



LAKE CLIFTON FIRE 10 JANUARY 2011

FIELD INTERVIEW TASK FORCE REPORT - COMMUNITY BUSHFIRE SAFETY

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Publisher:

Bushfire CRC, Melbourne Victoria

September 2011



**Bushfire Cooperative Research Centre Extension:
Communicating Risk - Human Behaviour Under Stress (2) Project**

Report Number 3: 2011

**Lake Clifton Fire 10 January 2011: Field
Interview Task Force Report-Community
Bushfire Safety**

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Table of Contents

Section	Page
Summary	3
Background and Aims	3
The Lake Clifton (Dorset Road) Fire	5
The Lake Clifton Fire Field Interview Task Force – Methodology	5
Those Interviewed	7
Preparedness For Bushfires	8
Prior Training and/or Experience with Bushfires	8
Reading About Bushfire Safety	9
Apparent General Knowledge of Bushfire Safety	9
Awareness of Bushfire Risk for the Area	10
Insurance Against Bushfire	10
Long Term Preparation to Reduce Bushfire Threat	10
Readiness For a Bushfire	11
Awareness of Potential Fire danger Weather	11
Readiness to Respond on the day	12
Awareness That a Fire Was Approaching	13
Readiness to Take Survival Action Knowing There Was a Fire	13
Prior Bushfire Plans/Intentions, and Actions on the Day	14
Where Residents Went After Leaving	15
Residents’ Sources of Information About the Fire Threat	16
Expectations of the Fire Service	17
Psychological Factors Influencing Residents’ Decisions and Actions	17
Additional Factors Potentially Contributing to Outcomes	19
Would Residents Behave Differently in the Future?	19
Comparisons of Those Who Left With Those Who Stayed.	20
An Unexpected Finding - Driving to the Fire	20
References	21
Appendix A: Interview Protocol	22
Appendix B: Lake Clifton Fire – Notes for Interviewers	23
Appendix C: Fire Scar and Property Location Map	25
Appendix D: Ethics: Participant Information Statement	26
Appendix E: Interviewee Demographics Questionnaire	29
Appendix F: Recovery Advice for Residents Leaflet	30
Appendix G: Interview Transcript Coding Form	31
Appendix H: Bushfire Survivor Threat Rating Scale	35
Appendix I: Conducting Post-Bushfire Field Interview Research – Brief Guide	35

Acknowledgements

We are grateful to Suellen Shea (FESA), Director Community Engagement, for organising and providing support to the Task Force (as well as being a Task Force member). Vivienne Gardiner, Heather MacNamara, and Ruth Norton from Community Engagement assisted with the interviews. Patrick Dunlop organised data collection support from the University of WA. Patrick Dunlop and Karli Riseborough (UWA), and Meagan Tyler (RMIT University) conducted interviews. (The first author also conducted interviews).

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Summary

Following the fire on 10 January 2011 which destroyed 10 homes in the Lake Clifton area, a field research interview Task Force was established under the coordination of the Bushfire CRC. The Task Force comprised researchers from three universities and from FESA Community Engagement. A total of 40 interviews were conducted: 35 with households in the fire scar area—this represents 56% of the 62 households affected. The remaining five interviews were with households on the edge of the fire scar. A semi-structured interview protocol was used. Interviews were coded and transcribed. The transcripts were analysed for content and themes by the La Trobe University (Melbourne) Bushfire CRC team. This report describes the main findings from the Task Force interviews in relation to:

1. Bushfire preparation and knowledge.
2. Readiness to respond to bushfire threat.
3. Bushfire plans and intentions, and actions on the day.
4. Information and communication on the day.
5. Factors affecting decisions and actions on the day.

The major findings were:

- Most people interviewed had no previous experience of bushfire.
- Most people interviewed had received bushfire preparedness material prepared by FESA.
- There was a high level of awareness of bushfire risk in the community – but less than half indicated that they had any longer term preparedness measures in place, and there was limited appreciation of the potential for a serious bushfire on that particular day.
- Most people had thought about what they would do in the event of a bushfire and had a bushfire plan, and took action in accordance with the plan – after the fire most said they would follow this same course of action again.
- Visual cues of the approaching fire (smoke, embers, flames) were particularly important in the decision making process.
- Everyone interviewed indicated that they were insured (although some indicated they were underinsured).
- The majority of people who left went to a nearby local community point (the Lake Clifton Bakery area).
- Practical assistance from family and friends, and information on the location of the fire were seen as key factors impacting on survival.
- In addition to the general sense of threat, visual cues of the approaching fire, and the prior commitment to a bushfire plan, a need to protect pets or livestock was identified as an important psychological influence on decision making for many on the day.

Background and Aims

On 10 January 2011, a fire broke out on the western side of the Forest Highway, to the east of Lake Clifton. Subsequently, no lives were lost, but 10 homes were destroyed, together with some outbuildings, vehicles, and equipment. It is understood there were some livestock losses. The fire and its immediate aftermath caused considerable public debate and media comment. Senior

managers in FESA requested the Bushfire Cooperative Research Centre (CRC) to coordinate a joint field research Task Force to interview a sample of those residents affected by the fire. The Task Force comprised staff from:

- FESA Community Engagement.
- School of Psychology, University of WA.
- School of Management, RMIT University (Melbourne).
- School of Psychological Science, La Trobe University (Melbourne).

A total of 40 interviews were conducted over four days: 18 - 21 January, 2011. According to information provided by the Shire of Waroona, there were 62 occupied properties within the fire-scar area. Interviews were conducted at 35 of these properties (56% of the occupied properties). A further five interviews were conducted at residences on the immediate north-western edge of the fire scar.

The interviews were subsequently transcribed and analysed for content and themes by the La Trobe University Bushfire CRC team.

The **aim** of this report is to summarise the findings extracted from the interview transcripts in relation to:

1. Bushfire preparation and knowledge.
2. Readiness to respond to bushfire threat.
3. Bushfire plans and intentions, and actions on the day.
4. Information and communication on the day.
5. Factors affecting decisions and actions on the day.

While many interviewees volunteered information about their experiences after the fire, especially issues associated with restricted access to fire-affected areas, this information has not been incorporated in the report.

We have attempted to present the information obtained from our analyses of the interview transcripts in such a manner that it speaks for itself. **We have offered a small number of comments about issues which stood out to us as researchers.** We have **not** made recommendations, judging that doing so was outside our remit as researchers and more properly the business of those with relevant experience in relation to community bushfire safety programs.

Where it was available we have provided comparative information about bushfire preparation and readiness extracted from transcripts of interviews with residents of the Marysville area affected by the Victorian 2009 Black Saturday bushfires. Like Lake Clifton, Marysville is a small community in a rural area which had never previously been affected by a major bushfire. However, unlike the Lake Clifton circumstances, the Black Saturday fires occurred on a day of predicted extreme fire danger weather and total fire ban, and occurred following six days of widely publicised predictions about extreme bushfire risk.

The current report follows an earlier exposure draft, on which senior FESA and Bushfire CRC staff were invited to comment. Subsequently, in this **final report**, several additions and clarifications were made. Errors and omissions were also remedied.

The Lake Clifton (Dorset Road) Fire: 10 January 2001

[The following is based on information provided to the first author in briefings by FESA staff on Monday 17 January, 2001, and on material in the FESA document *Major Incident Review, Lake Clifton, Red Hill and Roleystone Fires, June 2011.*]

Lake Clifton is a rural residential area 109 kilometres south by road from Perth CBD. The vegetation at the time is best described as open woodland, with considerable amounts of fully-cured grass. The dominant large tree is the tuart (a eucalypt hardwood), there are also banksias and casuarinas, with melaleucas in lower-lying areas. Properties are relatively large; 2 – 6 hectares. House construction varies greatly. More modern dwellings are mostly brick veneer with steel roofs. Local government (Waroona Shire) restricts the amount of vegetation clearing permitted on each property.

Smoke from the fire was detected at 11.47 on Monday, 10 January, 2011. The fire broke out on the western side of the Forest Highway and moved in a west-north-westerly direction.

The Fire Danger Rating on the day was forecast as “Very High” for the SW coastal area. An automatic Bureau of Meteorology weather station at Mandurah recorded peak readings of 37.2 degrees C, 15% RH, and winds east-south-east of 20 kph. The fire burned quietly initially on public land west of Forest Highway, near Dorset Road, moving in a generally west-north-west direction. At about 15.19 the fire was reported to be burning close to the Armstrong Hills residential area. At 17.00 the first house loss was reported by aerial observation. The fire was declared contained at 03.00 Tuesday 11 January, 2011. While more than 40 houses survived, ten were destroyed.

The Lake Clifton Fire Field Interview Task Force - Methodology

Research Task Force Membership

The field research Task Force comprised four members from three universities (two from UWA, one from RMIT University, one from La Trobe University), and four members of FESA Community Engagement. Prior to commencing data collection, two Task Force representatives met with the local community recovery group to explain the purpose of the research and gain an understanding of the issues the community was facing in the wake of the fire. The Task Force then established a ‘home base’ close to the fire affected area (at the Lake Clifton Bakery) to act as a central point of contact and from which to conduct interviews with residents. All members of the Task Force were dressed in branded apparel (either Bushfire CRC or FESA as appropriate) and all wore name tags.

Materials & Procedure

A semi-structured interview protocol was developed by the four university researchers in consultation with the FESA Director, Community Engagement. It was based on that used by the Bushfire CRC Research Task Force to interview survivors following the 2009 Victorian bushfires (Whittaker et al 2009). Residents were asked about their awareness of bushfire risk; knowledge of and preparation for bushfires; bushfire plans; awareness of official and informal warnings and communications about the fire; and their experiences and actions on the day of the fire. Interviewers were also encouraged to ask further probing questions or

deviate slightly from the protocol where appropriate so as to elicit more detailed responses. A copy of the interview protocol is at Appendix A.

A set of Notes For Interviewers was circulated before the Task Force went into the field (Appendix B). Prior to commencing data collection, a FESA map of the area, showing the fire scar and the locations of all affected properties, was shared amongst the Task Force members. The map also showed the status of the property (vacant, structure[s] damaged, structure[s] destroyed, or structure[s] intact). This map was used to monitor which properties were visited (a copy is at Appendix C). Each interview pair was also equipped with the following items: a digital audio recorder, pens/pencils, a laboratory note book, a laminated copy of the interview protocol, and a ring binder containing project information sheets, support information sheets, and demographic questionnaires. All interviewers were provided with ample supplies of water throughout the day, and food was provided at lunchtime.

Interviews were conducted during the period January 18 – 21, 2011. On each day, all Task Force members who were rostered to work met at the Lake Clifton Bakery (as the operations point) at an agreed starting time. The Task Force members rostered for that day then formed pairs, usually one university researcher with a FESA staff member. At no stage did any pair comprise two individuals from FESA as it was considered very important that the research be seen by residents as involving independent researchers in addition to FESA staff. At all times, the university researchers wore a blue Bushfire CRC tabard with “Researcher” appearing in clear lettering.

Each working day was divided into two time blocks: a morning block (10am-1pm) and an afternoon block (2pm-4pm). Pairs were mixed such that no two individuals worked together for more than a single block so as to minimise any systematic researcher bias effects. Prior to the commencement of each time block, each pair was assigned a list of addresses to visit in sequence. All addresses were selected on the basis that the property was within the fire scar area, or just outside and had come under significant fire threat on the day. Task Force pairs then drove to locations near their assigned addresses, and visited residences on foot.

All but two participants were interviewed on their properties (the two other interviews were conducted in the Lake Clifton Community Centre, which was serving as a relief centre). Where a home was undamaged, a door-knock approach was used. In some cases, residents whose homes had been destroyed were seen to be on their properties, and where deemed appropriate, they were approached by the researchers. In most instances, residents agreed to be interviewed at the time they were approached, though some asked if they could reschedule their interviews. Only two residents declined to be interviewed, and one other requested that the interview not be digitally recorded (written notes were made).

Before commencing a formal interview, residents were informed of the purpose of the study and assured that their responses would be de-identified and presented in aggregate form in any reports. Residents were also advised that they could terminate the interview at any time they so wished and had the right to refuse to answer any question. A copy of the written information statement provided to each household is at Appendix D. Within each Task Force pair, one member acted as the lead interviewer (the lead interviewer was always a university researcher). Where it seemed appropriate, participants were advised that, if they so desired, the FESA representative would be willing to exit the interview if this would enable the resident to speak more freely. The offer was never accepted, but in one instance the offer appeared to be received positively as evidence of the seriousness with which the research was

being conducted. Finally, the interviewee, or primary interviewee if it was a joint interview, was asked to complete a household demographics questionnaire (a copy is at Appendix E). At the conclusion of an interview, residents were provided with a FESA information leaflet describing the support services available to fire-affected households (Appendix F).

The 39 recorded interviews were transcribed by Pacific Transcription Services. A coding sheet developed by the La Trobe University Bushfire CRC team (Appendix G) was then used to extract information in standardised form from the transcripts. The coded data were entered and analysed using the *SPSS* statistical software tool. Extracts from all the transcripts which illustrated particular issues and themes were identified and categorised using the *NVivo8* text management software tool.

In the following sections, we mostly present numerical summaries of the information provided by interviewees, followed by some extracts from interview transcripts to illustrate the language used by participants to describe their experiences. The number at the end of the extract is the code identifier for the interview.

Those Interviewed

A total of 40 interviews were conducted, involving 52 actively participating adults (at 12 properties two adults engaged in joint interviews). Four of the interviews were with residents whose house had been destroyed. The 52 interview participants were 21 men and 30 women (one 'not recorded'). Their mean age was 54 years and ages ranged from 26 to 77 years.

Figure 1: Age Distribution (N = 38)

<i>Range</i>		<i>Frequency</i>	<i>%</i>
18 – 25		0	0
26 – 40	xxxxxxx	6	16
41 – 55	xxxxxxxxxxxxxxxxxxxx	16	42
56 – 65	xxxxxxxxx	8	21
66 – 70	xxxx	4	11
71+	xxxx	4	11

The 40 households comprised 24 with no children; and 16 households with a total of 32 dependent children (under 16 years of age): an average of 2 per household, range 1 – 4.

Of the 40 sole or primary interviewees, 15 (38%) worked; 15 (38%) were retired; 4 (10%) were engaged in child care and home duties; while the occupational status of 6 (15%) is not known.

Not all interviewees were asked how long they had resided at the property. Of the 29 who provided the information, their period of residence ranged from 3 months to 22 years. The median period of residence was 6 years (the average was 8 years). A division was evident involving longer-time

residents who were retired; and a somewhat younger group of mostly couples (and a few single parents) with children who had moved-in relatively recently for largely family life style reasons.

Almost one-third (n = 12) of those interviewed commented on what they perceived to be a generally low sense of community among residents.

We didn't really communicate...I introduced myself when they first moved in, and it kind of didn't really work out. And I guess that's the way people are here. When you move into these kind of environments on, like, five acre blocks and no one can see you, it's kind of like that's the way people want it. [A003]

We know people's faces a lot but we don't really associate with a lot of people, apart from our immediate neighbours, because both of us still work. [A004]

One couple described their frustration at being unable to arouse interest in a community bushfire safety meeting or in community social gatherings. Only a few interviewees described close ties with immediate neighbours.

In spite of many interviewees describing the natural environment as a reason for living in the area, only a few of those interviewed expressed a strong emotional attachment to their property (two of these interviewees stayed and defended successfully). Several others indicated in passing some reluctance to clear trees, in order to maintain their natural environment.

Facilitator: Well, knowing that there was a chance of a bushfire, what preparations, if any, did you and your husband make to protect the place against a fire, if it was to occur?

Interviewee: Well, we tried to clear as much as possible around the house without going too far, because a part of our covenant or whatever on the block is that you don't clear too much space. So we kind of went as far as we possibly could in that area, I think, without felling the great big trees. [A004]

Preparedness For Bushfires

Table 1: Prior Training and/or Experience with Fires

	Lake Clifton	Marysville - Victoria
YES	18% (5)	37% (13)
SOME	25% (7)	6% (2)
NO	57% (16)	57% (20)
UNCLEAR	12	13

Yes:

I have experienced fires before but not from a personal owner's point of view, being in the _____ and having been involved in numerous fires. [A004]

Some:

Facilitator: You've had experience on the land with fire?

Interviewee: No, no, just in the Navy we did a bit of fire fighting, that's all. [A002]

Those who answered "yes" reported that their training/experience was in the form of work activities, or workplace training to do with fire safety generally.

Table 2: Reading About Bushfire Safety

	Lake Clifton	Marysville - Victoria
YES	58% (18)	N/A
SOME	19% (6)	N/A
NO	29% (9)	N/A
UNCLEAR	9	N/A

Those who answered “yes” mostly described reading FESA material received from Waroona Shire.

Yes:

Well I think it's just commonsense really and media and we did get a thing in the mail from FESA, I think, of what to do to your property and, yeah, we just sort of thought about it and thought what happens if a fire comes through? What's going to make it – the house go up or whatever. [A011]

Some:

We've had plenty of information from fire authorities. A kit came through, you know, your bushfire survival kits and all that type of thing. They've been very, very good. How to prepare in case of a fire and emergency and of course when the day comes you think Jesus Christ I should have read that bloody thing a bit more. [A001]

Table 3: Apparent General Knowledge of Bushfire Safety - Ratings on a 4-Point-Scale

	Lake Clifton	Marysville - Victoria
EXTENSIVE*	12% (4)	28% (11)
SOME	41% (14)	46% (18)
MINIMAL	29% (10)	21% (8)
NIL	18% (6)	5% (2)
UNCLEAR	6	2

Extensive:

You just don't stay, as far as we're concerned. If it was just an ordinary day no wind and...Just a fire, you know, between here and next door or something. Well, you'd get out and fight it but not that sort of stuff. We've seen it before....Not wild fire. Probably the amount of wind we had....It's insured, so--see you later! 'cause you know even on the ground you can't do anything....It was racing across the trees at a frightening rate. Yes, we've seen it all before so we understand it. [IC_C_016]

Some:

But I was born and bred in the country and lived in the country most of my life and so I'm very aware of bushfires and how to prepare for them. [IC_A_001]

Minimal:

Facilitator: Have you lived in bushfire threat areas before?

Interviewee: Yes, a long time ago, probably 24 years ago. [IC_C_015]

Table 4: Awareness of Bushfire Risk For The Area

	Lake Clifton	Marysville - Victoria
YES	97% (35)	94% (45)
SOME AWARENESS	3% (1)	6% (3)
NO AWARENESS	0% (0)	0% (0)
UNCLEAR	4	0

The large percentage of residents indicating (in hindsight, it must be remembered) awareness that living in the area entailed risk of a bushfire suggests that what is needed is instruction and assistance about those actions able to be taken by residents to minimise specific threats to life and property posed by bushfires, rather than simply raising general awareness of risk.

Yes:

Facilitator 1: Okay then. In terms of you being here how concerned were you about the possibility of being affected by bushfire living in this house in this place?

Interviewee: Yeah, I suppose it was a concern. When I first bought it and we saw all these trees and vegetation around I think it's the first thing you think about is fire. But then again some of the neighbours tell us we haven't had a fire here since Jesus Christ entered Jerusalem. So everything was hunky-dory and we took it on... You get that feeling it'll never happen. It'll never happen. But it did. It did, yeah. [A001]

Some:

Probably just one of those things that you keep in the back of your mind that you never really expect too much. [A006]

Table 5: Insurance Against Bushfire

	Lake Clifton	Marysville - Victoria
YES	78% (28)	N/A
UNDER-INSURED	22% (8)	N/A
NO	0% (0)	N/A
UNCLEAR	4	N/A

Table 6: Long-Term Property Preparation To Reduce Bushfire Threat – Ratings on a 4-point Scale

	Lake Clifton	Marysville - Victoria
EXTENSIVE	6% (2)	38% (15)
SOME	44% (16)	28% (11)
MINIMAL	47% (17)	25% (10)
NIL	3% (1)	10% (4)
UNCLEAR	2	1

Extensive preparation:

I bought a fire fighting pump. I put in a secondary fire break around the house...I burnt kind of around here, where the bush was closest to the house...I had 70 metres of firefighting hose. ('water?') Rain, 95,000 litre galvanised iron tank. [A003]

Some preparation:

I always used to go around the block and make sure I cut it down; slashed all the vegetation down. I picked up all the loose stuff that I could and made fires during the winter....I've got about half a dozen reticulation points around the house. I've got a very long lead from the bore directly into the tank, bore water and as soon as that fire started there I turned the bore on and sprinklers then came on to my roof and sprinklers all came around here... we filled a suitcase and this was after reading that fire brigade stuff that came through the post...we put all relevant documents in there and we put a few photographs in there, all photograph albums and we filled that suitcase with what we called memories. [A001]

Minimal preparation:

Well we always thought we'd leave because we just weren't equipped to fight it, really. [A012]

Nil preparation:

no I didn't even think about it. [A007]

Readiness For A Bushfire

Table 7: Awareness of Potential Fire Danger Weather on 10 January 2011 – Ratings on a 4-Point Scale

	Lake Clifton	Marysville - Victoria
HIGH	4% (1)	54% (22)
SOME	4% (1)	22% (9)
MINIMAL	33% (9)	20% (8)
NIL	59% (16)	5% (2)
UNCLEAR	13	0

High awareness:

I also watch the weather for looking at the systems; I'm quite good at knowing what the weather is going to do. So I said to S_____ it's going to be a real bad week, strong easterly coming so if someone lights a fire we're in trouble... the weather forecast said the fire danger was high....we watch GWN and they did the long term forecast...And the fire danger map.[A005]

Some awareness:

Interviewee: I had loaded it into the car the morning of the fire because we were actually going down to Mount Barker to visit some friends on the Wednesday. I said to R____, I said I'm not leaving here without it, I'm not. Because, I don't know, by then I was really starting to...This was about two hours before we saw the first smoke.

Facilitator: What made you concerned on that day? What was it about...

Interviewee: I think it was just increasingly - every time we had a really strong wind, the fact that - I don't know...I think it was just because it was so, so dry. The year before, it had rained all the way through, right through until November and I just didn't have a concern last summer. But this summer, it just felt so dry. It just sort of felt like it was going to happen somewhere.[IC_C_009]

Minimal awareness:

Facilitator: any warnings about the next day that there might be a high chance of a fire or high risk of a fire spreading if one were to start that you can recall?

Interviewee: Probably that it was just 37 degrees and I think the winds were at least 30 knots or something.

Facilitator: So the general weather forecast was enough to trigger some, okay, if there is a fire there could be some problems?

Interviewee: Yeah. [IC_C_001]

Nil awareness:

Facilitator: Was there anything either in the weather forecast leading up to the fire or in the weather patterns on the day of the fire that rang alarm bells for you?

Interviewee: No, nothing. Nothing at all. We'd been up to the farm - to my sister's farm up in [unclear]. We went up there all weekend and came home Sunday afternoon, and had to go to town for something. We said, we'll just do a bit of shopping. Casual as you like. [IC_A_009]

The above findings (and those in following tables) highlight a challenge for fire authorities nationally: how to get across to residents that a serious fire **can** happen on days when **no** official warning of fire danger weather has been issued.

Table 8: Readiness to Respond to Bushfire Threat on 10 January 2011 - For Defence or For Leaving Early – Ratings on a 4-Point Scale
(That is, readiness to take action on 10 January 2011 IF a bushfire was to threaten—cf Table 10))

	Lake Clifton	Marysville - Victoria
HIGH	3% (1)	32% (13)
SOMEWHAT	3% (1)	46% (19)
MINIMAL	3% (1)	20% (8)
NIL	91% (30)	2% (1)
UNCLEAR	7	0

High readiness:

We were confident that the plan that we had and the equipment – we didn't start the system up till just before the fire hit the fence. We had it going an hour and a half... The other preparation was I had S_____ get blankets and towels ready with the [water] trough and we've got the swimming pool at the back. [A005]

Somewhat ready:

I already had all these box files that had all our passports, wills, documents, insurance, that was all packed...We downloaded all the computer stuff onto a Terabyte drive, all the photos and everything....So we had all that and basically I decided that if we ever were away overnight - in fact, I had loaded it into the car the morning of the fire because we were actually going down to Mount Barker to visit some friends on the Wednesday. [IC_C_009]

Minimal readiness:

Facilitator: so you'd been organising the phone tree stuff? Other preparations you've done around the house for bushfire?

Interviewee: Yeah, I'd been raking around. On the day, I actually did about five barrow loads [IC_C_007]

Table 9: Awareness That a Fire Was Approaching on 10 January 2011 –Ratings on a 4-Point Scale

	Lake Clifton	Marysville - Victoria
HIGH - detailed	9% (3)	24% (10)
SOME - vague	49% (17)	37% (15)
MINIMAL – 'fire somewhere'	34% (12)	39% (16)
NIL	9% (3)	0% (0)
UNCLEAR	5	7

High:

It was just the fact that we were told there was a fire so we kept an eye out and as it got bigger and closer then we made the move...So my first instinct was take a look, see how bad it was, and on the way down another - I think there's one main flare-up further south, about roughly four k's. [IC_C_003]

Some:

Well, you know, we got [unclear] up the path and then we had to drag – so close on the other side but there was already sparks...We were just about to have lunch when D_____ looked out the front window and she said it was all yellowy and that...A red glow. It was so red...So she went to see what – it was just like an eclipse. She went to see what was causing it and the next thing, the fire, we seen the fire and that was right over the other side of the river at that time. I went to see where it was coming from straight away and I come back and told her straight away to get her gear in the car and get ready to go. [IC_C_013]

Minimal:

We saw some smoke we thought it was back towards South Yunderup, so we thought we'd go down the freeway, not to sticky beak, but we'd just go down the freeway, come back and have a look see. [A002]

Table 10: Readiness to Take Action to Survive Under Impending Bushfire Threat on 10 January 2011 – Ratings on a 4-Point Scale
(That is, readiness to take action on 10 January 2011 WHEN it was known that a bushfire was burning in the area-cf Table 8)

	Lake Clifton	Marysville - Victoria
HIGH	24% (7)	35% (12)
SOMEWHAT	38% (11)	41% (14)
MINIMAL	14% (4)	21% (7)
NIL	24% (7)	3% (1)
UNCLEAR	11	7

High:

it was down on Southern Estuary and we saw the smoke was horrendous and by the time I got here it was the orange haze and it was ash falling...So I was here five minutes, grabbed the car, drove in the dogs and we were gone. [IC_C004]

Somewhat:

it was a case of like – well, should I move them or not, is it going to come. That was what was going through my mind. Like it might not even come that far and I've gone to the trouble of moving them all and it might not just happen. I know it sounds really stupid, but that's sort of what I thought...But at the back of my mind I'm thinking it's not going to come anyway. So I wasn't going to start whacking things in the trailer. I know that sounds really weird when I think about it. I could kick myself. 'Cause I'm thinking it's not going to come anyway and I'm going to have to unpack all this bloody stuff when I get home. That was the bottom line. [IC_C_001]

Minimal:

It was only - that was 1.15. I didn't actually get in my car till quarter to two because I kept thinking to myself, righto, what haven't you done? Or it's still pretty much the same as it's been for the last hour or more. Do you really need to go? I potted around, put a few dishes in the sink. I thought if it was going to burn down I'd like it to be tidy. [Laughs] [IC_A006]

Nil:

I just grabbed the phone that was - I was standing right there and ringing my husband at work and I was just in a mad panic. I just said to him - trying to say what I had to say, and I could hardly speak and I could hear him trying not to panic. I'm just saying - tell me what to do. I don't know what to do, tell me. You can't think. There's a bushfire and it's really close. I tried to explain the toilet blocks that are there - I said it's coming from that way and just getting closer and closer. That's when he said - go and turn the bore on, grab the dog, maybe chuck a few lots of clothes in your bag - in a bag, and get out, now. [IC_C_015]

Prior Bushfire Plans/Intentions, and Actions on 10 January 2011

Table 11: Prior Bushfire Plans/Intentions, and Actions on 10 January 2011

Prior Bushfire Plan/Intention	N	Action on the Day	n	%
<u>Leave Early</u>	26	Left early	5	19%
		Left late	19	73%
		Absent by chance	2	8%
<u>Stay and Defend</u>	4	Stayed and defended	3	75%
		Left late	1	25%
<u>Wait and See</u>	2	Stayed and defended	1	50%
		Absent by chance	1	50%
<u>No Plan</u>	5	Left late	2	40%
		Left early	1	20%
		Stayed and defended	1	20%
		Absent by chance	1	20%
<u>Unclear</u>	3	Stayed and defended	2	67%
		Left late	1	33%

In summary:

Interviewees' **bushfire plans/intentions** were:

- Leave early, 65% (26)
- Stay and defend 10% (4)
- Wait and see 5% (2)
- No plan 13% (5)
- Unclear 8% (3)

Interviewees' **actions** were:

- Left early (warnings, saw smoke) 15% (6)
- Left late (saw flames, embers) 58% (23)
- Stayed and defended successfully 18%; (7)
- Absent by chance 10% (4)

Overall: Of those who **intended to leave** prior to impact of a fire, **92%** (24/26) did so. Of those who **intended to stay and defend**, **75%** (3/4) did so. **Clearly, the household bushfire 'plan' is likely to be a major determinant of what household members do when bushfire threat is imminent. Close attention to enhancing the effectiveness of educational material and programs about household bushfire plans by community bushfire safety workers perhaps has the greatest potential to generate positive results for the future.**

Interviewees Who Were Not at Home When the Fire Was Reported

Nine of those interviewed were not at home when the fire was reported initially (most were at work) and they came home when they received news of the fire. Of the nine, six left subsequently; while three stayed and defended—one had planned to stay and defend, one had no prior plan, and it was unclear what the remaining interviewee had planned to do.

It should be noted that 10 January 2011 fell during school holidays. For one couple interviewed, both parents were at work while their two children aged 14 and 11 were home alone. Both parents returned when the fire was reported and the family left safely. **While only one such situation was encountered, the incident confirms the importance for community bushfire safety material about household bushfire plans to address the possibility of children being alone at home when a bushfire threatens.**

Table 12: Where Residents Went After Leaving

Lake Clifton Bakery area	71% (15)
Family/friends – various locations	23% (5)
Waroona town centre	5% (1)
Unclear	8

Residents' Sources of Information About the Fire Threat on 10 January 2011

Table 13: Residents' Sources of Information About the Fire Threat on 10 January 2011

Visual cues: smoke, flames, embers	83% (33)
Telephone/mobile calls from family/friends	65% (26)
Radio	13% (5)
Personal contact by local police & ES personnel	13% (5)
Internet	8% (3)
Resident phoned authorities	8% (3)
Television	3% (1)
FESA State Alert*	0

[Note that interviewees could report more than one source, and most did so (telephone/mobile calls from friends/family, plus visual cues). The percentages were calculated on a base of 40, and thus do not sum to 100%.]

* All but six households were asked specifically about this, four others volunteered that they had not received an expected phone message from FESA. Three interviewees said they received the Alert message some hours after the fire had impacted.

* *Male Interviewee:* G___ got a phone call (from a neighbour) saying, 'is your property alright'?...That's when we first heard about it and G___ is registered with FESA for this early warning.

Female Facilitator: State Alert? Is that the call you got?, State Alert.

Male Interviewee: She never got it, to this day hasn't got it

Female Facilitator: ...So you're registered?

Male Interviewee: G___ is registered.

Male Facilitator: G___ is registered, but you didn't get anything.

Female Facilitator: So did you register on line, your mobile number ('yes'), your home number? Both, OK. ...My understanding is that there were three put out, three State Alerts put out.

Male Interviewee: So, we never received any. [A 004]

Probably the most striking feature of the above table is how few interviewees mentioned broadcast warning messages (radio, internet, TV, FESA State Alert) as their source of information. This suggests two lines of future endeavour for authorities: obviously to work to enhance the effectiveness of official 'broadcast warning' systems; but also to encourage vigilance by residents and use of informal neighbourhood telecommunication 'networks' in times of possible threat. Evidence suggests that social networking systems (Face Book, Twitter) will play an increasingly important role—for good or ill.

Table 14: Expectations of the Fire Service**Expected Individual Advice or Warning**

Stated they did :	18% (7)
Stated they did not	13% (5)
No mention of expectations	70% (28)

Expected Fire Fighting/Rescue Assistance

Stated they did	8% (3)
Stated they did not	0% (0)
No mention of expectations	92% (37)

By this stage J_____ had come home, he'd rung me and said 'I'm on my way home, it looks close'. Then my daughter kept ringing me saying 'mum have you left yet, have you left yet'? I said 'no, FESA -- they haven't been here yet'. She said 'I believe they are going door to door.' I said 'no they haven't been here yet, I'm sure, you know, if we have to evacuate we'll be told'. [A 012]

The above findings suggest a possible need for authorities to monitor community expectations in the future. Some research from the general field of risk perception and risk management suggests that as agencies inform the public about enhancements in warning and protection systems, the phenomenon of 'risk homeostasis' may work against potential improvements in overall community safety (Wilde, 2001). It seems that some individuals may respond paradoxically to the 'good news' by transferring risk to authorities and thus becoming less self-reliant and less vigilant (and thus potentially less safe). This is yet another example of a 'wicked problem' challenging community bushfire safety-promoting endeavours by agencies (*cf* Camillus, 2008).

Psychological Factors Which Influenced Residents' Decisions and Actions on 10 January 2011.

Analyses of the interview transcripts suggest that the following factors influenced the decisions and actions of interviewees who were present when the fire threatened Lake Clifton residents.

Table 15: Psychological Factors Which Influenced Residents' Decisions and Actions on 10 January 2011.

The perceived general threat from the approaching fire	68% (27)
Commitment to their bushfire plan	65% (26)
The need to save pets/livestock	63% (25)
Visual cues of imminent threat: smoke/flames	58% (23)

Perceived threat to the lives of family members	30% (12)
Lack of time meant no alternative but to flee	30% (12)
The property was insured, lives were not	18% (7)
Warnings from trusted 'others' about the danger	18% (7)
Information about the fire's proximity from 'others'	13% (5)
Fire was bigger than expected	8% (3)
Spousal disagreement about what to do	8% (3)
Warnings over the radio	5% (2)
Information on the internet	5% (2)

Table 16: Self-Reported Factors That Contributed To Residents' Survival

Practical assistance from friends, family, neighbours	53% (21)
Information about the location of the fire	43% (17)
Self-control of fear and anxiety	28% (11)
Keeping a focus on survival-related tasks	25% (10)
Knowing you were responsible for the safety of others	20% (8)
Not worrying about things that did not matter	13% (5)
Feeling confident you could do what had to be done	8% (3)
Being confident that what you were going to do would work	5% (2)

Table 17: Self-Reported Factors That Potentially Compromised Residents' Survival

Not knowing the location of the fire	78% (31)
'Panicking'	23% (9)
Illness/disability of self or family member	10% (4)
The presence of young children	10% (4)
Lack of confidence you could do what had to be done	8% (3)

[For the above tables, note that each interviewee could report more than one factor, and most did so. The base for all percentages was 40. Thus the percentages do not sum to 100].

Final decisions to leave or to stay and defend typically involved several factors. For those who decided to leave, the determinants were mostly a combination of perceived threat to life posed by the fire, in combination with a belief that property loss could be managed through insurance, and a judgement that they lacked the means to confidently defend the home.

It's only bricks and mortar. Everything's replaceable. The first thing is you, your family...they come first. Living things come first. End of story. Money can buy anything on this block. I said that to J_____: "I don't give a shit what burns down. We have to be safe, you with the two grandkids, me and you, the dog and the parrot. That's the main things. Never mind the buildings, never mind anything else. Just go". [A001]

Almost all those who left reported that some kind of "trigger" factor caused final commitment to actually leaving.

Facilitator: Just if I could follow that one to the end, can you identify anything that was happening that was the trigger to actually leave?

Interviewee: It was only just the smoke, when we couldn't see any more. We couldn't see any more so we couldn't defend anymore, so we went, simple as that. [A004]

For most of those who left, the dominant overall experience prior to departure was one of **uncertainty**: whether it was **necessary** to leave, **when** it might be necessary to leave, **what** needed to be done before leaving, and **where** to head. **This seems to suggest a need for community bushfire safety education endeavours to emphasise the importance of detailed planning for leaving if threatened by a bushfire.**

For the smaller number who chose to stay and defend, the most important determinant appeared to be a judgement that the threat posed by the fire was manageable with the resources at hand. Planning and preparation contributed to this sense of self- and outcome-efficacy:

I was always confident that I would survive; yeah, because I'd worked it out. You can be over confident as well, but no, I never feared for my own life. I knew when that blast came over, that was pretty intense, but I also knew that the equipment that I had would save it. [A003]

None of those interviewed who stayed and defended made any mention of having thought about what to do if defence failed. **This suggests a need for information about preparing to defend a property against bushfire to emphasise the need for a backup, or fall-back, plan and preparations to survive if defence fails and the house burns.**

Additional Factors Which Potentially Contributed to Outcomes

The transcripts were examined for reports about six environmental or physical factors which might potentially have affected the survival outcomes for interviewees:

- Lack of water for defence.
- Equipment failure.
- Building vulnerability.
- Escape route problems.
- Vehicle/caravan/trailer failure.
- Fatigue.

For each of the above, only one or two (different) interviewees' transcripts indicated that the factor may have compromised their safety. Clearly, none presented a general problem for residents.

Would Residents Behave Differently in Future if Threatened by a Bushfire?

Twenty six interviewees were asked if they would do anything different (leave, or stay and defend) if threatened by a bushfire in the future. Of the 21 who left, only one said that he would **not** leave but stay and defend in future. Of the five who stayed and defended, one said he would **not** do so again, but would leave well before the fire arrived.

Comparisons of Those Who Left With Those Who Stayed and Defended

The ratings and categories extracted from the transcripts of the 29 interviewees who left were compared with those of the 7 who stayed and defended. The small number of those who stayed and defended meant that any differences between the two groups (in mean ratings or in frequency of factors mentioned) had to be relatively great in order to be judged 'significant'.

Those who **left**, compared with those who stayed and defended, had:

- A lower mean rating on level of long term preparation for bushfires.
- A lower mean rating on level of overall knowledge about bushfires and bushfire safety.
- A lower mean rating of readiness to take action under bushfire threat.
- A much lower mean rating of fire threat-level exposure (Appendix H).

In, addition, those who left were more likely to report that surprise and the perceived lack of time influenced their decisions and actions.

[The comparisons were made using *t*-tests to compare the two groups on mean rating levels, and *Chi*-square tests to compare the two groups on whether or not a factor was mentioned. The detailed statistics have not been reported, but can be provided].

An Unexpected Finding: Driving to the Fire

Putting yourself in hazard? Or actively reducing uncertainty about the location of the fire so as to survive?

Nine people (23% of households interviewed) reported leaving their homes to drive and see where the fire was.

As soon as we saw the smoke at 12 o'clock – I was having a sleep and recuperating and I said to S____ [wife] 'please drive down to spot where that fire is, don't go near it, tell me where it is'. Because when it took off I said it's at [_____] farm, it's in the grass. [A005]

We looked out over the hill and went gee – that looks really close, I've never noticed a fire that close before. So we went for a drive to see where it was. [A006]

So my first instinct was take a look, see how bad it was, and on the way down another - I think there's one main flare-up further south, about roughly four k's. [IC_C003]

From where he was in Coronation Road, he could already see the smoke from the first - within the first 15 minutes. So to my son, who's 19, I said 'just go and have a look.' He sort of went down Southern Estuary and said it looked like just a grass fire. Went onto the freeway, got to Old Bunbury Road, did a U-turn and came back. By the time he got back to where it was, it had hit those pine trees and those flames were seven metres high. [A010]

Concluding Observations

In a 2009 interview the Head of the US Federal Emergency Management Agency, under President Obama, made an interesting comment in relation to community disaster safety: “It’s like a Chinese finger trap. If the feds do more, the public, along with state and local officials, do less” (Ripley, 2009).

Task Force members were very enthusiastic about the benefits of joint FESA-university staff research interview teams: FESA staff heard directly from residents about how the fire danger was understood and responded to; university researchers appreciated the knowledge inputs from FESA staff. To assist in future post-bushfire field interview research, a Brief Guide for researchers is at Appendix I. This Brief Guide was prepared in light of experiences following the 2009 Victorian Black Saturday bushfires, and the 2011 Lake Clifton fire.

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APPENDIX A: Lake Clifton Fire 10 January 2011 Research Task Force: Interview Guide
version 3; 19/01/2011

1. How long have you lived here?
2. What were the main reasons you came to live here in this particular community?
3. What sort of a community would you say it is? (—Close-knit....or....?)
4. When you came to live here, and prior to the fire of 10 January, how concerned were you about the possibility of a bushfire threatening your home?
5. What preparations had you made to protect your home in the event that a bushfire broke out and threatened your home?- (--What were the main sources of information you used for making these preparations?)
6. Did you (and your family) have a bushfire plan? If so, what was the plan? (---What were the main reasons you decided on this plan?).
7. Can you think back to Sunday 9 January, the day before the fire? What fire danger weather predictions or warnings were there about the next day, Monday 10 January, the day of the fire?
8. IF APPROPRIATE: What preparations had you made on the day for a possible bushfire?---What were the main sources of information you used for making these preparations?).
9. Were you here, on your property, when the fire broke out?

IF “YES”, PROCEED to Question 10; IF “NO” ASK ABOUT THE CIRCUMSTANCES.

10. How did you first become aware of the fire? (--When you first knew about the fire, how concerned were you about possible danger for you (and your family)? ---What would you say was your main worry initially?)

11. What did you decide to do about the fire initially?

12. Walk me through the main things that happened on the day of the fire and what you decided to do as the day unfolded, starting from **before** you knew about the fire. (**INTERVIEWER:** your aim is to get a narrative of the significant events which occurred for the interviewee. Pay particular attention to: (a) information about the fire: media warnings, calls/texts/visits from family, friends, neighbours, agencies; and environmental cues such as smoke, embers, (b) the effects of these items of information—how they changed the interviewee’s understanding of the situation, and the risks and concerns; (c) decisions about what to do; and (d) actions taken. IN PARTICULAR: BE ALERT TO FOLLOW-UP ISSUES OF: (a) COMMUNICATION, ESPECIALLY **SOCIAL NETWORKING**; AND (b) **STRESS/ANXIETY** AND THEIR EFFECTS ON DECISION MAKING.

12a. Optional: Looking back, what information about the fire was most important in making your final decision about what to do?

12b. Optional: What information about the fire was missing that made it difficult for you to decide what to do?

13. Knowing what you know now about the fire, what if anything would you do differently?

INTERVIEWER: be careful in discussing post-fire issues, do NOT cross the line into ‘counselling’, refer the interviewee to the Help Sheet attached to the Participant Information Statement, if appropriate.

FINALLY: ask the interviewee to help you complete the Demographics Questionnaire sheet.

Appendix B

Lake Clifton Fire: Notes For Interviewers

Apparel:

Much of the time we will be outdoors, in fire affected environments. I suggest wearing leather shoes or boots; and work-type slacks and shirt that can survive getting dirty. Have some official identification with you—I will wear my La Trobe staff card in its holder, around my neck. If you have a name badge, wear it—I will be wearing my Bushfire CRC name badge. I will bring with me four blue “Bushfire CRC – Researcher” tabards provided by the Bushfire CRC. These should be worn at all times while in the field. A shade hat should be worn outdoors if sunny. Take sunglasses by all means, but remove these when interacting with residents. Have a rain jacket.

Health and Comfort:

I suggest taking a small pack with you each day. Have a litre of water—temperatures may be in the 30s. Food: at least on Day 1 take a lunch that does not require refrigeration—do not count on being able to easily buy food in the field; and take some snacks that will not melt in the heat; thereafter we will play it by ear. Bring sunscreen, lip balm, and I suggest some roll-on insect repellent as a precaution, toilet paper. If you use any medications, take these with you (so you know, I carry an asthma inhaler). If you have a medical condition that may be an issue, alert me to this confidentially.

Safety:

I understand that the environment is not regarded as hazardous—we will not have to wear PPE (hooray!!!). However, it is important to be vigilant and to behave prudently at all times: think of being in a workplace environment that may have unforeseen dangers. Playing the percentages, the most serious (though unlikely) danger is from falling trees or tree branches: in a treed area, always look up. Apart from that, be very careful about what you touch or pick-up (as one who knows—believe me, it is a pain in the bum to have to ask one of your team to take you to a medical clinic for a tetanus injection). If you see anything that concerns you, alert someone in the team. Be careful with personal hygiene, I will have with me some hand disinfectant/cleanser to use before eating.

Materials:

Each interviewer will have the following:

- (a) A digital voice recorder.
- (b) A 2-ring folder kit with the following: (i) a laminated copy of the interview guide; (ii) copies of the Participant Information Statement; (iii) copies of a sources of help information sheet; (iv) copies of a demographic information form; (v) some blank sheets of paper.
- (c) A green Laboratory Notebook which is to serve as a field dairy and a backup-written record of interviews conducted.

Please bring with you several biros!

At the beginning of each day:

We will meet as pre-arranged. Please be on time (me too). On Day 1 (Tuesday 18th) we will go through our procedures, practice operating the digital recorders, and work-out any operational issues. We will exchange mobile phone numbers so we each have a list of numbers—do not forget to keep your mobile phones charged. I will ask if FESA can have a staff member give us a safety briefing about issues we should be aware of while in the field.

Conducting the interviews:

Remember that we are at best tolerated visitors, at worst unwanted intruders; we are asking people to give us their time to revisit events that may well have been, at the very least, anxiety-provoking and unpleasant. Our first principle is: **Do No Harm**. I suspect that we will working in pairs much of the time. It is easier for an interviewee to focus on one interviewer only: if in a pair, before each contact, decide who will be the lead interviewer. Have an introductory ‘spiel’ rehearsed, like

“Good morning. My name is Patrick Dunlop from the University of Western Australia. We are members of a Bushfire Cooperative Research Centre taskforce in the area today. We are visiting residents and asking them if they would assist us by being interviewed about what they experienced with the bushfire on Monday 10th. We are doing this so as prepare a report for the fire and emergency services agencies to help them improve community bushfire safety in the future. I would be very grateful if I could interview you about your experiences with the fire on Monday 10 January. It would probably take about 40 minutes or so. I have here a description of what we are doing. If you are interested in helping us, could you read through it, and if you agree we can do the interview now”.

Give the person the Participant Information Statement together with the ‘help available’ sheet—explain each briefly.

If the interview goes ahead, ask if it can be recorded to save time, switch on the recorder and start recording—check the time display to make sure it IS recording. **YOU** begin by saying **“This interview is being conducted at—state address, the date is _____, the time is _____”**. Then begin with the first question on the Guide; follow the Interview Guide flexibly, allow the interviewee scope to tell his/her story, but do not let it degenerate into a pointless chat. Make sure **all** the topics listed in the Guide are raised with the interviewee.

At the end of the interview, ask the interviewee if he/she will help you fill-in the demographics form. After this, thank the person for their help, answer any questions they may have, **IF YOU FORGOT TO BEGIN THE INTERVIEW BY STATING THE ADDRESS, DATE & TIME, DO IT NOW!** Write the **track number** of the recording on the form. **THEN** stop the recorder.

As soon as possible after finishing the session: write the details YOU have to fill-in on the top section of the demographics form about the location of the interview, and then write in your green laboratory note book: the date, time, the address, your BCRC Digital Recorder Number; and the numerical track (or tracks) number(s) where the interview has been recorded. This is most important as a backup. Put the completed demographics form in the plastic wallet for same in your interview kit folder.

When you have time (as soon as possible), in your green lab notebook, write a brief summary of the main points covered in the interview as you remember them, note things that stood out for you as being important, write down any impressions that may be useful later in the analysis phase. Identify your notes according to the address of the property.

At the end of each day:

At the end of each day we will meet briefly (location to be decided according to circumstances) to discuss how things went and to download the recordings onto a computer file by way of backup.

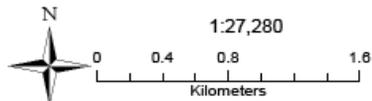
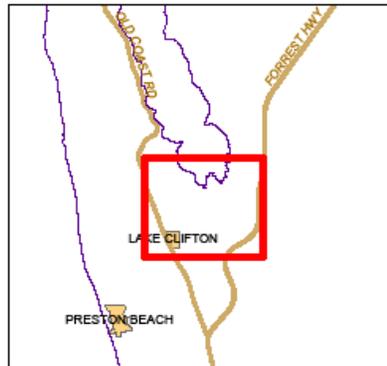
Personal wellbeing:

We have no real idea what we will encounter. Going on my 2009 Victorian Black Saturday Bushfires experiences of interviewing survivors, some interviews can be quite emotionally impactful for some interviewers. Mostly, simply talking about any such with fellow-interviewers at the end of the day keeps things in perspective. Take **care** of yourself. If, down the track, when the interviews have been completed, you are concerned that you may have been affected by some experiences more than you would have wished, consider seeking assistance from your University counselling service.

Jim McLennan
15 January 2011
Mobile 0438 096 548

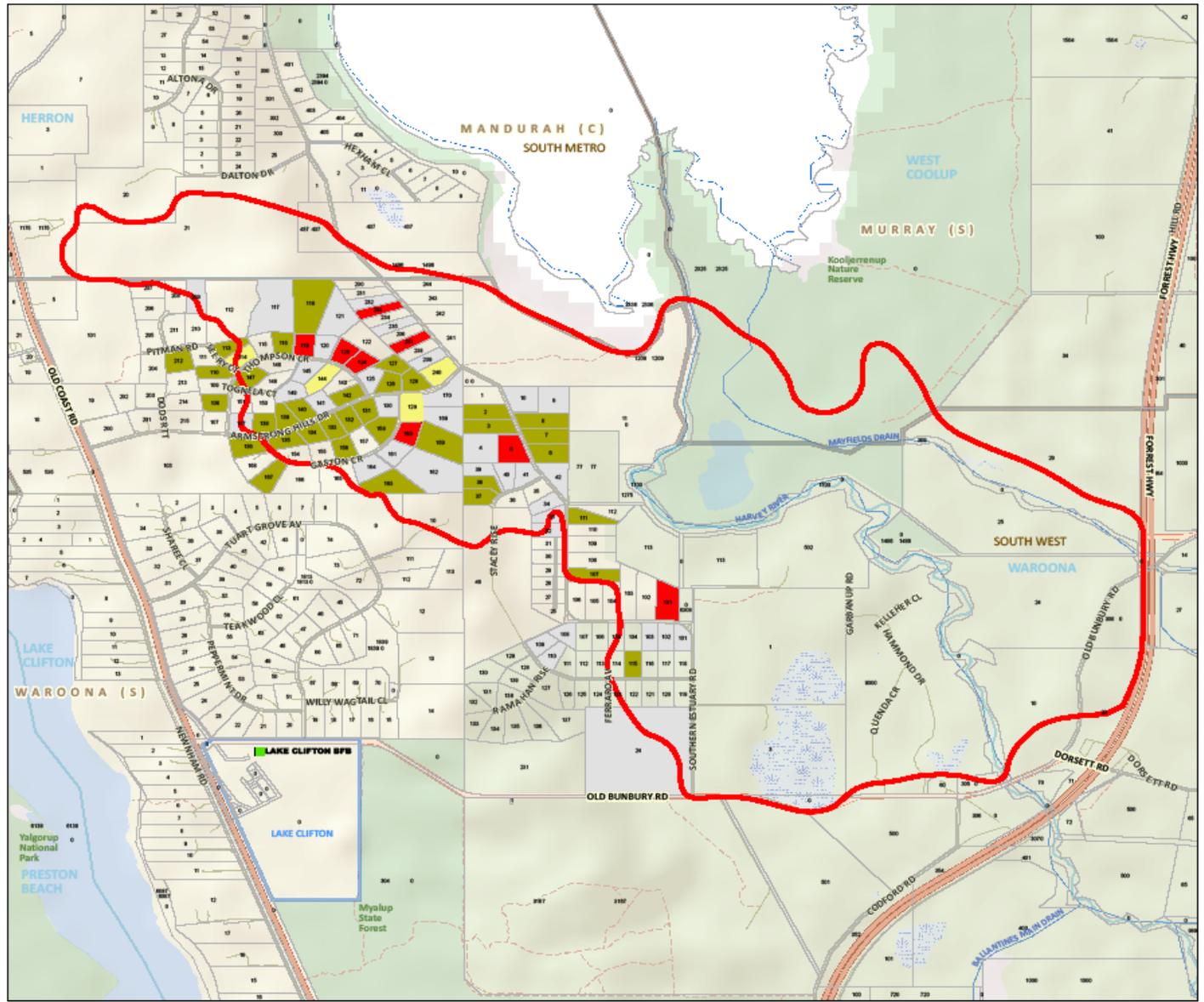
Dorset Road Fire - Waroona Shire

-  Fire Perimeter
-  Lot Boundaries
-  Properties Interviewed (No Damage)
-  Properties Interviewed (Damaged/Destroyed)
-  Damaged/Destroyed Properties
-  Vacant Blocks
-  Roads



Map created by FESA Spatial Services
 Drawn by VP Lee on 16/05/2019
 Data sourced from Landgate, FESA Air Intel
 Date 1/November/2019, 2017 Lake Clifton - 1710421
 Dorset Fire Waroona.mxd

DISCLAIMER: All information depicted in this map is correct as of creation.
 FESA does not accept any responsibility for assumptions made after this date.





Participant Information Statement

Project title: HOUSEHOLDER RESPONSES DURING THE 10 JANUARY LAKE CLIFTON FIRE

Investigators:

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- Ms Lyndsey Wright; Research Manager, Bushfire CRC. Level 5, 340 Albert Street East Melbourne 3002 Victoria. Phone: (03) 9412 9610; Mobile 0419 568 524; Email Lyndsey.wright@bushfirecrc.com

You are invited to participate in research being conducted by the Bushfire Cooperative Research Centre (Bushfire CRC) for the Fire And Emergency Services Authority (FESA). This Information Statement describes the research. Please read this Statement carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask the interviewer.

Who is involved in this research? Who is paying for it? Why is it being conducted?

This community bushfire safety research is being run by the Bushfire Cooperative Research Centre (Bushfire CRC) for the Fire and Emergency Services Authority (FESA). The interviewers are from the University of Western Australia, La Trobe University, and RMIT University. The research is being funded by the Bushfire CRC and FESA.

Members of the wider Lake Clifton community affected by the fire which started on 10 January 2011 are being approached and asked to describe their experiences of the fire. FESA hopes to develop a better understanding of how to improve community safety for the future by learning as much as possible about what happened before and during the fire.

Why have you been approached?

We hope to interview people who experienced the bushfire that started on 10 January. People are being contacted in several ways:

- People attending community meetings following the fire will be invited to arrange for an interviewer to visit their property.
-

- Some people will be approached personally by interviewers who are visiting areas affected by the fire and invited to take part by being interviewed.
- Some people will be telephoned or approached directly because their property address lies within the bushfire affected area as identified by FESA bushfire mapping.

What is the project about? What are we trying to find out ?

The research focuses on areas relating to community bushfire safety, including:

- What do people understand about bushfire danger, property preparation, and leaving early on days when bad fire weather is forecast?
- What were the experiences of people affected by the recent bushfire, and what did people do before and during the fire?
- Were the bushfire alerts and warnings adequate, how did you seek information, where did you look?
- What would have helped people manage better?

If I agree to participate, what will I be asked to do?

You would be participating in an interview. With your permission, the interview would be recorded and later transcribed. The interview can take place when it suits you. Interviews can take from 20 minutes to an hour. At the end of the interview you would be asked to complete a brief form which asks about demographic information, including how long you have been a resident here, and the household composition on the day of the fire.

Participating in the interview will be taken to imply that you consent to take part in the study. You do not have to answer any question you do not wish to, and you can stop participating at any time. You can also contact the investigators later if you wish to withdraw the information you have provided. You can also contact them if you would like a copy of the transcript of your interview, or if you want to talk about the interview or any issues arising.

The interviewer will ask things like:

- Prior to the bushfire, had you prepared your property?
- Did you think Monday 10 January was going to be a day of bad fire weather?
- When and how did you first find out that you were threatened by a bushfire?
- What could you have done differently to improve your safety before and during the bushfire?

Are there any risks associated with participating?

The interview may result in some distress as you would be recalling the experience of the bushfire. You are free to end the interview at any time. A sheet is attached which lists contact details for sources of help and support for people affected by the bushfire.

What are the benefits associated with participation?

There may not be any direct benefit to you. However, your account of experiences and views may help with improving bushfire safety, and to reduce the impact of future bushfires on your community.

What will happen to the information I provide?

Your name and address will be noted so that if you want to withdraw your information, or if you want a copy of your interview transcript this can be done. However, your name will not be on the

interview transcript, only a code number. Similarly, when the information on the form with your demographic details is entered into a data file for analysis, your name and address will not be entered, only the code number. The digital recordings and the forms will be kept secure by the Bushfire CRC and will be destroyed after five years.

A report about the fire and recommendations for improving community bushfire safety will be written for FESA. No identifiable material will be in the report.

Researchers from the University of Western Australia, La Trobe University, and RMIT University may use the de-identified information as a basis for presentations at scientific conferences or writing scientific papers.

A copy of the main report will be on the Bushfire CRC website (www.bushfirecrc.com) as from 31 July 2011.

What are my rights as a participant?

You have the right to:

- (i) cease participating at any time;
- (ii) have the information you provided withdrawn and destroyed provided you request this within 4 weeks of your interview;
- (iii) have any questions about the research answered by the investigators.

If you have any complaints or questions that cannot be answered satisfactorily by the Investigators, please contact Dr Richard Thornton, Deputy CEO and Director of Research, Bushfire CRC: phone: (03) 9412 9600; email: Richard.thornton@bushfirecrc.com

Suellen Shea, FESA

Lyndsey Wright, Bushfire CRC

17 January 2011

APPENDIX E: Lake Clifton Fire 10/01/2011 Task Force: Interviewee Demographic Information

Address:.....

Date of Interview:...../...../2011; Time Concluded:.....am/pm

Interviewer:.....; Recorder Number: BCRC #..... **Recording Track Number:**.....

Interviewee: _____

GENDER: M F (circle to show)

AGE RANGE: 18-25 26-40 41-55 56-65 66-70 71+ years

NUMBER OF YEARS RESIDING IN THIS COMMUNITY: 0-5 6-10 11-20 21-30 31+ years

EMPLOYMENT STATUS: employed not employed retired

EXPERIENCE IN EMERGENCY SERVICES? No Yes-describe:.....

Household composition on the day:

ADULTS (18+ years) _____; TEENAGERS 16-17 years _____;

CHILDREN 12-15 years _____; Children 4-11 years _____; Children <4 years _____

Anyone with a disability, infirmity, or illness likely to experience difficulties in the event of a bushfire?

No Yes.....

Insurance:

Yes, sufficient Yes, but under-insured No

Recovery advice for residents

RETURNING HOME:

Take care when moving around the fire affected area, especially your property, as conditions may change.

ROADS:

Motorists in the area should take extreme caution when returning home as there may still be smoke across some roads. Beware of fire and other emergency services personnel who are continuing their work. Other things to beware of are wandering livestock, loose gravel, debris on roads, fallen trees and branches.

DAMAGED BUILDINGS AND PROPERTY:

- Beware of unstable buildings and sharp items such as glass shards, corrugated iron and rubble.
- If your building has asbestos materials and it has been damaged wear appropriate personal protection such as respirators and particle masks.
- Fire or falling debris may have damaged chemical containers. If you are unsure about handling these chemicals contact FESA on 9323 9300 or 9323 9333 during office hours.
- If you suspect you have damaged firearms, ammunition or explosives contact local Police.

AROUND YOUR PROPERTY:

- Do not use water from your water tank as it may be contaminated. For advice on using rainwater after a bushfire visit www.public.health.wa.gov.au (enter 'rainwater and bushfire' in the search box).
- Beware of falling branches, burnt out stumps, burning and smouldering trees.
- Unless you can confirm power is off, treat all lines as live. Several power poles and powerlines have fallen and been damaged. Power has been turned off to most areas but please be careful.
- Due to damaged fences, livestock from your property and neighbouring properties may be in unexpected locations.

WELFARE SERVICES:

The Department for Child Protection is continuing to provide services including personal support, food and shelter. People can access these services by contacting the Department's Peel office on 9583 6688 or by attending Waroona Recreational and Aquatic Centre, Hill Street, Waroona.

These steps may help you and your family with your recovery:

- Seek support from local welfare agencies
- Encourage your family to talk about their experience with friends and neighbours
- Rely on official information from authorities
- Become involved in community activities as soon as you can
- Children should return to their normal routine as soon as possible

ANIMAL WELFARE:

The Department of Agriculture and Food is assisting landholders with advice on assessment of livestock that have been injured as a result of the fire. For help with pet welfare contact your local vet.

IMPORTANT NUMBERS:

Shire of Waroona 9733 7800
Western Power 13 13 51
Water Corporation 13 13 75
FESA information line 1300 657 209

WA Police 131 444
Main Roads WA 138 138
Telstra 13 22 03

Appendix G: LAKE CLIFTON Human Behaviour Project – Coding Form

1. a. Coder Initials: _____ b. Interview Code #: _____ c. Date Coded: _____
 d. Length of Interview: _____
2. Interview (address): _____
3. Fire Complex: WA: Dorset Road Fire 10 January 2011 [Waroona/Lake Clifton fire approx. 100k South of Perth]
4. Type of Property: Rural-Residential Home on a large block: 2-6 hectares
5. Household composition on the Day: _____

6. Children Under 16?: Unclear 0 1 2 3 4 Likely, but
 ages/numbers unclear

7. Interviewee (1): Role: _____ (2): Role: _____
 Gender: _____ Gender: _____
 Age: _____ yrs Age: _____ yrs

8. Status on Feb 7th:

Not at home: Not present (decision) Not present (chance) On Ops Duty
 (FESA/DES/SES/Parks/Other)

At Home, Left:

Left early
 Left late (no danger)
 Left late (danger)
 Took last resort shelter

Stayed:

Defended (success)
 Defended (failed, stayed)
 Defended (failed, abandoned) Safer precinct
 Shelter passively around home

If Left or not Present (decision), where?

Friends/Family Last resort shelter
 Hotel/Motel Unclear
DIST (est): ___ ___ kms
 Nearby city town

Outcome: House survived House destroyed Unclear

Notes: _____

9. Plan/Intended Action: Leave Early Stay and Defend Wait and See No Plan Unclear Different
10. Training/Experience: Yes Some No Unclear
11. Reading or Similar? Yes Some No Unclear
12. Insurance?: Yes No Under Unclear
13. Survivor Threat Rating Scale (see overleaf) (1-7): _____
14. Interview Quality: Bad Unexceptional Excellent

A. Preparation long term

0. ? or N/A	1. Nil	2. Minimal (tidied up), or (formed intent to leave)	3. Some (up to 2 of column 4) (up to 2 of column 4)	4. Extensive (a) alt. water source, (b) building maintenance, (c) alt. power, (d) sprinklers, (e) clothing, (f) implements, or (a) had evacuation plan (b) packed up documents before day, (c) had planned when to leave and where to go
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B. Awareness of fire danger weather

0. ? or N/A	1. Nil	2. Minimal Reported awareness	3. Some Evidence of vigilance	4. High Precautions on the day: listening to radio; checking websites; scanning environment
-------------	--------	----------------------------------	----------------------------------	--

C. Readiness if fire occurred on the day - Physical

0. ? or N/A	1. Nil	2. Minimal (e.g. tidied up or cleaned gutters), or (thought about packing valuables)	3. Some (up to 2 of column 4), or (had a few items packed)	4. Extensive (a) test equipment, (b) fill vessels with water, (c) lay out clothing, (d) hosed down property, or (a) bags packed by door (b) pets ready to go (c) readied car for leaving (d) readied other people (e) considered where to go
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D. Knowledge of fire

0. ? or N/A	1. Nil	2. Minimal (e.g. media)	3. Some (e.g. meetings)	4. Extensive (a) training, (b) practice, (c) reading
-------------	--------	----------------------------	----------------------------	---

E. Awareness of approaching fire

0. ? or N/A	1. Nil	2. Minimal (only aware of fire late)	3. Some (knew of fire in nearby locale)	4. Extensive (knew of fire, actively tracking progression)
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F. Readiness to Act if fire threatened

0. ? or N/A	1. Nil (caught by surprise)	2. Minimal (aware of a fire, failed to personalise, or lack of concern)	3. Some (aware of danger, some concern but uncertain about likely impact)	4. High (acknowledged threat, expected impact)
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G. Sources of Information

1. Radio	2. Television	3. Internet	4. Phone Tree	5. Phone (friends, family, etc)	6. Personal visit	7. Environmental	8. Other
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H. Expected SPECIFIC (Official) warning?

0. ?	1. Yes	2. No
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Ha. Expected (Official) fire fighting assistance?

0. ?	1. Yes	2. No
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I. Decision Process Factors**(i.) Overall:**

- a. Prior commitment to plan: _____
- b. Trigger:
 - i. Official Warning (radio)
 - ii. Official warning (internet)
 - iii. Unofficial warning (friends, etc.)
 - iv. Environmental cues (smoke, flame)
 - v. Expectations negated
 - vi. Warning (other)
- c. Perceived threat
- d. Time/No alternative
- e. Family
- f. Pets/livestock
- g. Insurance
- h. Spousal disagreement
- i. Other: _____

(ii.) Survival-enhancing:

- a. Down-regulate fear/anxiety/stress
- b. Maintain attentional focus
- c. Action-survival link
- d. Information/communication
- e. Social support/assistance
- f. Outcome efficacy
- g. Personal efficacy
- h. Responsibility for others
- i. Other: _____

(iii.) Risk-amplifying:

- a. Panic/fear/anxiety
- b. Lose attentional control
- c. Actions not linked to survival
- d. Absence/defective information/Communication/warnings
- e. Lack of social support/assistance
- f. Lack of outcome efficacy
- g. Lack of personal efficacy (incl. Waiting for instructions)
- h. Dependents (elderly, children, disabled)
- i. Other: _____

APPENDIX H: Bushfire Survivor Threat Rating Scale REVISED 15 August 2010

Scale Level	Qualitative Description	Behavioural Indicators	Notes
LEVEL 7	Extreme threat to life: odds were about even for surviving vs perishing	Interviewee injured or otherwise seriously affected physically; companion(s) in the incident perished or were injured or were otherwise seriously affected physically	Injury NOT necessary if other factors indicate an extreme threat
LEVEL 6	Severe threat to life; any significant worsening of the situation might well have lead to death or serious injury	Interviewee (and companions) were not injured (or only minor) but: the house they were defending was destroyed and they had to seek shelter; or the house was damaged and at some time they had to take shelter for a period; or the vehicle in which they were escaping/sheltering sustained fire related damage or other impact damage.	House may have survived with some damage—there was a very real possibility that the house may have been lost if something else had gone wrong—it was “touch and go”—if the house had gone, they would have been in real trouble.
LEVEL 5	Serious threat to life: failure of a vital aspect of the defence, shelter, or escape procedure or “system” might well have lead to injury or death	The house being defended suffered some damage; the vehicle in which they were travelling had to drive through flames and/or dodge debris	Unexpected problems had to be solved—pump stopped; a point of vulnerability developed for the house.
LEVEL 4	Significant threat to life: a sudden change in the situation might well have resulted exposure to threat of physical injury: change in wind direction, increase in ember storm intensity, surprise ignition of a fuel source as an emerging threat.	The house had to be actively defended, flames had to be extinguished; the vehicle had to be moved away from a heat source; the conditions were extremely hot while sheltering	
LEVEL 3	Moderate threat	Had to remain vigilant that the house was not impacted by fire or embers, had to shelter for up to half an hour in a vehicle from radiant heat, embers, smoke	Default for “left late, in danger”
LEVEL 2	Low threat	Saw smoke within 2 km, saw flames, observed embers falling.	Default for “left late, no danger”.
LEVEL 1	Minimal threat	Saw smoke in the distance; relocated to a safe place with no danger; was aware of fires in the general area.	Default for “left early”.
LEVEL 0	No threat	Not present on the day	

Note: Pre-existing medical/physical conditions may modify assignment of a threat level, as may psychological (as distinct from physical) impacts of the fire.

Appendix I

Conducting Post-Bushfire Field Interview Research – Brief Guide

1. Find background information on the fire(s) from the media and other sources. Note potential issues. Keep an open mind.
2. Establish liaison with the lead agency.
3. Establish the field research management group.
4. Obtain a briefing on the fire from the lead agency; obtain copies of relevant maps and reports on the fire from the lead agency.
5. Clarify funding.
6. Clarify lines of responsibility and authority.
7. Establish the aims and the scope of the field research in collaboration with the lead agency.
8. Recruit the field research team.
9. Make the necessary arrangements for ethics approval.
10. Write the Interview Protocol in collaboration with the lead agency (**Appendix A**).
11. Write the Participant Information Statement to be given to interviewees, in collaboration with the lead agency and to match the requirements of the relevant Human Research Ethics Committee (**Appendix D**).
12. Obtain, or prepare, a Sources of Assistance Contact leaflet to be given to interviewees, in collaboration with the lead agency (**Appendix F**).
13. Write a Demographics Data Sheet on which to record interviewee information, in collaboration with the lead agency (**Appendix E**).
14. Establish the procedures for matching interview recordings, property addresses, and Demographics Data Sheets, and for keeping these secure.
15. Establish with the lead agency the logistics of the field research: transport, accommodation if required, food, water, first aid arrangements.
16. Write a detailed Guidelines document for the field researchers which explains the aims and scope of the research; the procedures to be followed in conducting interviews; what will be provided; what they must provide themselves; safety issues and procedures to be followed; all the relevant contact information—especially mobile phone numbers (**Appendix B**).

17. Prepare field kits for interviewers: digital data recorders, spare batteries, clip boards, field notebooks.
18. Obtain from the lead agency up-to-date area property location maps for field teams.
19. Establish the plan for field operations: team compositions, line of command, taskings and locations of teams, rotations and rests for interviewers, transport, assembly, meals.
20. Arrange a briefing meeting for all involved: procedures, safety, encourage a *premortem* of what issues might arise and what to do (see Gary Klein, Performing a project premortem, *Harvard Business Review*, September, 2007: <http://hbr.org/2007/09/performing-a-project-premortem/ar/1>).
21. Conduct training for the interviewers, especially how to use the recording equipment.
22. Make arrangements for meetings of the management group and for debriefings of field teams.
23. Arrange for the printing of material. To reduce confusion, print different documents on different coloured paper.
24. Make arrangements for a master map on which a designated Recorder updates regularly all the details of all properties visited and which properties have had an interview conducted (**Appendix C**).
25. Make arrangements for a Lead Researcher to be available for telephone contact at all times teams are in the field to make final decisions as necessary.
26. Make arrangements for data logging, data security, interview transcription.
27. Plan the data analysis and reporting in collaboration with the lead agency.
28. For the analysis, consider combining quantitative and qualitative methodologies: use a coding form to extract 'standardised' information from interview transcripts (**Appendix G**) enabling quantitative analyses to be carried out; use (say) the *NVivo9* text management software tool to extract and categorise verbatim accounts from the transcripts.

Jim McLennan
6 August 2011