far they could go or until they found mobile coverage to access information via the internet or by calling people outside of the fire affected area. Several reported using the RMS Live Traffic app once they had reception, but assessed that the information was not up to date.

The only communications we'd had was the radio, and it was very much information was all over the place. It was actually the worst setup. It was good that we had a radio communication, but the information that was going on was the people were encouraging other people to phone in. It was like Chinese whispers, you know? "Oh, you can't go this way." "Oh, you can't get out that way." And the more you heard of where they were blocked, what was going on, problems with getting food and that, the more panicked you felt. – Tourist, Malua Bay

It was a real guessing game of when we could actually get out. You would see people pack up their tents at 4:00 AM, disappear for a couple of hours, and then come back and they're like, "The highway's still closed." And you're like, "Oh, okay." Well, the only way I actually know that is by people trying. ***We have learnt now. We have bought ourselves a non-digital radio, so when we go camping, we'll take that with us.*** – Tourist, Lake Conjola

We were about 10 Ks out, and we'd seen that there was a grass fire on the side of the road, about 15 Ks north of Cooma, and it started getting really, really smoky. Couldn't see anything, and there was cars turning around in front of us, so we decided to turn around, as well. We ended up going back to Cooma, and we had to sit there. ***And we were in the same situation where we didn't have a lot of phone service, or we couldn't get on the internet, or couldn't get on Facebook.*** I contacted my brother to give me updates about whether or not the road was open, and he ended up getting in touch with someone who was on a police scanner, just to try and get us out of Cooma, because we couldn't go back down the mountain, because they'd shut the Brown Mountain. We couldn't go further west, because of all the fires out towards Tumut, and we couldn't go north because of the fire on the side of the road along the Monaro Highway. So he ended up contacting us, saying that the road just opened, and to try and get through while we could. And we did that. – Visitor, Cobargo

Tourists had a mixed experience with obtaining information and support from accommodation providers on when and how they could leave. Some tourists reported property managers and caravan park owners coming around and updating them with information.



*It was really helpful especially that initial time they visited, after I've realised that, "Oh, this isn't good. We should probably see about getting moving." But just the fact that they turned up so quickly to say, "Yeah, you can't [leave]. It's not going to happen." That was really helpful in itself because who knows what we would have done... Just knowing the fact that they were local residents. Both of them had been in the area for a little while and had been through bushfires either personally or through the fireys, actually, being a volunteer or whatever. **Just having that type of that knowledge attached and experience attached to that position was helpful. We're like, "Okay. This guy knows what they're talking about. Let's do what he says."** – Tourist, Narooma*

*So the exchange of information was going on between people inside the campground. **The people at the caravan park were very prepared**, they told us all that they had plenty of fuel for electricity generation, to last for a couple of weeks, and that they would keep the toilet block going and the basic amenities, but that would shut down all the other lighting, and so on. So we thought okay, we'll stay. – Tourist, South Durras*

Others did not receive information from accommodation providers and therefore felt they were on their own. This was particularly the case for people staying in unstaffed private holiday rentals.

There was no-one to ask. And that's part of the problem, I think, as a tourist. You just, you don't know what the right source of information is either. – Tourist, Broulee

*This is a really important point I think, that these shire councils have an obligation to tenants. These aren't permanent tenants, these were holiday tenants and they knew nothing. **They had no contacts into the community, they didn't know what to do, what was going on.** And I take my hat off to them that they were watering down a property that wasn't theirs, but they had no more information. – Holiday home owner, Broulee*

*It was a tough one because it's you would think that the police would tell the owner of the caravan park, and then they could see disseminate the information out. **But there was just nothing.** And I think the caravan park people were even... Just knew nothing. So yeah, I don't blame anyone for it, but it would have been nice to know a little bit. – Tourist, Lake Conjola*

Tourist Leave Zones

Around half (47%) of the tourists, visitors and secondary residents who were surveyed reported that they were in a Tourist Leave Zone. People commonly found out about the Tourist Leave Zone via radio (34%) followed by television



(13%), social media (13%), people in the surrounding area (11%) or Fires Near Me NSW (10%). After receiving notification of the Tourist Leave Zone, 54% of people returned home to their primary residence and 14% went to another location outside the Tourist Leave Zone (Figure 23). Around one-third (n=34) stayed within the Tourist Leave Zone. Reasons for staying within the Tourist Leave Zone included to protect houses and property (mostly occupants of secondary residences; 32%), because police, fire or emergency service advised people to stay (12%) and attempts to leave were unsuccessful (11%).

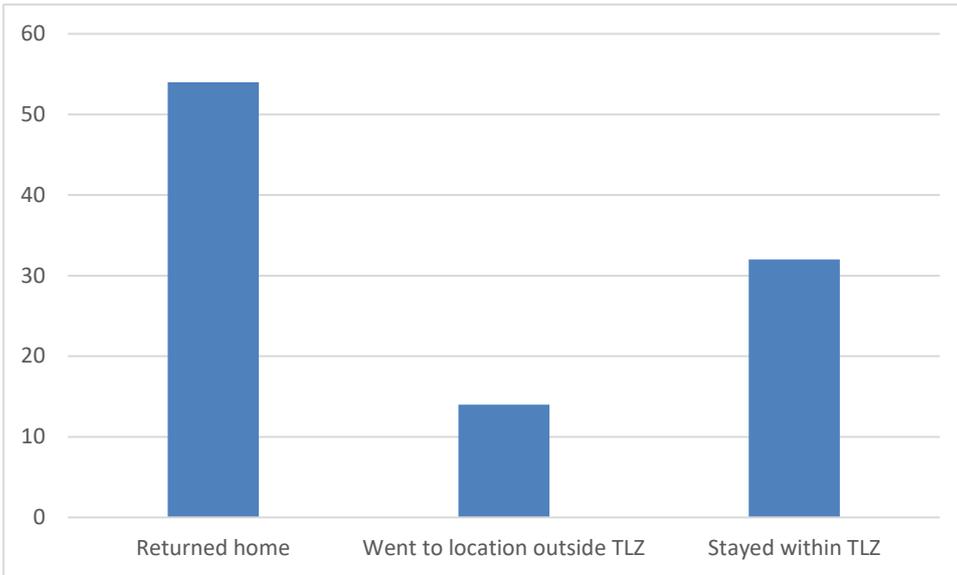


FIGURE 23: RESPONSES TO TOURIST LEAVE ZONE (%)

Around half of the tourists, visitors and occupants of secondary residences surveyed left before (42%) or when (9%) the fire arrived (Figure 24). Just under a third stayed to defend their holiday home or accommodation (32%); however, of these, 4% began defending but left and 15% began defending but the fire never arrived. Smaller proportions stayed and sheltered inside a house or building (6%), in a structure or vehicle (3%) or somewhere outside (5%).

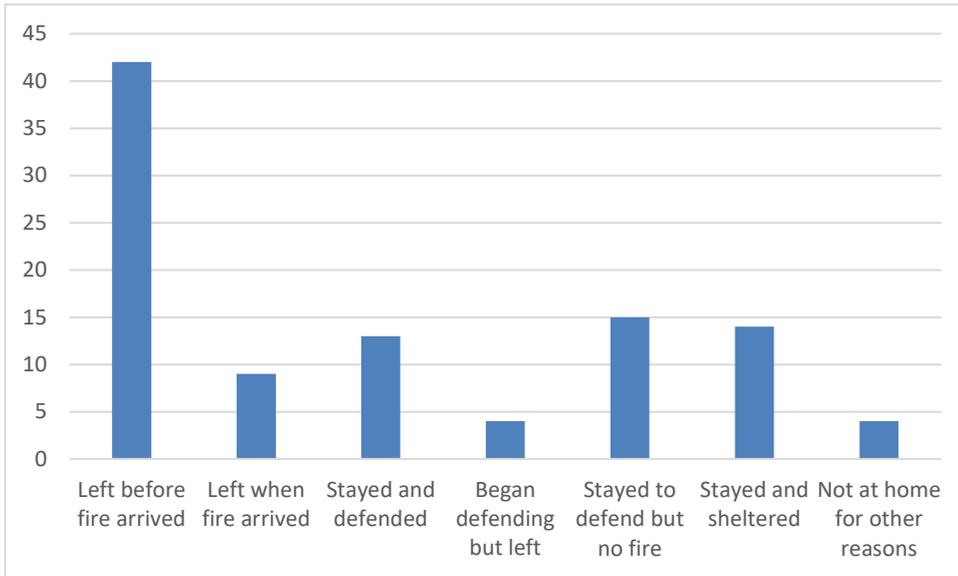


FIGURE 24: RESPONSES OF TOURISTS, VISITORS AND SECONDARY RESIDENTS (%)

Some tourists and visitors who were on the south coast over the New Year period had difficulty recalling whether they became aware of the Tourist Leave Zone prior to or following their fire experience. Several recalled being unaware of the Tourist Leave Zone at the time, given the extensive telecommunications outages. Many who sought to leave fire affected areas did so independently of the Tourist Leave Zone advice.

*Down in Gippsland they had those tourist exclusion zones and things like that and I don't think we ever noted ... **I wasn't aware of anything like that in New South Wales at that time anyway.** – Tourist, Surf Beach*

*No, not then. It was specific areas and when we got on the road, and then my phone started loading up occasionally with messages and they're saying, "Leave the area," type of thing, **it was a bit late then. It was hours late.** – Holiday home owner, Rosedale*

*I didn't see them. **I heard on the radio that we should be getting out but I was getting out anyway so that was all right as far as I was concerned.** – Holiday home owner, Guerrilla Bay*

However, interviewees generally understood and were supportive of the purpose and need for the Tourist Leave Zones. Many explained that they wanted to leave these areas to conserve resources and services for local people who needed them most, and to get out of the way of emergency services.

*Because there was this feeling, like, two hands here. One hand is, **we don't want to be a burden in this area because food's going to be scarce, petrol's going to be scarce, and people are suffering. They don't need us***



hanging around. Because there was a battle to get food, and stuff from the grocery stores when that runs out. And the other side is, we felt like traitors, because we were like, "Ah, this is your problem. We're nicking off home now. We're safe." But we need to get out and get away, because areas lose their resources that they need. Why should we be the ones taking all the pasta off the shelf, when they need it? That sort of feeling. – Tourist, Malua Bay

From my perspective, **I just wanted to do whatever I could to be helpful. If that meant we've got to go then so be it. That was my primary motivation** – it wasn't a safety thing for me; Dalmeny Headland, the CFA guy said "This is the safest place on the south coast right now and will be for the coming week but that's why we need you gone so that we can get the locals in here". So it wasn't a safety thing for us; it was just more I just wanted to be as helpful... I didn't want to be that guy who's causing problems because I refuse to leave – that was my primary motivation was just to try and be as helpful as I could. – Tourist, Dalmeny

Our trigger was really if they felt that the entire south coast and tourists needed to be out of the way, I didn't want to be someone that was in the way. Having a connection to the area through family down there and living in Eden and hearing that resources were limited for them, **I didn't want to be somebody taking resources from people who were staying to defend their lives and livelihoods and that sort of thing.** – Tourist, Tuross Heads

A number of tourists and visitors to fire affected areas commented that they would have left the area immediately if they had heard the Tourist Leave Zone announcement in the days before the fire's impact.

*No, that would have been great actually. We found out only later by one of my work colleagues, they said, "Oh, they put an article in the Canberra Times." And like, "Well, yes, that's all very well if you have access to the Canberra Times." But, no, that would have been actually... **Had we received the warning in advance, I think the article was posted on the 30th of December, we would've left straight away.*** – Tourist, Broulee

So it would've been good to have Tourist Get Out, because **we would've left the day before if they'd said something.** Say, "You've got to go now, if you're not from here." You do it, you don't argue. You do it. – Tourist, Malua Bay

Most holiday home owners interviewed for the research believed the Tourist Leave Zones applied to them because they had another place they could go.



A small number did not believe it applied to them and stayed with the intent to defend property or to continue their holiday.

I must admit I did think we could stay for a couple of days, even though the weekend coming in about three days' time after this event was predicted to be worse than we'd just been through, and I think that was correct – it was a terrible fire. – Holiday home owner, Broulee

*They were asking tourists to leave. **We didn't count ourselves quite as a tourist** but yes, they were.* – Holiday home owner, Guerilla Bay

I don't really see myself as a tourist down there. Like, that literally is an annex of our house. – Holiday home owner, Malua Bay

Some interviewees felt the call for the mass evacuation of tourists was unsafe. Others were confused by the messaging and were unsure how the mass evacuation could be achieved practically and safely when many roads were closed and there was active fire. They felt safer staying in the fire-affected area:

*The next morning we were like, "Oh, we'll just go for a drive and see what's happening, and just, I don't know, just look around and think about what we should do." Because I thought, "Oh, we'll just stay down there until the roads are all open and everything." And then, when we were in the car, we heard on the radio, yeah, basically ... I can't remember which, **there were two authorities, one was saying, "Tourists, please leave, get out." And one was saying, "Please don't do any unessential travel." So we were like, "What do we do?"*** – Holiday home owner, Tomakin

I just think it was the wrong call. People were safe where they were, give or take. They might have been a bit uncomfortable, but they were safe. They weren't safe on the road. So, I'd underline that as, "How do you then go about the evacuation process when really you're only one road in and one road out?" – Holiday home owner, Malua Bay

*We couldn't go south beside the Clyde Mountain was closed. We would have had to have gone further south to Brown Mountain which seemed to be just a log jam of traffic from what we could see. **In a lot of ways also, we felt, well I think we're probably better off staying in Bawley Point.*** We know the area. We know what to do if it gets bad. – Holiday home owner, Bawley Point



4.5.3 Future preparedness and interviewee insights on improving tourist, visitor and secondary residents' preparedness and recovery

Half of all tourists, visitors and occupants of secondary residences surveyed reported that they had not done anything to prepare for the possibility of bushfire (52%). Very few of those who were interviewed had done anything to prepare for the possibility of bushfire during their travel or stay. When asked if they had taken any additional measures to prepare for the threat of bushfires during their travels, interviewees responded:

*No, there wasn't. I was intending to fill up both cars after we got there, largely just to say how much fuel we used, but that would have been very useful had we done that. But I didn't, which indicates **we didn't really take any additional measures, and I really thought that threat was north of Batemans Bay, not south.*** – Holiday home owner, Malua Bay

*No, no. We thought we'd have Christmas, cook a Christmas turkey, wave our children off back to New York and back to Canberra. No, we didn't. We did not necessarily go down with... **We didn't, for instance, take any of our protective clothing that we have for up here with the Community Fire Unit. So, no, it never occurred to us.*** – Holiday home owner, Broulee

Just one interviewee, who had had previous direct experience with bushfire, prepared for the possibility of encountering fire whilst on the road:

We did. We took extra towels with us and extra water because we knew... Both myself and my partner are from bushfire prone areas. We knew that putting yourself under a wet towel was an important thing to do when you're in cars or anything like that, just in case. And knowing the way that we went was through bush, there was always the possibility of something happening. – Tourist, Merimbula

There is potential to develop additional resources to assist visitors, tourists and secondary landholders to plan and prepare for bushfire in future. This includes preparing for bushfire whilst travelling and whilst staying at a destination away from home. Non-residents were asked to reflect on what could be done to improve their safety in the event of a future bushfire threat. Interviewees emphasised the need for visitors to have better 'offline' access to locally relevant information about the emergency resources, facilities and places of safety in the vicinity of their accommodation, particularly for those staying in unstaffed accommodation:

I really encourage the researchers to look at this issue around preparing tourists, because it really struck me, how unprepared we were. And not just here, but in lots of places. We were up in Hamilton Island a few years ago, before the cyclone came through. And I was astounded that there was no information about cyclone preparations, in the places we were staying. There was no emergency kit in the house we were staying in. There was no information about what was the safest room in the house to be in.



And, sure enough, when the cyclone came through, that's exactly the issue they had on Hamilton Island. So, I suspect it's not just bushfire prone areas. And I really do wonder, given we force people to put smoke alarms in houses that they rent to tourists, to protect them from a house fire, I do think we possibly should, **if you want to rent the house out, you maybe should be taking a little bit more responsibility for the emergency preparedness of your residents.** Because in Australia, the chances are, you're staying in places like bushfire areas, or along the coast, you may be impacted by some kind of a natural disaster. – Tourist, Broulee

We left a note for the house we stayed at just saying we had no access to any batteries or anything like that, torches. So we just left a little note to them just saying to create a kit for your guests. – Tourist, Malua Bay

We also had the old fashioned paper maps. **Now how many people have got the paper maps sat in their holiday cottage, a detailed good enough quality map that you've got the names of the roads, you've got the names of the locations that they're giving on the radio?** Well, most people wouldn't have that. They don't carry maps anymore. – Visitor, Broulee

On the day we kind of got a text message but if our phones had died before that we wouldn't have known where to go. **I think people just need to look at that information and plans before they travel these days, I guess. Just where to go. If you lose reception with your phone know where the evacuation points are and have a kit with you,** just masks and stuff like that so you can breathe properly. Just have that in your car or something, or take that with you so you're better prepared. – Tourist, Malua Bay

I do wonder whether the holiday houses really should have an emergency kit under the kitchen sink, which has a battery-operated radio, a torch, a few candles, some matches, and maybe a map of where the nearest Neighbourhood Safe Place is, would be helpful. Because, they have smoke alarms for a fire in the house. They're in an area that's got a fire risk. It's probably not unreasonable that they expect that, at some point, the people living in their house, or staying in their accommodation, may be exposed to fire, as a risk. Having that kind of kit available would be helpful. – Tourist, Broulee

Some tourists and visitors also shared how the experience has prompted them to rethink how they will travel and holiday during a time of high fire danger in future. Some stated that they would only holiday close to the beach so they have an open area to shelter. Others stated that they would assess whether a place has multiple routes of ingress/egress and would not holiday somewhere with only one road in and out. Two tourists stressed the importance of having local knowledge (knowing place names, roads in/out, places to shelter etc.) and would only



holiday in an area they were familiar with during the bushfire season. In looking to what they would do differently if travelling during a bushfire threat in future, many stressed the importance of having cash and a full tank of fuel once arriving at their destination and of having a battery powered portable radio.

*Oh yeah. We all say **that if we went away again, we wouldn't rent a house that only had one road out.** Yeah. Cause there was no way. And as I said, we were lucky to be right on the beach. Yeah. It was only that to the beach or out along the road where the fires were. That was an issue. So we've said that we'll never do that again. – Tourist, Manyana*

***I probably would be a bit more intentional with what I'm taking with me in terms of...** Just having those candles there, we didn't bring those. They were just there in the house and that was a life saver. I guess, thinking more about if I am in that situation again, what would I need, what did I need with me then, and how could I prepare that beforehand, just in case. **And I think, investing in a radio as well would be great** – Tourist, Narooma*

*The fuel access I think was really interesting. **I will always now, I think, be fuelling up my car when I get down there prior to a big weekend,** regardless, in case it hits the fan, because being stuck with no fuel was a real issue. – Holiday home owner, Broulee*

For tourists and occupants of secondary residences from Canberra who experienced fires on the south coast, the experience prompted many of these interviewees to revisit/develop their bushfire survival plans for their primary Canberra residence. Many described creating kits in preparation of evacuating or putting together kits with masks, torches, candles etc in preparation of a blackout. Many noted that they purchased a battery operated radio upon returning to Canberra.

*I think everyone learned a lot of lessons about preparing for that this year. **When we got home we kind of created a little kit for us with radios and batteries and torches and all the stuff that we didn't have access to when we were stuck down the coast without any information or power or lights or anything like that.** So we kind of got a little kit set up for home. And if we do go on holiday this year we'll definitely take something like that with us as well. – Malua Bay*



4.6 AWARENESS AND ATTITUDES TOWARD BUSHFIRE RISK REDUCTION ACTIVITIES

4.6.1 Were people aware of bushfire risk reduction activities in the area over recent years?

Interviewees were asked about their awareness of any bushfire risk reduction activities that had been undertaken in their area in recent years. The most commonly identified risk treatments were hazard reduction burns and mechanical works such as the creation of Asset Protection Zones. Some also mentioned local RFS brigade activities and community engagement events such as bushfire preparation workshops. There was a very clear expression of interest in and support for cultural burning activities among many interviewees.

Hazard reduction burns

Hazard reduction burns were the most commonly discussed risk treatment, with many interviewees supportive of these activities. Hazard reduction burns and backburning were often conflated, with people regularly talking about backburning when referring to what were hazard reduction burns. A number of interviewees believed that burning activities in recent years to reduce fuel loads were helpful in reducing the intensity and severity of the fires, with some calling for burns to be conducted more frequently or extensively.

*In my personal opinion, the only reason the fires didn't get through and burn half of Kurrajong down and half of East Kurrajong Road and Comleroy Road and all that sort of area, East Kurrajong area is because we did a hazard reduction across the road from... **we'd burned it three years earlier and the fire went in there, got about 100 metres in, and then went out** – we didn't have to chase the fire in there or anything like that. – Kurrajong Heights*

*The year before, **I'd had the RFS come up and do a mitigation burn**, so my property and the three properties next to me had all been burned in '18 so there was really not much on the ground... **I think that really helped things out.** – Malua Bay*

*A few years back, they did do some **aerial incendiary bombing** up in the national park up behind us and at the time, I didn't really think that it did very much, but I actually think that it might have contributed to at least to break some of the stuff up and make it a little bit more patchy in through there because that is where they eventually managed to get on top of it and put it out with the helicopters a couple of weeks later. **I reckon that probably did do something.** – Wyndham*

*It wouldn't have been as bad, I must say, if there had of been a lot more hazard reduction burning done over the past 20 to 30 years here... **I'm a***



great believer in hazard reduction burning, and I think there needs to be a lot more of it. – Bermagui

There were also interviewees who were generally supportive of hazard reduction burns but commented on the possible variability of the efficacy of such activities and the need to carefully plan and manage burns:

Hazard reduction, but that's got to be done very carefully and in a way that doesn't just burn... you can't just go out and burn the crap out of the bush and say, "Yes, we've hazard reduced". It's got to be done strategically and it's got to be done on an evidence-based program and sometimes in my view, the HRs that are done around here are done because of pressure from the local people – not evidence-based but just "Oh, that bush looks a bit thick. I'll get the people to burn that". – Mittagong

Two of our neighbours had the RFS do a hazard reduction burn and one of them don't have a house anymore so the effectiveness of that is variable obviously. – Malua Bay

Some others were less convinced of the effectiveness of hazard reduction burns in reducing fire risk and impact. Some interviewees expressed reservations that recent burns had made a significant difference or suggested that some burning activities may be counter-productive, encouraging pyrophylic species:

The RFS had burned that whole slope pretty thoroughly two years ago. Didn't make a bit of a difference. It's all just totally incinerated. I know that some local people had tried to do local burns and things like that, but it just doesn't make any difference...I'm very concerned about all the talk that's going on about building lots and lots of hazard reduction burning because, for the first thing, I don't think it's effective at all. I can show that. The second is that when you do it, it changes the whole structure of the forest. What happens after that is it's more flammable. – Malua Bay

I really worry about how we respond to things like this; there's a knee-jerk reaction, which we saw after the Black Saturday fires in Victoria, which was a lot of clearing, and a lot of burning. The research doesn't support a lot of burning, particularly the type of burning that is done when you do hazard reduction burning. I mean it's still relatively hot fires and it doesn't take very long before that forest is more fire-prone... then you get fire weather like we had and anything will burn and so it doesn't really matter. I think even if we'd been practicing cool burning across the landscape, it might not have made a difference in a year like this one. – Wyndham

Hazard reduction really is only going to work if you burn all of that national park – if you turned everything into a black wasteland and I don't want to



see that...I don't want to see that getting burned every couple of years just to save my house - I can rebuild my house. Yeah, our views are a little different... **I don't think we understand the process well enough to just be setting fire to it.** – Balmoral

I was sort of ambivalent about prescribed burning in that it's good for a little while, maybe six months, 12 months. But, after that, unless you do enough of it, it might cause an area's species to be stripped to much more pyrophylic species like, around here, bracken fern, wild grass, wallaby grass, danthonia, which sounds like a firecracker's going off when it burns. Yeah. I hadn't done much prescribed burning or any really in recent years. – Kiah

A few people also commented on their wish for more communication and more notice to be given to local residents regarding planned hazard reduction burns. One interviewee, for example, suggested that local hazard reduction burns had panicked them because they were unaware they were being conducted:

*I think that there needs to be more communication about hazard reduction... two weeks ago there was an under-communicated hazard reduction. And we don't want to be these annoying people that ring up 000 all the time, but we don't want anyone in our community to die or lose their home either... **Certainly if we'd seen a flyer in the letterbox that said there was a possibility of hazard reduction over the coming month, we wouldn't have been so surprised.*** – Deepwater

Asset Protection Zones and firebreaks

Some interviewees also discussed efforts undertaken to establish and maintain Asset Protection Zones (APZs) and firebreaks for bushland adjacent properties, preceding the fires. These included APZs established on national park or state forest borders and residents' own APZs around their homes.

*There'd been some conducted by National Parks over towards Fitzroy Falls way. Then, I understand, prior to the 4th, that **there had been some grader work where they'd been grading along the boundary of the National Park with the property.*** – Bundanoon

*National Parks was here because our neighbour's son works with National Parks, and so they'd turned up with some bulldozers...**They bulldozed these little mini asset protection zones...*** – Blackheath

*So, instead of having grass and plants running up to the house, which lots of people do in the area, we've put pebbles all around the house. **So we've created what they call asset protection zone around the house. And***



so that makes it easier to defend because we don't have trees coming right up to the house. – Orangeville

A few people reflected on difficulties encountered in undertaking mechanical hazard reduction works, suggesting that more could to be done to encourage or support the creation of APZs:

*Hazard reduction is the main thing. Asset Protection Zones around villages and individual homes. A lot of the times those, the council turns around and says, "Yes, you've got to have 10 meters off your back fence please". That's great. When the house first goes in, it's got 10 meters of clear gravel yard. But then the grass starts to grow or someone decides it'd be a nice place for a shrub or whatever else goes on. And **no one seems to come in and enforce it. Things like that need to be enforced. Tathra was basically the example of that one. When the fire went into there, the worse scenario they had was the previous APZs had been overgrown.*** – Majors Creek

*Obviously, no one wants it all cleared, **but I think they could do a better job of creating some buffer zones, and just making it easier for landowners...** We want to protect our houses and protect our families. But we're just caught up in this green tape, if you like, or red tape, where we have to jump through so many hoops, and threats of being fined.* – Oakdale

There needs to be a focus on establishing better Asset Protection Zones between those village environments and the surrounding bushland... You'll never stop fire. It's all part of the whole environment we live in. That's the way it is. But it's about ensuring that we can minimise any impacts from wildfire on people and assets. – Braidwood

There were therefore different positions expressed regarding the efficacy and adequacy of hazard reduction burns and asset protection works undertaken before the fires. Some interviewees felt that these activities had played a role in lessening the damaging impacts of the fires, while others were less convinced of their effectiveness or felt that more could be done.

RFS brigade engagement

Many people interviewed for the research had encountered local brigade engagement activities such as workshops, Get Ready Weekends or meet and greet events at markets, which helped encourage them to prepare their properties and develop or review their household fire plans. A number of interviewees commented on how brigade members' local knowledge contributed to their own understanding of their bushfire risk and what they could do to plan and prepare. Some noted that local brigades had undertaken a risk



assessment for their property. This supports findings from the analysis of survey data, where 44% of primary residents reported they had participated in NSW RFS brigade event and 28% had participated in a Get Ready Weekend event. Some brigades were recognised as being particularly proactive in facilitating community engagement.

*The RFS in Wollombi, about 10 years ago developed a community engagement program. And most of us went to workshops. I think they were half day or full day workshops, and we came away from those knowing what to do to prepare our place for fires, how to get information, how to give information, to prepare your house like bring your furniture in all of that stuff. And also we had to fill out forms just for ourselves, what are we going to do? What is our plan? ... **Those community engagement sessions that we had with the RFS were utterly invaluable...** And then they've had briefings and things like that every summer. – Wollombi*

*Our local RFS brigade were all there and they sort of had a sign saying, "Come in, talk to us"... So I had actually gone and connected with the RFS brigade there. **So we were having conversations around triggers and what might make you leave and having a plan, so that had helped us formulate some idea.** They also have these awesome maps and aerial photos of where fires have been in the past... **I was able to talk about the risk of grass fire as opposed to bushfire, so that was really valuable. And they did everything they could to be available to the community.** – Robertson*

***Each year they have meetings where local landowners are invited to meetings where they're educated on fire preparation and they produce information sheets to hand out to locals.** They've just been very proactive in going out to the local community, they've had stands at local markets. – Paynes Crossing*

*We did go to the RFS local presentation. When they had, for instance, open days or mornings down at Surf Beach, **we'd go and chat with the guys about what we can and what we should do.** – Surf Beach*

I think both the local brigades have done an enormous piece of work around working within their community.** So the different... South Katoomba RFS branch, they've done work with their local areas. And there is the... HUFF program in Blackheath. Heads Up For Fire maybe... that's like a street by street program run from the neighbourhood centre that's really good and it does a lot of pod-based fire prevention and fire resilience work. So you get to know your pod and then you know who's away or who's sick, or who needs help. Everyone has a role in a fire emergency, all of that kind of stuff. It's really good and they've done an excellent job through Blackheath and Mount Victoria. **And I reckon that's



partly why there was no houses lost. Like it was amazing this year. –
Katoomba

Usually as [new residents] come to our community, the community association welcomes them and tells them... we've got our little Canyonleigh Chronicle newspaper... **and we've got a page in there on RFS news and what's happening...** - Canyonleigh

We proactively introduce ourselves every time there's a property sale, and people move in, we make a point of making contact and giving them information and we're coming up again to having our annual Get Ready day in September and we reach out to the community, invite everybody along to the station and we give presentations all day long and information and so on. As a small bunch of volunteers, we do the best we can, given the limited time we have. There's more we could do but you know, you only have so much energy and time. – Matcham

There was a lot of education that was going on and the RFS was very available... **They were coming through the community well in advance, looking at properties, assessing them...all that kind of stuff was the part that the RFS really helped us understand how far you have to go [to be prepared]...** They would come through, they would look and they would review our fire plan, they'd ask us what we're doing, they would say, "No, I can't tell you not to stay or stay, but if you had to stay, these are the things you need to do". - Kulnura

I had actually gone and talked to our local fireys – we have a monthly market once a month, or we did have before Coronavirus took the hit... **When summer just started, they actually had a weekend where they were up at the hall, giving people advice on fire prep.** So I went and had a talk to them, and you know, because it's a really small village and everything, **they knew the property that I was talking about and they actually said that it wouldn't be too bad if it was well-maintained.** – Wyndham

I give them money actually because I think they do a good job. **They come and talk to us, they offered one free 'clear your yards' for older people [Assisting which I took advantage of at one stage and it hasn't come back. I just know that they're there when needed.** Guerilla Bay

Discussions such as these highlight the effectiveness of brigade community engagement activities for creating awareness and understanding of local bushfire risk, and for motivating planning and preparation. Brigade activities went beyond provision of general information, involving personalised advice and feedback on people's preparation of their home and property and plans for how



to respond in the event of a bushfire. The value of these engagements lies in their local and personal nature, as well as their delivery from local NSW RFS members, who are regarded as knowledgeable, credible and trusted community members. The value of local brigade activities in motivating planning and preparation for bushfire cannot be underestimated.

No or inadequate risk reduction

There were some comments from interviewees suggesting that particular areas had little or no hazard reduction activities conducted over long periods. Some reflected on a perceived lack of vegetation management in certain spaces and a belief in the need for more risk reduction activities, particularly for some national parks, forestry areas and council managed lands.

*I think also with the controlled burning in the forest, it has to be brought back in because I know behind us, we've got state forest all around us. And as soon as it hit our property, it was just too big for us to fight, too big. **They haven't burned off around us for 12 years so you can imagine the fuel that was on the ground in there, and that's what we had to deal with.** – Tumut*

*There's no talks about doing anything like that or doing decent hazard-reduction burning in the national park, or the state forest area... Since I've been living here, about probably two years, there has been no proper management of the national park area, and speaking to my partner and father-in-law, **there's been literally no burning or grazing of the local national parks for over six years.** That means you've got nearly bushland what hasn't seen a fire in probably – they were saying – about nearly 20 years. – Moruya Heads*

*The Wadbilliga State Forest is directly across the road from us – it's beautiful but if there had been any, it would have been minimal and it wasn't something that we were made aware of that they were doing. It was a tinderbox and that's why it was so bad... **As far as we're aware, there hadn't been any major hazard reduction done...** It was a catastrophe waiting to happen. – Countegany*

*Now we asked the council for a couple of years to come in and clear out all the undergrowth on the gully, and their response was that we had to get a fire assessment of our complex... **We've lived there for three years and in that time, not once have the council come through and tried to even do a small burn or a clean out or anything.** So, yeah, they weren't very ... They didn't seem very proactive on that type of thing. – Malua Bay*



In discussing the lack or perceived inadequacy of hazard reduction activities in some areas, interviewees also commented on various difficulties involved in undertaking these activities. They identified a range of obstacles they felt impeded hazard reduction efforts, including issues with resourcing, permits and restrictions, as well as environmental factors impacting the window of opportunity for prescribed burns.

It's been something that we've really struggled with over the last 20 years to get hazard reductions undertaken due to constraints through RFS. Some of its funding, some of its resourcing, some of its permissions. Hazard reduction is very difficult to get done nowadays on a larger scale. And also, the weather conditions. Obviously, it's been very difficult to get burns in because of how dry the bush is. It's nearly too dangerous to do hazard reduction burns. – Peakview

*Like, you have to have so many permits, and my dad said he's got to get a permit through this person, but he has to talk to so many people up in Sydney or Canberra that'll want to come back down the chain, **it's just too much work paid to be able to get through to try and get this stuff done.***
– Cobargo

I had a hazard reduction approved, as did lots of people round here, and they were pulled by the Health Department... because of the smoke, they said, "No, we can't have any more fires."... So my hazard reduction has been on the cards waiting for this winter and it still isn't... hasn't been done, and it looks like now it's not going to be done because it's run too late. So once again my property, which hasn't had a fire on it in 25 years is absolute tinderbox, ready to blow up. And that's the problem that we have. – Fraser Creek

Cultural burning

A key theme in discussions of bushfire risk reduction efforts was awareness of and support for Indigenous land management practices and cultural burning. Some interviewees reflected on the benefits of lower intensity, cool, mosaic burns informed by Indigenous methods rather than hazard reduction burns that are done 'too hot'. While only a few interviewees had knowledge of cultural burning events being undertaken prior to the fire season, a number reflected on a wish to see more attention given to supporting further cultural burning programs, including more resourcing for Indigenous fire programs and more training in Indigenous burning methods for RFS volunteers and landowners.

I'd like to see a lot more hazard reduction done. I'd like to see it done with more the Indigenous type way which is the way I try and do it... I've got some Indigenous friends that have given me some ideas about how to manage fire around here. I'd like to see a lot more of that. – East Kurrajong



We used to do selective burning activity, which was really along similar lines to the cultural burning activity. And I think that that needs to be looked at. And I know that there's a fair bit of discussion about it. **But the cultural Indigenous methods of fuel reduction need to seriously be looked at, at a higher level, and needs to be implemented.** I truly believe that, because I've seen how it's worked in the past... I think a lot of those management practices need to be introduced on a broader scale. I know there has been a fair bit of discussion about that. But I do support that very much. **So, it's just something that I think needs to be taken a bit more seriously by everybody.** – Braidwood

I'm Indigenous, I'm a really strong believer in the Indigenous fire programs... I think sometimes the misconception with cultural burning is that it's for a spiritual reason, I guess, but it's really a management practice. I am aware that the service has provided people training in the Northern Territory, in Arnhem Land, with cultural burning practices... I think it is a really great opportunity that we could enter into and I do think that it would combat a lot of issues that we do have, and it would extend our burning period... **I really do think that implementing cultural burning in a more formalised structure within the service could really improve our ability to control our hazards coming in to fire seasons – preparation and preparedness, and the flexibility behind it.** – Rutherford

It was the cultural burning I think that seems to make a lot of sense from the little we know of it, and we just sort of wonder, maybe there should be a lot more but less intense and more targeted burning over the years, rather than whatever it is we're doing at the moment... So yeah, I hope that sort of a thing gets taken into account as well. – Bawley Point

What we need is a cool burn, we need to be able to walk through it, we need 200-300 millimetres of flame height. That's it. We need the lizards to be able to scramble through it, the lyre birds can hop over it... **I believe that it needs to be introduced as a subject into the training of new firefighters – not advanced firefighting; it needs to be introduced into the basic firefighting curriculum... I think the principles of it are the most important thing...** – Kurrajong Heights

So definitely drawing on the Indigenous bushfire fire skills maintenance. And I really hope that their training becomes available to non-Indigenous or that they also make an enormous, a lot more Indigenous people trained to work with property holders... Fire sticks Indigenous bush maintenance and management. I think it should be something that the community have become aware of ... I think that embracing and incorporating those practices is just essential. – Paynes Crossing



A small number of people did raise concerns about the efficacy or viability of larger-scale cultural burning practices:

*I've also been worried about the automatic assumption that we must follow Aboriginal burning practices because they must be right because I don't think there's a lot of evidence. **I think the evidence for that is very varied.*** – Surf Beach

*There's no doubt there's things we can learn from the past and in terms of how the landscape was managed before Europeans came here, but at the same time, we live in a really different place. Carbon dioxide levels are double what they were then so plants are growing faster; we end up with more... In four years, we've got more biomass than what you had 200 years ago. ... **Even if we burn, use the same regime that the Aboriginal people were using back then, it's a different environment, and whether we can replicate that now with fewer people on the ground.*** – Wyndham

4.7 BUILDING STANDARDS

Awareness of bushfire regulations: 12% of primary residents reported that their house was built to regulations to reduce bushfire risk, while 47% indicated that their house was not built to one of these regulations. More than one-third of respondents (39%) were unsure of whether their house was built to regulations to reduce bushfire risk or not.

Exceeding minimum requirements: Some interviewees described how they had exceeded minimum requirements to increase the bushfire resilience of their home. This gave them increased confidence that their house might withstand a bushfire.

4.7.1 Were people aware of bushfire protection measures incorporated into the design and construction of their home?

A number of interviewees commented that their homes were built before requirements to consider bushfire protection measures. However many who had constructed their homes more recently or had built with bushfires specifically in mind were aware of the particular standards that their homes were designed to, with some noting that they had gone beyond minimum requirements.

When I put the DA in for a house, we put a vegetation exclusion area line right around the house and I just nominated 40 metres....It was rated BAL40... The actual house is built out of steel, corrugated iron, BAL40 windows, and not a lot of vegetation around the actual house itself at all.
– Kurrajong Heights

Yes, the house was built in 2014-2015 – so fairly recent, and it's BAL level 19 I think. Yeah, something like that, so there's no ventilation outside, non-



combustible material – it's cladding and tin, no eaves, only one gutter and that's got a leaf-guard on it. – Sassafra

We recently built a mud brick house...We could have chosen to build in anything really, but we chose mud brick from that aspect as well...It is built to about [BAL] 12.5 and in certain aspects about 19. Definitely, it has those protections added to it. Double-glazed windows and we have very specific directives about what we plant directly around the house and what we put in terms of paths and all that kind of thing as well. – Araluen

We only built our house in 2016 so we were very careful to put in fire-resistant products and not put any materials in there that we thought would be a fire hazard. We also have a metal roof and we could easily put the sprinklers up... **We're low BAL here but we did make sure that what we put in was well above the minimum BAL rating.** – Burrawang

Other interviewees reflected that although they were not required to meet specific bushfire construction standards, they had still made efforts to incorporate protection measures into their homes:

No, because it was built so long ago, there were none of those regulations. I am renovating the place continuously, I've been renovating it for many years. And everything I do is to the absolute maximum regulation... Fire can't start on the roof of our house because I've fireproofed it... We're putting actually aluminium windows on that side of the house because it's safer... Because of the way I've built it, an ember won't sit on it and start to smoulder. **So everything I construct now on this house is with that in mind.** – Frasers Creek

We put Colorbond cladding up. That was another thing that we did several years ago. **We thought it was always going to be a helpful thing in case of fire.** – Kiah

It was built in '97... **It's almost like a bushfire magnet, which is why we put sprinklers on it.** – Malua Bay

We started building it 40 years ago; **we've been building the house and other buildings ever since and they're designed to be as protected as possible and built with fire resistant materials.** They're 90 percent mud brick which is not flammable, for that reason. – Paynes Crossing



4.7.2 Did the presence of bushfire protection measures influence people's planning, preparation and responses to the bushfires?

Non-regulated buildings: Many interviewees were aware that their homes were not designed and constructed to reduce bushfire risk and this influenced decisions to leave. For example, some interviewees identified the wooden construction or poor condition of their house as a source of vulnerability.

The absence of protection measures meant that some interviewees felt their homes were highly vulnerable to fire, and this was a key factor influencing their decision to evacuate early:

*It was built 20-something years, probably 25 years ago...It's made out of wood. It's got a wooden veranda. It's surrounded by trees... **I knew without even having to ask anybody that the place was indefensible in a fire.** So it had always been my plan that in case of fire, I would evacuate and that I would have to be mentally prepared to lose the place. – Bermagui*

*I lived in a weatherboard house on top of a ridge next to Murrabrine Mountain and **there was no way I was going to stay.** It wasn't going to happen. – Verona*

The lack of protection measures in the design and construction of their homes also encouraged some people to be more rigorous and vigilant in preparing their properties in other ways. One interviewee explained:

***When I built my home back then, there were no codes for fire protection... Because of when I built, I'm more diligent in making sure I have that proper property protection.** So we've got a big clearing around where I live, we don't have trees overhanging near the gutters even though we are in the bush, we do gutter preparation every fire season, we've got a pool... So we put in all those safety measures too and protection measures for ourselves, even though our home is actually quite flammable. – Blaxland*

4.7.3 What were people's expectations of their home during a bushfire?

A number of people felt that while protection measures made their homes more defensible, particularly against ember attack, they recognised they would still be vulnerable under certain severe fire conditions:

[Interviewer]: Did you feel confident that the house would provide you with protection or withstand a fire?

*[Interviewee]: Yes, we did, but **we also knew that catastrophic conditions would mean that the house may well be undefendable.** – Burrawang*

*It's more fireproof than a lot of houses, but my son-in-law said that from what he'd heard, from what **my daughter had been told about the ferocity of the fire,** he said that it's just as likely that it's going to bust the windows*



as it comes through, because it was so fierce. **So that's partly why he said not to try and defend it**, because if it's that fierce, yeah, there's nothing much you can do about it. – Bermagui

[Interviewer]: You mentioned that you built to BAL40 five years ago –did you have confidence that the house would be okay?

[Interviewee]: I had reasonable confidence. Yeah, I did have reasonable confidence the house would be okay. I mean, **perhaps not on those Catastrophic days**; I thought "If the fire comes through in those catastrophic conditions"... I don't think this house is... **well I don't think any BAL houses are really built to withstand those Catastrophic conditions.** – Blackheath

Some suggested that the incorporation of bushfire protection measures made them more confident that their home would provide refuge if they were forced to shelter from the fire:

We just wanted to know that we've got this refuge here, if we're stuck here...We're very confident. I mean, it could have burnt down still, but we knew that it would give us 10 minutes, which is probably all we needed really. 20 minutes. So yeah, we were confident. I went around and did some modifications before a fire hit close up or any gaps I could see up in the roof space. It's built on a slab and the walls are made of fire retardant stuff so it probably would have been all right. Yeah. We were able to rely on it for that, I think. – Little Forest

4.8 COMMUNITY RECOVERY AND RESILIENCE

4.8.1 What were people's experiences in the aftermath of the bushfires?

Evacuation centres

Many of those who left their homes or accommodation went to evacuation centres. Some interviewees spoke highly of the kindness and care that they received at evacuation centres, and of the value they placed on spending time with others who had been affected by fire. However, some tourists and occupants of secondary residences spoke of feeling guilty about using resources and accepting help at the evacuation centres.

The Bega community were extremely welcoming. We were at the Bega showgrounds where we stayed. They had Chaplains checking on people, mental health services checking on people. Meetings twice a day where we were welcomed and informed of everything that could be had. They fed us, and we were like, they'd come and check how many people for dinner. And we were like, "actually, we've got all our own food." And they were like, "don't be silly, it'll just go to waste. We are here, we're providing, we have everything that you need." **So for us, we were stuck and felt like**



Armageddon was coming in, it looked like it through the sky, but the Bega whole community was so welcoming that we knew we were in a pretty safe place and really pretty good... But yeah, if there's any way to do it and including the Mayor there that was front and centre every time, twice a day, giving people information. And I think what was good about the centres was having information. We weren't in the dark, they told you everything that they knew and they welcomed you to the area. I think that made a really big difference. – Tourist, Tathra

Basically, it's like a basketball, or a school hall, but with lots of holes in it, so it was full of smoke. So we spent the night, basically, laying on the floor, on towels, as was everyone else, because there was just no... **we didn't have the equipment we needed. They weren't prepared for all of these tourists, suddenly arriving in their town.** They were trying to look after the local residents. It was awful. It was really ... it was so sad, and they were so good to us. Because there were people in there, that were running the evacuation centre, who had their own family, tucked up in the corner. They'd obviously left their homes, had no idea if their actual homes were safe, and they were there, making us cups of tea, and Milo... **It was awful, but it was also one of the most amazing experiences, in terms of the kindness that we received from those communities.** And so, we spent the whole of that night in the Moruya Evacuation Centre. And then, the following morning, at about six o'clock, they woke us all up, and people started to think about trying to get out. – Tourist, Broulee

As horrible as it was everyone was really looking out for each other and helping the old people. There were really old people down there and people coming down to the beach that had lost their homes. And there were women down there whose husbands were out fighting in the fires and far as they were concerned they could have been dead. **And it was just a really sad and scary situation. But everyone kind of banded together and looked after each other, so it was the good kind of community spirit.** Yeah. Tourist, Malua Bay

However, some interviewees noted that evacuation centres became overcrowded, stressful and lacked the facilities needed for the older people or those with disabilities. Some also commented on the inadequate facilities for managing pets and animals that people brought with them to evacuation centres.

At the Bega showground, at the official evacuation centre, we spent all our time there helping other people. Like, we were really well off. Most of the people that were camping there, like **there were old ladies sleeping in cars and disabled people.** And they were sleeping in cars. Like, I'd offer them my tent. They'd go, "No, I can't get off the ground." They were sleeping in cars because there was nowhere else to sleep, and that was high enough for them to get out, get up. And **I'd help them go to the toilet**



in the middle of the night. We ended up building them some steps to get into the toilets. They were so disabled they couldn't actually get into the toilets. And then we realised. So, they were walking further to get to other toilets. They brought in portaloos. So, we built steps for them, just did stuff to try and help people. – Mogilla

It took us over an hour to actually get to an evacuation centre in Narooma... There was so much traffic trying to get in and park there that it was just kilometres long traffic trying to get into town. And you then got told to go and register somewhere, but we had to park a million miles away and just walk over. **And I've got my 85-year-old nan struggling to walk, and it had been a very stressful night for everyone. We registered when we got to the evacuation centre there, and I said, "Look, I've got an elderly nan with me. Is there any chance I could get a seat or something for her to sit on?" And they just said, "No. We can't do that."** And it was just first in best dressed with all that kind of stuff. – Cobargo

There were dogs shitting around the place and people laying on the [ground]... I mean it was just awful, and it seems to me **those are things that we could be doing and be ready, you know, whether it's an evacuation centre for fire or flood or any natural disaster.** – Malua Bay

The situation there was pretty hectic. It was pretty cold. You had a lot of people without warm bedding or anything, and you could just see that they were really stuck and they were scattered everywhere throughout the leisure centre. People even sleeping outside under these little makeshift tarp things... **And so, we kind of rugged up and we're feeling like, "Oh man. We're disturbing these people's privacy and we don't really need to be here." But then it was just like, let's just try and talk to someone. Just see what they know, see if there's any... All we need to know is if we can leave or not because we don't need to be here and using all the resources here that other people could be using.** – Tourist, Narooma

Some interviewees decided not to go to evacuation centres and made alternative arrangements, such as staying at a relative or friend's house, or going to a beach.

That area south of the Moruya River became quite popular; there was an evacuation centre but it wasn't functioning very well. **A few people we spoke to had gone to the evacuation centre in Moruya and then came back down to the swimming pool and said "There's no point going to the evacuation centre – there's nothing there. It's safer and more sensible to be here"...** At that point they didn't even have any cooking facilities. That was in the early afternoon; I think by the late afternoon, they did. It was crowded, there was no improvement in information flow; people went there and just came back. – Holiday home owner, Guerilla Bay



We went to Bega into my office, where we continued to live for three weeks. The evacuation centre's not very far away, but it was jam-packed. And the evacuation centre got so awful to be in with the smoke... And I had neighbours from my place staying there and I just said, "Look, you can't breathe here. It's awful." – Verona

A small number of interviewees also experienced problems with securing accommodation, which added significant stress to their situation:

*The stress I ended up under because the kids were traumatised – their behaviour was all over the place, they were so unhappy, they were sick – I ended up at the field hospital they'd set up because of the rashes and the asthma with the little one, and then that and yeah, **constantly facing "Where are we living tonight" because we couldn't get them to extend the accommodation. I ended up on hold for seven hours one day – that really pushed me over the edge** between trying to look after my kids but also not knowing where we were going to stay – that was terrible, really terrible.* – Malua Bay

Shortages and outages of power, reception, fuel and food

Many residents and tourists discussed the impact of shortages and outages in the immediate aftermath of fires. Among these outages, electricity was perhaps the most consequential, as this impacted on communications, as well as the ability to acquire food, petrol and other essentials such as medication. Many noted the irony of official advice to check apps and websites for further details when there was no cellphone reception/internet available. Others discussed how the absence of information added to their stress and, for many, generated a sense of profound isolation.

And when it receded, all communications went down. There was nothing. And that was frightening. It was suddenly like... that was your safety net. You knew where you were going, what was going on with communications, but there was nothing. No mobile phones. Nothing was working. – Tourist, Malua Bay

From a community perspective though, the real chaos and the real inconvenience, I think was caused by the loss of power. And particularly the loss of power to the mobile phone network. And so, you've still got government saying, "Go to the Fires Near Me app, or go to the Traffic Live app and get updates." Well, when you've got no comms, you can do none of that. And so, chaos ensues. **You can't communicate with family and friends outside of the fire zone to tell them you're safe.** So, they're things that just could not be done. And I think that also played into the chaos. – Malua Bay



And then there's this extraordinary feeling of "Well I'm in my house but there's no power, there's no phone, I don't know what's going on, I don't know who's alive and who's dead. What to do?" – Holiday home owner, Surf Beach

A small number of residents expressed frustration with tourists and visitors in fire affected areas using resources and buying supplies that could have been used by local residents.

*As the fire approached, being a holiday area, the warning was, "If you're a holiday maker, get out of here, do not be in the way, get out of here". **So basically they emptied the fuel bowsers of all the fuel as they all jumped in their cars at once** and said, "Well, I'm going back to Canberra and Sydney or wherever..."* – Batehaven

*The other incredible thing that happened was, because there's so many holiday homes here and there's so many tourists here, they were all told to leave on the Wednesday... **But they took it upon themselves to take all of our food and petrol on their way thinking that it would take them a couple of days. So they cleared out IGAs and all of our supermarkets to the point where there was nothing on the shelves. Not thinking that we couldn't get any supplies through...** It felt like the end of the world. There was no food, no petrol, no electricity. Everything was burnt and black.* – Malua Bay

When asked what could be done to better manage bushfires in the future, an interviewee from the south coast replied:

Getting tourists out. *They're the ones who should listen to the earliest possible warning: "If you do not need to be in that area, leave. If you live there, if your income is based there, if your family's there, if you own property there, if it's your primary residence, give it another 24 hours. **If you do not absolutely need to be there, it's going to ruin your holiday but get out, leave please.** Get off the roads, get out of the supermarkets. Stop taking the petrol, leave." There were a lot of people that stayed and used resources and just choked up the roads and pissed people off big time.* – Longbeach

Post-fire information and communication

As noted above, information provision and communication were significantly impacted by power cuts and loss of mobile signal in the aftermath of the fire. Discussions with interviewees focused on: the information that was available and the services that were provided at evacuation centres; how residents found out about the fate of their houses; and information about road closures and safer routes home or out of fire affected areas.



Registering at evacuation centres

Some interviewees noted that they were unaware of the need to register at an evacuation centre, or that services offered were only available to those staying at the evacuation centre.

*Who knows when days were but **I did go down to the evacuation centre and unfortunately, a gentleman there said if you weren't staying there, you weren't entitled to anything from there.** So, me being me, I do have a tendency to get my back up quite easily. I said, "Okay, we're on our own" – we didn't go back down there again. We stayed where we were. When the recovery centre opened, we went and registered there. – Nambugga*

We realised on the second day that we should have registered at the evacuation centre; we knew there was an evacuation centre but we thought that was for people who had nowhere to go. And that first night, we thought, "Oh, we'll just stay in a hotel. We can afford to do that. Let's not worry. There'll be people worse off than us"... I think that was a missing piece of the information puzzle to me; I didn't know that you should do that so that was a good lesson and once we heard that, we thought, "Oh well, we'd better go along and register" and we did. We realised a lot of it kind of in retrospect, that we could have got free accommodation, free food, free everything from there if we'd needed it, but fortunately we didn't, we were okay. **But I think for us, the availability of all that stuff at the evacuation centre was not clear until we found out later. I think being a bit clearer about the need to register at the evacuation centre, as I said earlier, being clear what that's for and why you should do that, and what it can provide – that would be good.** – Bawley Point.

Finding out about homes

Many of those who left their home during the fire experienced difficulty finding out whether their house had survived. A number of interviewees who lost their home expressed frustration and distress at the uncertainty of not knowing and, in some cases, the way they were informed. For some, the absence of official notification was problematic, both in terms of being informed in the most sensitive and appropriate way possible, and in terms of accessing insurance and other support later.

To this day, no one has formally or officially told us we've lost our house. The RFS say that it's the Hume police because when a fire comes through, there's got to be a coroner's report – they say it's the Hume police; Hume police say it's an active fireground so it's still with the RFS, and then it's only after, I think it was a week or 10 days, and admittedly we were highly stressed or distressed – and then when I spoke to somebody at the Hume police, he said, "Well, what are you going off at me for? If you already know, why are you calling me then?" **...there's not even a communication process that deems who's meant to speak to the impacted residents.** – Bundanoon



We actually were never officially told that our house had burned down. We spoke to the police about that and like I said, they said, "It's the RFS responsibility" and the RFS said, "It's the police responsibility". So, no one actually said to us "Your house is gone". We eventually got in... I think you want to see it for yourself, and I think it's just the... well, it's your home, it's your home base. There's always a pull to go home, isn't there? Even at that point in time, you know, we had a lot of people saying, "Come and stay with us" but they were hours away and we just felt we couldn't – we just had a very strong need to be close by – and we still do have that feeling. – Bundanoon

It would be really nice to have had something official from RFS to say we have determined that your house has been destroyed. And I'll tell you why, because we had had all sorts of dramas with council around proving that our house was destroyed. And at one point the insurance company or the council said something, said you need to go to RFS and you need to get them to give you something to say that the house has been destroyed. My feedback would be, where would I go to get that? Because if you go on RFS's website, it is not obvious who you go to to get that information, it really isn't. Particularly when it comes down to area specific information, there's just no information there. – Rosedale

Some interviewees noted that they found out about the fate of their houses through social media or by watching television coverage. Others were informed by neighbours who stayed to defend within the fire affected area. Residents also spoke of the need to see their home directly – regardless of whether it was still standing or destroyed – but noted that this was often delayed or frustrated by roadblocks.

The people that were there [at the roadblock] just said, "You can't go up there." So we just had to wait there and basically you just sat there and watched everything burning... The people that are on that front line where people were asking, "Well, what's going on?" Or, "Do you know if my house has burned down?" They really need to be briefed to say, "Look, we don't know," and have either someone to refer them to or something like that so they're not telling people something that isn't accurate. **That was probably the biggest issue we had... if you chose not to stay and fight the fire, you couldn't sort of go back in and retrieve anything or see what your house was like, because they were worried about powerlines being down and all those sorts of things.** – Malua Bay

There were some phones that did have mobile reception... **There were people that were behind us who actually were from Rosedale, and they showed us footage of houses going up in flames... It wasn't my house that was going up, but it was these people that we were with, it was actually their house going up in flames. And it was news reporting, it was a journo standing outside their house as it went up. Not the nicest way to find out**



that your house has burnt down. So by process of elimination we assumed that we had lost our place as well... But yeah, yes I would say to you that it was a horrible way to find out, that there was no official confirmation that they could say "These are the houses that have been destroyed". I don't know any way that would have been great to find out, but it was very much up to you to figure it out. – Rosedale

One interviewee was checking her Facebook feed when she came upon a photograph of her house burning:

I just clicked back onto Facebook, I guess trying to work out what was happening, because it was all turning really bad in Batemans Bay. The sky was going like blood orange and **that's when I saw a photo of the house burning and that was about 9:30.** – Surf Beach

Returning home (residents)

Many interviewees spoke of the need to return home once the immediate fire threat had passed. Some wanted to return quickly in case roadblocks prevented them from accessing their home and many noted the importance of being with the property to put out spot fires or embers after the fire front had passed.

Yeah, it was an unbelievable desire to go back home, which I've never ever felt before. I don't even particularly like our house. I have more respect for it now – it's not a pretty house, it looks out of place, but it's home. – Balmoral

We knew from past experience that roadblocks would be set up to stop people trying to get home, and so **we thought we would try and get in early, or quickly, to see if we could get home and firstly find out if we still had a house** because we'd assumed that we didn't have a house, and if we did, to take any action that we could to put any fire out that was at the house which is what we did. – Malua Bay

Participant 1: **It was just a gut feeling to come back,** because I thought if this fire's still around it, they say your house usually goes after the fire's gone, if you're not there to protect it after. I thought, well, we better go back and have a look.

Participant 2: We left the house there by itself for, what, six hours. The danger part I would imagine would've surely been over by then, because the fire was moving at a fair rate of knots, so it would've just gone straight through, so it was just the aftermath. **On reflection, we probably should've come back earlier.** – Malua Bay



And then that night in Sydney, **I was so upset thinking: “This is terrible, people are running around looking after our place and here we are comfortably in Sydney”**. I think that's just awful. So I said, "No, I'm going back." And the next morning at seven o'clock, one of the neighbours rang and said, "Yes, you can come back." So we said, "Thanks very much." We came back. The fire was still here, but just low fire, like a hazard reduction sort of. So that was still here and it stayed around and stayed around really. – Wollombi

Several interviewees noted that roadblocks prevented them from returning home when they wanted to, or forced them to take routes they considered less safe. Roadblocks also meant that some families were separated for some time. Others noted issues such as fallen trees and powerlines on the roads.

We were able to get back easily [the first time]... there were no barriers to come back so we came back, checked the house out, started, as I said, to put out spot fires... We decided to go back down and pick up the cars, which we did, **and they had put roadblocks up and they wouldn't let us back. We were only, maybe... the roadblock was a kilometre at the most from our house and they just wouldn't let us...** We could almost see our house from the roadblock but they wouldn't let us through, **so we had to go back and go around a back way which was actually quite dangerous – we actually had to drive through some fire grounds just around the back.** – Surf Beach

There was no one manning them... **When we got to the end of the street, it was “Road Closed” – I think “Locals only, residents only”, so that was fine, we got through that. I guess the part that was difficult then was because there were still trees smouldering, there were still fires all over the place** and there were obviously going to be trees by the side of the road that needed to be taken out too. – Surf Beach

Among those who returned home to find their house was still standing, many cited feelings of relief, surprise, and joy that their houses had survived, amidst shock and distress at the scale of devastation around them. Again, interviewees emphasised the importance of seeing homes for themselves:

We came into the Entrance Road and it was just devastated. It was all horrific, it was all burned and my daughter was sobbing, she was hysterical, sobbing and “Fucking hell, fucking hell”. I do remember seeing people standing around every now and then and then **I remember thinking, “Well, I can't burst into tears because I've got to see my house. I have to hold it together. I'm the mother here. This is my only house”**... So then we came down Kurrajong Street and all of that was burned; all these houses, big beautiful houses, they were all gone, and I was thinking, “Oh my God, this is awful”, and then we got to the bottom of Kurrajong, and we started to see some houses still standing and I thought, “Oh my God, these houses are still here” and I was like **– I'm not religious at all, but I was**



begging and I was saying, “Please be there, please be there, please be there” and I came around the corner and my house was still there. I was thinking, “Shit, all that deck. How did it survive?” – Conjola Park

We took the kids here two days after the fire because they didn't believe that we had a house. **It was a hard call because we knew they would see terrible things but they wanted to see it for themselves.** We did it really carefully – they came out, their trampoline was ruined, the treehouse was gone, the trees were gone – it was a terrible sight, all the fencing was gone. It's just miraculous we had somewhere to live. – Malua Bay

For many of those who returned home in the immediate aftermath, there was still fire in the landscape. This prompted ongoing concern and anxiety, even though the immediate danger had passed:

I woke up at 2:00 or 3:00 in the morning. It was very, very smoky, and I felt like I couldn't breathe. I almost had a panic attack thinking that the fire was coming back. Anyway, I got through that but everything wasn't all fine and dandy just because we were back – **there was still a few scary moments, and I think even a couple of days later, just up the hill, the fire reignited right behind the house of someone I know and they were waterbombing up there. So, it wasn't as if we came back, the fire had completely gone and nothing ever happened again; there were still events happening for another week or so around that didn't make you feel completely safe.** – Bawley Point

Many spoke of putting out spot fires and continuing to defend their property in the aftermath of the fire front passing through, and identified this as a key motivation for returning home once the fire danger became 'manageable':

But yes, then **we spent the next, I don't know, it felt like about three or four weeks of just little flare-ups, there was still fire – the fire was still burning two kilometres from here,** it was harassing other parts of Blackheath, and you know, we had the DC-10 flying over which was exciting and also terrifying. It was just constant choppers and planes, sirens, constant vigilance the whole time but yeah, we definitely had a sense of “Well, the worst has passed for us, for our block” and for this side of Blackheath, everything that has gone... I mean, obviously there was still a threat but it felt manageable, it felt that it was a known quantity now. – Blackheath

Interviewer: But that allowed you to return home to start putting out those spot fires?

Participant: Yeah, and just I guess to try and get settled for the night because we had to stay here; the fire had gone – **there wasn't anything left to burn really so we felt safe enough to stay here.**



Interviewer: When you were putting out the spot fires and protecting the house, how did you feel? Did you feel adequately prepared to do that?

Participant: Yes. Yeah, no, we were quite methodical about it really. Our daughter as well, we just walked around, identified where we needed to get some water on and what trees needed... yeah, it was actually quite calm. We were very calm about it; there was no sense of panic. – Surf Beach

Ongoing issues with power outages in affected people's ability to communicate and access information, and to access and store food.

We were without power for 25 days, and we just used that, and because we used to turn the electricity off at night, because it wasn't much point, because we'd just go to bed and then just turn it on in the morning again and run it all day. **Then it finally came on on the 25th day, and because we didn't have anything in the freezer, I went down and bought ice cream and stuff like that and put it in the freezer and the power went out again.** So then we turned it on again and left it going into night time. That was quite... Basically, it has been for the last nine months, we've just been... cleaning up. – Malua Bay

The power outages actually lasted for quite a long time. We were without power for a couple of weeks. And then it was on and off afterwards for a number of more weeks, because the relay tower was reliant on generator power, and the poor chap who was tasked with maintaining that generator couldn't get through to it on a number of occasions to keep the generator alive... **We hadn't expected the impact of that, with not being able to access things like Fires Near Me apps and stuff like that... And I think that was probably the most distressing part for a lot of people. It was the complete lack of information** and... Yeah. It was a long period of time. It was a very long period of time, and it became quite annoying. Does that make sense? It became a source of irritation, because it shouldn't have. We should have been able to make contact with people or people should have had an alternative system of contacting us. – Bermagui

We had no power, there were no phones. We had no fire for three weeks in the end and **we had no phones for nearly four months so we had to go down to the beach – we had to drive out to make phone calls.** So that was kind of up until the day and then there was the recovery. – Surf Beach

Tourists, visitors and occupants of secondary residences

For many tourists, visitors and occupants of secondary residences, the lack of communication and information – in conjunction with the lack of fuel – made it



difficult to act on official advice and to make decisions about when or where to go:

We wanted to let people know we were safe to alleviate their anxiety, so that was one aspect of it. **The other aspect was: how on earth do we get accurate information on which to base our plans, on which to base our actions?** And so that was the more problematic part, how do we get this information on which to base our actions. **And again it boiled down to ABC radio, amazing.** – Tourist, Durras

That morning we had no power, **we just wanted to go home, but we didn't really have any communication, all the phones were down. We couldn't contact our family to tell them that we were okay. So that was very stressful. We only had access to ABC radio.** Every half hour we were just sitting in the car and trying to get information about if we could go home, but all the information coming out was the best thing to do was to stay where we were. But we were concerned about that too because we had no hot water. We had food, but not enough to kind of... Like the fridges were full, that food was starting to go rotten and stuff. So we just assessed the situation throughout the morning and then we decided to try and go home. – Tourist, Malua Bay

So, **we were incommunicado and unable to get up-to-date information about how to get out, and that was the worrying thing.** People were told to get out but we didn't know how, we didn't know which roads were open, we didn't know where we could get fuel, we didn't know if we were going to get trapped there for a while, where we could get food. **The only communication channel we had was the car radio** and I was very conscious of conserving batteries and fuel and whatever. – Holiday home owner, Broulee

Many also noted a sense of guilt for using resources, and that outages and shortages continued to impact on their journeys while attempting to return home:

Turned the radio on and just went blind. I just went, "Yeah, okay, well, we'll turn down here then." And that's what we did. And at times, we were the only car on the road and I was just going, "Shit." **Yeah, that was a really a very high stress drive**, and I felt sorry for the kids... But they just shut up and sat in there for seven hours. I just threw food at them and we got to Cooma and ... But, **yeah, driving along and the kids would be like, "Oh, there's fire over there, Mum. Look at that mountain." And it's like, "Oh god. What am I doing?"** You always think in your head of contingency plans, like, "Oh, I could drive into that field and ..." Or, "There's water there or there's blankets or whatever." And, yeah, basically when I got home, walked into the driveway and just bawled my brains out because I was so exhausted – Tomakin



And I guess that's one **thing I felt that I wanted to get out of down there, because I was terrified and just wanted to get home. But it was also because I felt like I didn't want to use the resources for the locals**, because I was conscious even from the fuel perspective, the locals needed the fuel and they were stuck. – Lynam

Upon returning to their home or primary residences, many continued to be impacted by fires or smoke – particularly those who resided in Canberra – and this added to their stress:

Yeah, it did seem to go on forever. Even before December, as I recall, there were other parts of New South Wales that seemed to be under a lot of pressure and then Victoria got involved in January I think. **Then for us, we were almost going from the frying pan into the fire, when we came back to Canberra there were threats of bushfire.** – Secondary resident, Bawley Point

We were just super, I guess, over vigilant I think because the fires were so bad. **We just had the radio on 24 hours, we weren't sleeping. I think we were worried that it was going to happen here as well. Just for weeks and weeks we just had the bloody radio on just waiting for it to hit Canberra.** We kind of were living for that information so that was kind of horrible, constantly glued to the radio, hypervigilant I guess, waiting for it to happen here and just terrified it was going to happen here as well. And where would we go if it happened in Canberra – Tourist, Malua Bay.

Emotional and mental health impacts

Interview discussions highlighted significant emotional and mental health impacts that have become evident in the immediate and longer-term aftermath. Common points of discussion were: shock at the scale of devastation; concern for children; a sense of starting again forever changed. Tourists and occupants of secondary residences also identified significant impacts that arise both from the event itself and the difficulty of returning to communities that were not significantly fire affected.

Some interviewees reflected on stress, emotional impacts, and responses that they, or others in their family or group, experienced both during and immediately after the fires:

There's that, I guess that kind of adrenaline, that fight or flight feeling that we just had for two days straight. **We were just exhausted when we got home. Just that anxiety in your stomach of am I going to die and how to get out of here? It was just exhausting.** – Tourist, Malua Bay



I had a panic attack afterwards, and almost a nervous breakdown, went into shock for a few days. It took me three days to start feeling again; I'd gone numb. – Wyan

This fire season affected vast areas, and the visible damage to the landscape, environment, and towns was a source of ongoing stress for many after the fires. Some noted with surprise that the devastation still impacted on them many months afterwards.

*My youngest son and his wife were really upset because we were seeing the photos of Mogo, which had got up and they had already been there on the Sunday, they had driven up and spent the morning in Mogo and gone and had ice cream here and done this and done that. And they couldn't believe that two days later, some of the places they'd been to had just gone. And so that was quite devastating. And **they were also quite traumatised on the way back because of the dead animals and stuff that they saw because they had to go back by the coastal road. And I think they saw dead horses and stuff, and that upset them a lot. And I think a lot of us here were very upset by the animal death toll particularly.** – Tuross Head*

I came home the other morning – I'd gone out for a run and when I came back there was this really... it was probably a month ago, so still cold weather but I just got hit by this warm blast of quite strong wind, and I could feel my heart thumping and my stomach clenching and stuff. – Reedy Swamp

*Then after that, all we heard about was people saying how lucky you are that you didn't lose your house. I say, "Do you have any idea how hard I worked to keep it?" **It's still a bit raw. It took me probably three months to stop crying all the way home every night, from work. Still pretty confronting as you drive home,** because all the area that I drove through, probably about half my trip is through Bell and Dargan and Mount Victoria, all that area, but areas there that will never be the same. – Clarence*

*It was absolutely incredible because it was like the whole world was on fire. And yeah. See, **I'm still emotional, which surprises me.** I didn't think I was going to be. You sort of thought of not only the people that were losing their homes and some lives lost, but all the animals and wildlife around you. And it was such a huge, huge thing not only in New South Wales, but Queensland and Victoria as well. And **that amount of loss of life and devastation was just huge. So it is traumatic. And at the time, you can't really deal with the emotion of that,** because as I said, you're just focused. You just have to kind of make these decisions. And it has surprised me actually ... I know that in the middle of the year about June, and there was something on TV about the fires. And they had some footage I hadn't*



seen before of people trying to escape the fires. How emotional I became watching that. **And I think that I sort of squashed down a lot of the emotion of it at the time.** – Bermagui

Some interviewees also disclosed ongoing emotional or mental health impacts several months after the fires – with many expressing surprise at the triggers and/or their responses. For some, this was also related to the onset of COVID-19 so soon after the Black Summer fires. These reflections are suggestive of the scale and long-term nature of the emotional and mental health implications of Black Summer fires:

My biggest thing is, you just don't realise that something can affect you in certain ways. You know, I'm normally a really strong person; I've been through a couple of other tragedies in the past and things like that and come through them, but **this just really brought me to my knees**, and I can't explain specifically why. **It's just something that – it was so prolonged and my psychologist says it's that flight and fright; I'm still in that** because it was just... and I was trying to be really brave at the time, and failing dismally, and then all of a sudden it caught up with me. **I just want people to realise that it can affect everybody differently and something like this can have really big consequences to people's lives.** – Countegany

Because it wasn't just a flash fire, in the space of a weekend or a week, it's gone through. **It was a good, solid four to five months of stress. Then you finally get over that and then there's COVID. Seriously, my stress levels are through the roof. I've actually been, after the fires, been diagnosed with adrenal fatigue.** That's just being in a high state of stress all the time. It just burns you out. It's not ideal, but we're still standing. Our house is still standing. Our animals are all good. We're very lucky. – Mangrove Mountain

Tourists and occupants of secondary residences also experienced ongoing emotional effects and stress, and the vast majority qualified this with acknowledgments that their primary residence had not been affected and that others 'had it worse'. Some discussed the challenge of being fire affected and living in a community that was not affected. Others discussed feelings of guilt for being in a fire affected area, and others reflected on how the experience had changed their relationship with the coast or their holiday location.

*And it's affected me, because when I got back, also Canberra was covered in smoke, and there were days we couldn't breathe, and it turned to real anger, pure anger. Absolutely angry towards the way that we caused this, and the way that it was handled by our politicians, and was continuing to be handled by them. Yeah, horrible... **Because when I got back, I tried to talk to people at... You know when you're at work, and I said, "We went through this. It was horrible." And lot of people, "No, I don't want to hear about it." Aren't interested. And you think, you've got to unload a burden. Is there no-one that would listen to this burden? You kind***



of feel selfish, because we went through a hell of a time, and the kids did too, but we didn't lose our home. So let those that lost everything, let them be supported first. We step back. – Tourist, Malua Bay

We got back to Canberra and we were jittery, I was jittery for a few days because it was firing to recover from. And the pings on the phone coming in about a fire has been located in your watch zone were really nerve wracking. The kids have been quite frightened, particularly the ten-year-old, and the five-year-old had a bad nightmare the first night after the fire... It's also extremely difficult to have a summer holiday with the kids at home. **The lethargy after the escape and the long drawn out coming back from the coast, which took 10 hours, meant that we were unable to quite mentally deal with and cope with our Canberra bushfire survival plan.** We kind of couldn't think about it, I don't know why. I guess we just didn't really quite want to accept that it could happen here as well. And we didn't quite know where to go. – Tourist, Broulee

For my husband and I, **we now have a sense of dread at the south coast that we didn't have prior to this fire season.** Whether we wore rose-coloured glasses, I don't know. We felt devastated for the people, the human side of it that lost businesses and homes and their livelihoods and their lives. We felt overwhelming sympathy for people say at North Rosedale. We love our house at the coast. It is our... It's where the whole family always gets together. It's nothing flash, it's full of mementos and we're very nostalgic like that and we know what it would be like to lose it all. So, we have that sense of compassion and that gut-wrenching feeling when people lost the entire house. Now that's on a holiday home level and then you've got the people out in rural areas, farms, that have lost their real house if you like. So, yeah. I think we... **It's going to take several summers for us to settle if you like. I mean we will be tuned into fires probably for a good while yet.** – Holiday home owner, Broulee

The mental side has been really tough. I think for us, too, although we lived through the fire, because we left that area, we haven't had the chance to... I guess grieve, like a lot of the locals did, because they put on so many gatherings... **We didn't have anyone to talk to about what we experienced, because all our friends up here didn't go through what we did,** and all that type of thing. So that's been really hard. – Cobargo

Impact of COVID-19 on recovery

Many interviewees discussed the impact that COVID-19 had on their experience of the fire's aftermath and subsequent recovery. For some, lockdowns and working from home provided an opportunity to focus on cleaning up and their recovery. Some interviewees, though, shared that COVID-19 had negatively



impacted their recovery through loss of income or reduced access to suppliers, builders, and other support services. Others described feeling 'stuck' and unable to travel away from bushfire-impacted areas:

We were home for about four weeks, and had just started the clean-up and then COVID happened, which was actually quite good because we got to just take a break, here at home, and focus on getting this place back up to scratch. – Malua Bay

Coronavirus was exactly what we needed to do that. When we went into lockdown here, we were out in the paddock every day and we were clearing, we were working hard, doing everything that we needed to do, we were busy as, and continue to be that way and we will continue to clean up and try and get rid of all the shit we can. – Wolumla

I'm somewhat retired now but of course COVID came in and who would have ever thought of that happening – so not only did we get the fires, we lost all our trade during Christmas, running up, and of course the park, we had no trade post-fires at all – we had nothing, nothing at all. – Talbingo

I guess that's impacted and made the stress of being in a bushfire area even worse, because we haven't been able to go out. And even now, we don't go out much – we only go out when we have to. Because of Coronavirus, we're not out visiting people or going to the beach or anything that we would normally do. So, we're just here, looking at it. – Wyan

Some interviewees described how the stress of COVID-19 added to and compounded the stress of the summer fires – perhaps particularly among those who were also vulnerable to COVID-19:

Many of us know people who lost their homes elsewhere and some not far away, and some people we know in other places have lost homes. That's been traumatic and it's had to disentangle it now from the COVID experience where we sort of had another kind of trauma – it's hard to tell what's the effect of the fire versus anything else. – Bawley Point

I don't think so. Look, I think it was such an extraordinary event, and then to have had COVID on the back of it, I guess everyone is still a little bit stunned. I'm sure there's a shock, an element of shock, for everyone which has kind of rolled over into COVID, and probably an element... I guess a bit of helplessness. We were lucky in that we were able to actually get everything resolved before COVID really hit and just as it started to come in... – Surf Beach



I think that COVID-19 coming on top of the bushfires has added another layer of difficulty. I'm finding it hard enough and I'm one of the lucky ones whose place wasn't affected. – Wyndham

Life, apart from COVID-19, has gone back to relative normality. But **the Damocles' sword of the fires of that three or four week period really has just made COVID-19 even more psychologically damning, because we felt that's also been hanging over our heads and because we have a lot of retirees here** who are in the plus-70 age group, we have felt particularly vulnerable and it's taken away, I think, some of our resilience. – Bawley Point

Many interviewees discussed how physical distancing due to COVID-19 had reduced their ability to meet with other community members and to support each other:

It's terrible, because you can't be close to anyone and everyone needed cuddles and hugs, you know, because you could just see people in town just ready to burst into tears. And this was months after and I'm saying, "You right? You right?" "No, no" and you could just tell that they were ready to burst into tears... **People weren't prepared to be so alone. They needed support and people around them** and everything because they were so traumatised by the fires... – Eden

We don't get together that much as a community anymore. We've been obviously trying to. We'd planned to have a bit of debrief, let the hair down after everything happening but obviously COVID sort of kicked that in the guts. So, we haven't had that opportunity really yet. – Peakview

Some interviewees were also concerned that the fires and their devastating impacts had been forgotten because of COVID:

I think now the timeframe, I think accessing counselling, it's not that easy to get either anymore, at the moment and it seems to have taken ... COVID has overtaken the fire. I think that's ... and we're kind of feeling ... and I can say because I've heard this said a lot. We're being forgotten. – Verona

I kind of feel like we've been forgotten about, like we're put on the backburner and COVID is more important. – Moruya Heads

Since COVID hit, **we [bushfire survivors] sort of feel like just kind of a footnote.** – Malua Bay



RFS volunteers also cited concerns that their brigades had not had the opportunity to meet and train as normal due to COVID-19, and concerns for what would happen if members experience flu-like symptoms during the bushfire season.

4.8.2 What was community sentiment, expectation and experience of service provision by the emergency services?

Interviewees reflected on the service provided by emergency services before, during, and in the aftermath of the fires. Many offered praise for the RFS for their services, and recognised the risks that volunteers took to serve and help others, and that volunteers must have experienced significant challenges and trauma. For some, this motivated them to join the RFS.

The service we got from the RFS was brilliant and that's why I signed up. They brought down a membership form and said, "You should join," so I did. – Burragorang

*I think we who stayed behind had a little bit of a psychological hit but I think the fireys had seen amazing and confronted amazing sights and fortunately they were all under guidance which we think is very positive. And **of course we can't laud them enough – they did a fabulous job.** So that would be all I think I probably would need to tell you. – Bawley Point*

They were fantastic. I might get emotional by the way but they were really fantastic. The RFS is different than what we have in the United States and I think the magnitude of service before and particularly during and after was something that I really came to appreciate in an incredible new light. What they did very well was they brought the community together, all along this area and they were just providing the best information they had. – Kulnura

However, many interviewees suggested that the NSW RFS needed more resources – be that paid staff, younger volunteers, technology, or tools – to complete their work effectively. Some believed that the volunteer workforce was overwhelmed by the extent and duration of the fires.

It could have been dealt with in a much better way than what it was and I've put it fairly down to the lack of resources that the agencies were given, the defunding of organisations, and the fact that the RFS runs on volunteers. – Kiah

I just find it flabbergasting that we rely on whatever it is – the bushfire season for three months of the year, that people who are retired or do it as an extra activity on the weekends – I find it amazing that we ask for all these volunteers and expect them to deal with what we just saw last



summer. They're on-call for three months, it's a second job but mostly – we're hearing in regional predominantly – they're all like... if you're in your 60s you're quite young to be doing... and **I just think "My God, we're a first-world country and we're relying on volunteers.** – Bundanoon

The fact that it's just volunteers who are the ones that are doing it, just seems ridiculous and I guess the only thing, I'm just annoyed that they knew that it was going to happen and it wasn't prepared for in a bigger scale. – Broulee

Critiques of the services received focused on information and communication issues. For example, some critiqued the RFS' provision of information to enable people to make their own decisions and appropriate preparations:

It's just the lack of information that we were getting while we were in that situation. And I do appreciate, from a step back, that it's very hard, because all the resources that were there were being used in the most important ways, and that was to fight the fire at that point in time. They didn't have additional police officers to sit there and direct traffic, or for you to wind down your window and say, "Look, the road's open, " or that kind of thing. I understand that it was a very fluid situation. What happened 10 minutes ago is very different to what's happening right now. **I just wish that... Even the RFS, that someone is maybe posted at the station the whole time, and they have got live updates as to what's going on. Or even they've just got something like a board that can go out on the street, the main street that people are driving by, saying local radio, and then just have the AM number so people know which radio station to tune into when there's an issue. Like, we were just scanning our car radios just trying to find a radio station, because I don't know it, because I'm 30 years old and I don't listen to AM.** – Cobargo

Some interviewees explained that they had expected door knocking, or to see fire trucks on their streets, or that the RFS would fight fire, regardless of the dangers. This arguably highlights the need to clearly communicate the operational constraints on fire services – and important considerations to ensure the safety of volunteers – to ensure that communities have appropriate expectations and to prevent frustrations and disappointment.

It was the people further up, like, "No, you mustn't put anybody in danger." Well of course you're putting people in danger, if you don't put the fire out, you're putting many more people in danger... In a war, you go in and you fight. If there are hijackers on the plane, you don't wait until they crash the plane, you take the hijackers down. **If there's a fire, you go in and you fight the fire, and you fight it with whatever you can do.** – Adelong

But I sort of had this vision of if there was a fire, because sometimes you see in on TV. You see areas that have had fires and you see the fire people



going up the street saying, "Leave now. Leave now." Right? **I thought there would be like someone in a red hat, like... an official looking outfit, telling me to leave my house and where I had to go and what I had to do. But that didn't happen.** – Holiday home owner, Broulee

Several interviewees, though, noted that they understood the limitations on what the NSW RFS could do, and that property defence may not be possible in some situations. Some mentioned community meetings or conversations where they had been explicitly told that the RFS would not be able to attend their property:

*In an inferno like we had, a firestorm like we had **that all they could do was basically save lives and try and keep themselves alive at the same time. So it is a shared responsibility and it's something that we have to accept.*** – Quaama

*It's a very, very bushy area and it's a one road in and the same road out. **The RFS had always told us they would never come in to fight a fire because they couldn't turn their vehicles around, so our strategy had always been to leave.*** – Rosedale

*As I say, **we would've liked to have seen a fire truck up there on the day, but they had told everybody we can't do that.** We have to concentrate on the places that are fully built up... I think that's fair enough. **If people like us build in places like that, it's our responsibility. You have to take that on yourself.*** – Malua Bay

It was drummed into us. The fire was way too big to fight. You can't expect anybody, you just can't. – Wollombi

4.8.3 What programs or initiatives do people think could be implemented in their communities to help them prepare for bushfires in the future?

Interviewees identified a wide range of programs and initiatives that could be implemented to help people prepare for bushfires in the future. These suggestions are listed below.

General recommendations

- Greater use of Indigenous cultural burning in land and fire management.
- More support for people to clear properties of debris.
- More active maintenance of fire trails.
- Mapping and signage of water supplies and other local resources for visiting brigades.



- Greater use of spontaneous volunteers to allow community members to volunteer during and after bushfires.
- NSW RFS to have someone posted at the fire station/brigade shed during events to provide updates to communities and/or use a notice board (especially where radio and phone reception is impacted).

To help residents and communities

- Provide information about access requirements to enable the NSW RFS to enter property, BAL ratings and changes to building codes, insurance coverage, and recommendations for sprinklers and other measures to protect homes.
- An 'audit service' where bushfire planning and preparation is assessed and recommendations are made to householders.
- Better systems for ensuring that vulnerable people living alone (e.g. older adults, people with disabilities) are aware of bushfires and, if needed, assisted to take protective action.
- Better communication from insurance companies about the need to increase insurance premiums as rebuilding costs rise.
- Provide education, "training or understanding of fire to just community members, everybody, even if they don't want to be a volunteer in the fire brigade".
- Local telephone trees to facilitate better communication among neighbours.
- Councils to play a greater role in promoting preparedness and resilience.
- Communities need to take initiative. This could include sharing plans among neighbours, meeting each other regularly, and supporting older people to prepare and plan.
- Provision of personal protective equipment and equipment for farmers – particularly in locations that the RFS won't attend.
- Provide information via a mailout or letterbox drop about: checklists for household preparedness; what to expect during and immediately after a fire (e.g. loss of power and communication; need for a generator, battery-powered radio etc.); and what happens after a fire (e.g. the need to register at evacuation centres; what services are available at evacuation centres).
- Need to ensure occupants of secondary residences and absentee landholders also receive communications.

To help tourists and visitors

- Need to develop communication pathways/information flow for tourists, who are not part of local social and communication networks.



- Holiday homes/Airbnb to have emergency kits that include such items as a battery-operated radio, a torch, a map showing location of the nearest Neighbourhood Safe Place.

For evacuation centres

- Need to ensure that infrastructure is maintained.
- Facilities for elderly and vulnerable residents.
- Facilities to contain and care for pets and animals.
- Sufficient equipment and supplies (e.g., first aid kits, water, nappies, tents, bedding).



5. DISCUSSION AND CONCLUSIONS

Responsibility for managing bushfire risk is shared among many actors, including government, the private sector and the public (McLennan and Handmer 2012). Principles of shared responsibility are now central to bushfire risk management. For example, the Council of Australian Governments (COAG) *National Inquiry on Bushfire Mitigation and Management* emphasised that “Well-informed individuals and communities, with suitable levels of preparedness, complement the roles of fire agencies and offer the best way of minimising bushfire risks to lives, property and environmental assets” (Ellis et al. 2004, p.xix). The idea of shared responsibility was central to the 2009 Victorian Bushfires Royal Commission, which recommended that “State agencies and municipal councils adopt increased or improved protective, emergency management and advisory roles. In turn, communities, individuals and households need to take greater responsibility for their own safety and to act on advice and other cues given to them before and on the day of a bushfire” (Teague et al. 2010, p. 6). Most recently, the *NSW Bushfire Inquiry* reinforced that reducing the impact of bushfires is a shared responsibility between governments, emergency services and communities, with the latter needing to “play their part” by developing and implementing their Bush Fire Survival Plans (Owens and O’Kane 2020, p.146).

Research findings presented in this report highlight the complex nature of community preparedness for and responses to bushfire. These findings have implications for the NSW Rural Fire Service, other government agencies, local brigades and volunteer members, businesses, and the wider community at risk from bushfire. While some findings have obvious implications for a particular agency or actor, few are the responsibility of one alone. For instance, findings related to community experiences and expectations of warnings highlight the need for the NSW RFS to continue to improve the warnings and information it provides to communities during bushfires. However, provision of more timely and localised warnings and information alone will not prevent losses of life and property during bushfires. People must recognise that bushfires can occur without warning, due either to rapid onset or failure in some element of the warning system, and that they must be prepared to respond with little or no warning. Other findings highlight the need for collaboration and partnerships to reduce bushfire risk. For example, the finding that many tourists and visitors were unaware and unprepared for bushfire highlights the need for government, emergency services and business to work together to support tourism businesses, accommodation providers and their patrons to better plan and prepare for bushfire.

New audiences for bushfire safety information

People with previous experience and exposure to bushfires were often highly aware of bushfire risk and had engaged in considerable activity to plan and prepare. Previous experience of bushfire motivated many people to learn more about how to plan, prepare and respond. Some did this by accessing fire service information, while others sought to enhance their skills and knowledge by joining the NSW RFS or participating in bushfire safety programs. The extraordinary extent



of the 2019-20 bushfires, and the significant proportion of the NSW population that was threatened and affected (including by smoke), present opportunities to reach new audiences with bushfire safety information and motivate greater planning and preparation.

Managing community expectations of warnings and information

Findings from the analysis of interviews and survey responses highlight the growing expectations of the warnings and information that will be provided during bushfires. As information and communications technologies develop and become increasingly accessible via devices such as smartphones, people expect that they will receive highly detailed and localised information in near real-time. Analysis of interviews suggests that people may want this information to make more responsive or timely decisions about what protective actions to take and when. However, as discussed above, bushfires can occur without warnings and warning systems can fail. Community engagement and education should emphasise the potential for disruptions to communications during bushfires, underscoring the need for well-planned and decisive action to avoid last-minute evacuation or being unable to leave a fire affected area.

Fires Near Me NSW

Fires Near Me NSW remains the preferred source of warning and information for most people during bushfires. While many people believed information could be more up-to-date, or experienced difficulty accessing information due to power and mobile phone reception outages, Fires Near Me NSW remains most people's preferred source of warnings and information. Nevertheless, people identified ways it could be improved. Residents most commonly wanted more information about the active edge of a fire and where it is spreading, while many tourists wanted more information about roads and transport. It is important, however, that the availability of more localised and detailed information about the likely spread and impact of bushfires is not used to delay protective action. As has already been noted, there will be instances where bushfires occur without warning or where warning systems fail. Where possible, those who plan to leave in a bushfire should do so long before they are directly threatened.

New communications methods

The research found that fire spread prediction maps and Tourist Leave Zone messages were effective in communicating risk and motivating people to take protective action. Consideration should be given to the circumstances where such methods may be used in order to prevent their overuse and ensure they are taken seriously by the community. Community members must understand that such communications are based on predictions that, while based on the best available science, are inherently uncertain.



Preparedness of tourists and tourism businesses

The research found that many tourists and visitors had not prepared for the possibility of encountering bushfire when travelling or at their destination. While the NSW RFS already provided information to people who may be travelling in a bushfire risk area (RFS no date), these findings suggest more work is needed to raise awareness and improve the preparedness of tourists and visitors. However, tourism and accommodation businesses also bear some responsibility for bushfire awareness and preparedness. Participants in this research noted that some accommodation providers did not provide adequate information or equipment for bushfire. Businesses should be encouraged to plan and prepare for bushfire, including by: taking measures to reduce risk to their buildings and other assets; providing appropriate information to guests (such as the location of Neighbourhood Safer Places); providing essential equipment such as battery powered radios and torches (i.e. an 'emergency kit'); and being ready to relay warnings and information. Such measures are likely to be especially helpful to guests in unstaffed accommodation, such as short-term holiday rentals.

Neighbourhood Safer Places

The research found that many people are not familiar with the term 'Neighbourhood Safer Place'. There is a need for greater community education, advice and dialogue about the role of NSPs as places of last resort during bushfires. With appropriate support, NSW RFS brigades can play a key role in local conversation about NSPs and other sheltering options, and motivate greater planning and preparation for sheltering as a last resort.

Recognition and promotion of brigade activities

Research presented in this and previous reports (Whittaker et al. 2020) highlight the critical roles played by NSW RFS brigades in raising awareness of local bushfire risk and motivating people to plan and prepare. Local brigades have adapted and developed engagement strategies and activities to meet the unique circumstances of their communities. Consideration should be given to how brigade activities could be recognised and promoted to other brigades – for example, through brigade profiles, best practice case studies, or showcases – to share effective strategies and innovations.

Notifying people about house loss

Consistent with previous research (Whittaker et al. 2020), this study found that many people who left their homes during the fires experienced difficulty finding out if their house had survived. Some were distressed to find out that their home had been destroyed via media reports, images on social media and word of mouth. These findings suggest a need for a process that provides greater consistency and certainty in how people are notified about house loss. Preventing the posting and sharing of images of destroyed houses on social



media is inherently challenging due to the unregulated nature of social media. However, the sharing and posting of such images could be reduced through proactive messaging that discourages such behavior and emphasises sensitivity and respect for fire affected people.



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