
TRANSCRIPT OF PROCEEDINGS

The attached transcript, while an accurate recording of evidence given in the course of the hearing day, is not proofread prior to circulation and thus may contain minor errors.

2009 VICTORIAN BUSHFIRES ROYAL COMMISSION

MELBOURNE

TUESDAY 16 JUNE 2009

(24th day of hearing)

BEFORE:

THE HONOURABLE B. TEAGUE AO - Chairman

MR R. MCLEOD AM - Commissioner

MS S. PASCOE AM - Commissioner

CRS WORDWAVE PTY LTD - A MERRILL COMPANY.
4/190 Queen Street, Melbourne. Telephone: 9602 1799
Facsimile: 9642 5185

1 MS DOYLE: If the Commission pleases, our witness this morning
2 is Professor John Handmer. Before he comes to the witness
3 box, I wanted to raise a matter that was dealt with
4 overnight. Representatives for Telstra raised with me
5 some objections to limited parts of Professor Handmer's
6 statement. Following consultation between counsel, there
7 has been an agreement to delete some sentences or parts of
8 sentences that would appear to travel outside Professor
9 Handmer's core experience.

10 As a result, what I have done is marked up text
11 in paragraphs 96, 101 and 102, 114 and 118. I think those
12 deletions have been provided to the Commission. Some sets
13 are also available here for the parties. They are being
14 provided as loose pages because they should be understood
15 as substitutions for the original pages that have those
16 paragraphs.

17 I can just show the Commission how the changes
18 work. In paragraph 96 there are those words deleted, a
19 full two sentences and a phrase. In paragraph 101 there
20 is part of a sentence deleted. In paragraph 102 the
21 deletions are marked. There should also be another
22 deletion now made by hand, following further discussion
23 this morning. The last sentence in paragraph 10 should
24 read: "Unless emergency systems can override phone traffic
25 they may find", so if you wouldn't mind deleting the words
26 "are likely to" and substitute the word "may", "may find
27 the lines congested". Moving over, there are then the
28 deletions marked in paragraphs 114 and 118.

29 When Professor Handmer comes forward, I will have
30 him obviously adopt his statement in the usual way, but it
31 should be understood as going forward with those

1 corrections.

2 CHAIRMAN: Yes.

3 MS DOYLE: Professor Handmer's statement is found in folder 36
4 of the hearing book behind tab 1 and the attachments are
5 behind tabs 2 and 3. In the course of his evidence he
6 will also be taken to some other volumes. Those will be
7 made available as we get to the particular items of
8 interest. In particular, Professor Handmer is the author
9 or co-author of articles which appear in folder 19. We
10 will go to that in the course of his evidence. I will now
11 ask Professor John Handmer to come forward.

12 <JOHN WILLIAM HANDMER, sworn and examined:

13 CHAIRMAN: Professor Handmer, take a seat and make yourself
14 comfortable. Can I warn you that if you have a strong
15 voice naturally, you won't need to worry about the
16 microphones. If you have a soft voice, we might have to
17 remind you because we do have problems sometimes if people
18 are too far away and have a soft voice?---Please remind me
19 if necessary.

20 MS DOYLE: Professor Handmer, you are presently the Innovation
21 Professor in Risk and Sustainability at RMIT in
22 Melbourne?---Yes.

23 You are also the Director of the Centre for Risk and Community
24 Safety at Melbourne's RMIT?---Yes.

25 You hold other positions which we will go to in a moment but
26 they include Director of the Human Security Program in the
27 School of Mathematics and Geospatial Science at
28 RMIT?---That's correct.

29 You have prepared an expert report for use in this Commission.
30 Do you have a copy of that with you, the document that
31 starts at the page (WIT.044.001.0002) being a report

1 headed "Witness statement of John Handmer" with
2 attachments behind it?---I have a copy.

3 You have been provided overnight with some amendments which
4 principally operate as deletions to parts of your
5 statement. With those changes, are the contents of this
6 statement true and correct?---Yes.

7 MS DOYLE: I seek to tender that statement and the attachments,
8 Mr Chairman.

9 #EXHIBIT 96 - Witness statement of John Handmer
10 (WIT.044.001.0002).

11 MS DOYLE: Mr Hander, turning to your experience and
12 qualifications first, you are a disaster management expert
13 with specialist expertise in warnings, in particular with
14 respect to floods and bushfire?---Yes.

15 In terms of your academic qualifications, paragraph 2 sets
16 those out. Your BA is from the Australian National
17 University. You also have qualifications from the
18 University of Toronto and a PhD from ANU, all in the
19 fields of geography and natural hazard, is that
20 correct?---Yes.

21 As we noted at the outset, you are currently the Innovation
22 Professor in Risk and Sustainability at RMIT and the
23 Director of RMIT's Centre for Risk and Community Safety.
24 You also hold positions at the Bushfire CRC, the Bushfire
25 Cooperative Research Centre. Can you explain the role you
26 play there?---Yes. There are four research programs in the
27 Bushfire CRC and I am and have been for the last six years
28 research leader of the program known as self-sufficient
29 communities, really about community safety.

30 You also note here that you are the Convenor of the National
31 Climate Change Adaptation Research Network on Emergency

1 Management. The membership of that outfit, is it
2 comprised of representatives from around Australia?---It
3 is a new initiative and it is at the moment comprised of a
4 small number of reps from agencies, fire and emergency
5 management agencies and universities from across
6 Australia.

7 You also hold adjunct professorial positions at each of the
8 Fenner School for Environment and Society at ANU and Risk
9 Frontiers at Macquarie University, as well as being
10 Visiting Professor at the Flood Hazard Centre in Middlesex
11 University in London; is that right?---That's correct.

12 You also hold a role on the body known as TRAAC, the National
13 Technical Risk Assessment Advisory Group and another body
14 with a similar name but pertaining to floods?---Yes.

15 Your experience includes time spent working in the United
16 Kingdom and research dealing with a number of types of
17 natural disasters. Could you perhaps first explain your
18 main experience in the UK and then talk us through what
19 you have done in relation to floods and other natural
20 hazards?---In the UK I worked for six years at the Flood
21 Hazard Research Centre, full and part-time, and I am an
22 affiliate of that centre and have been for many years.
23 That centre is dedicated really to supporting the British
24 government's policy on how to assess how worthwhile
25 various flood mitigation options are. So, in that context
26 we worked on the economics of flood damages, flood
27 mitigation measures, including warnings. In the UK,
28 because of the very high profile of flood disasters, we
29 spent a lot of time on warning system development.

30 You have also played a role on warning system development in
31 relation to floods in Australia. As I understand it, you

1 were the author of the 1999 Emergency Management Australia
2 document in relation to flood warnings?---I was co-author
3 of that, of the initial edition in 1995, and assisted with
4 the second edition and have been a reviewer on the third
5 edition which is currently in press.

6 You have also held positions or led research in the European
7 sphere. You have conducted research for the social and
8 institutional responses to climatic change and climatic
9 hazards and Euroflood. Can you explain what that work has
10 involved?---The Euroflood work was primarily about
11 planning issues across Europe with respect to flooding and
12 other hazards, but mainly flooding. The research project,
13 climatic hazards, was again primarily - my role was
14 primarily on flood risk management, including warning
15 systems in the UK, but also a little bit in
16 The Netherlands.

17 You are playing a part in two current EC projects, the
18 Floodsite and Ensure. The former relates to flood and the
19 latter to wildfire, as I understand it. Can you explain
20 those research projects?---Yes, my role in the flood site
21 project is to work on flood warning systems, especially in
22 France, and I did a fairly comprehensive study of the
23 flood warning system in Grenoble for that project. The
24 Ensure project is more about community vulnerability and
25 resilience and my role there is on wildfires.

26 You have also played a role in relation to research projects
27 pertaining to the tsunami in Thailand and in the Solomon
28 Islands. What did those aspects of research
29 involve?---Very briefly, in the tsunami we looked at the
30 impact on the local economy in Phuket and the different
31 strategies to revitalising that economy with a focus on

1 the informal economy. In the Solomon Islands it was
2 similar. We really looked at how important the different
3 levels of economy were in the Solomon Islands for local
4 communities, especially the local trading community, which
5 tends to be ignored by the international aid agencies.
6 In the last few years you have presented a keynote address at
7 the United Nations third conference on early warnings, an
8 address you gave in 2006?---Yes. I was on the scientific
9 organising committee for that meeting as well.
10 You have also given a paper at a European conference on flood
11 warnings in 2002?---Yes.
12 And participated in, for example, the United Kingdom Royal
13 Society 2006 workshop on risk communication?---That's
14 correct, looking at the use of probabilities in forecasts.
15 You have also produced a number of book, papers and monographs.
16 Those are set out in your CV, but in particular, if we
17 work backwards in a way, you have been an editor of the
18 recent publication Community Bushfire Safety, a CSIRO
19 publication?---That's right.
20 Chapters in that book have been prepared by yourself and others
21 from the Bushfire CRC and other research areas in
22 Australia; is that right?---That's right. It was a
23 national effort.
24 You have also written widely in the fields of warnings, flood
25 warnings, fire warnings, "stay or go" policy throughout
26 the period from the mid-90s to date?---Yes, from the
27 mid-80s.
28 Before we go to the aspects of your statement, I just wanted to
29 explore with you the differences between the types of
30 natural hazards in relation to which you have undertaken
31 research. We have referred to floods, tsunamis.

1 I understand you also have some familiarity with warning
2 systems that pertain to cyclones and earthquakes?---Yes, a
3 little bit. There is not much in the way of warnings for
4 earthquakes, unfortunately.

5 In recent years your research has tended to shift from flood,
6 natural hazards to fire hazard?---Well, I moved to
7 Victoria in 2001 and started working shortly thereafter on
8 bushfires, but continued the work in Europe and England on
9 flood warning systems.

10 In relation to floods, there is obviously a whole deal of
11 detail which underpins this, but is there a classification
12 system that attaches to floods? Is there a way that they
13 are described in terms of either severity or area of
14 impact?---In Australia the Bureau of Meteorology
15 classifies floods as minor, moderate and major. They
16 refer to levels, depth of water and the impact on the
17 communities. But more generally flooding is described by
18 water depth and how frequent or the likelihood of that
19 level of flooding. A very rare flood gives an indication
20 that it will be very severe. So there is a category but
21 it is pretty - I would say it is highly variable. It is
22 very place specific.

23 In relation to warnings, by what means is either the severity
24 or the likely area of impact of cyclones conveyed through
25 warnings?---Generally there is a categorisation system
26 from 1 or 2, very low impact, to 5, extreme cyclone. That
27 by itself tells us about the wind speed of the cyclone but
28 doesn't tell us about its impact. That has to be
29 interpreted in the warnings that are given.

30 In relation to earthquakes, the warning system gives the person
31 who receives the information some sort of indicator, as

1 I understand it, to the Richter scale which pertains to
2 strength of the force?---It is not really a warning
3 system. What it is is a measure of the amount of force
4 released by the earthquake and the damage that occurs
5 thereafter.

6 Obviously we will go to fires in a moment, but at the outset
7 are you able to indicate in general terms some differences
8 about the way that floods develop and impact and the way
9 that fires develop and impact that may have some
10 significance in terms of the way warnings can be delivered
11 about those two hazards?---If we consider normal river
12 floods, generally speaking a coastal flood in Australia
13 would develop from weather conditions that are forecast,
14 so that's perhaps similar to fire, but the flood itself,
15 as the river flow increases, is monitored and through
16 various ways of predicting it's possible normally to make
17 a fairly accurate prediction of the height and timing of
18 the flood downstream. That's for riverine flood. For
19 flash flood situations in urban areas and so on, that's
20 generally not possible. All that can be done is a
21 meteorological forecast about severe storm likelihood.
22 But, having said that, the flash flood paths are well
23 known to the agencies.

24 When you were speaking of riverine floods, as I understand it,
25 assuming there is sufficient lead-in time, there is often
26 the potential in relation to floods to give warnings that
27 are as specific as particular streets being impacted when
28 a river reaches a particular level?---It depends on the
29 confidence of the warning authority, but in theory, yes,
30 it is possible, and flood maps that are produced based on
31 estimated flood heights of course define particular

1 streets. It is never perfect, but it's a reasonable
2 assumption. It also shows what streets are cut off for
3 evacuation and when they are likely to be cut off.

4 You have spoken of riverine floods and flash floods. Are there
5 any significant differences that we ought to be aware of,
6 before we move to the detail of your statement, between
7 dealing with that natural hazard and dealing with a
8 bushfire in the Australian context?---Some bushfires seem
9 to move in a reasonably orderly fashion and allow us to
10 predict or allow the agencies to predict ahead of time.
11 The alpine fire in 2003, 2006 are good examples. They
12 moved steadily across the state towards the east. Towns
13 could see it was coming; in so many days meetings were
14 held and preparations were made. It was like a flood in
15 the western part of New South Wales where there are days
16 or weeks of notice for towns to prepare. Other fires,
17 perhaps the Canberra fire, the recent fires in Victoria,
18 don't provide that luxury and they are very sudden and
19 more like flash floods . We have the weather forecast, we
20 have the meteorological conditions that are right for the
21 situation to develop and then it develops very, very
22 quickly and in a way that is perhaps not easy to predict.

23 When speaking of flash flooding, you said although there are
24 differences between flash flooding and riverine flooding,
25 the areas prone to flash flooding are known to the
26 authorities. Is there any analogy between that and the
27 bushfire prone areas in Victoria?---There is probably a
28 weak analogy in the sense that in areas in cities, for
29 example, urban flash flooding and in some rural areas,
30 such as for example Alice Springs, flash flood, a serious
31 flash flooding problem, the paths and areas that are

1 subject to flash floods are well documented. In the case
2 of fires, the fire risk areas are - I think they are
3 mapped in Victoria and in many places, but that doesn't
4 necessarily mean there is a repeated history of fires in
5 those areas that has been documented. It is slightly
6 different.

7 With that background I now want to take you to aspects of your
8 statement. Can you turn to paragraph 6, which starts at
9 witness page 0003, just using the top right-hand numbers
10 there. You start with a summary or some introductory
11 remarks and you note that: "People at risk from disasters
12 can generally take action to improve their safety and
13 reduce losses and human suffering. The idea of warnings,"
14 you say, "is to provide a call to action to this end."
15 Can you explain the cause and effect there? What is
16 thought to be or what is ideally the purpose of a warning
17 and is there a way of judging whether a warning is
18 successful or useful?---There is probably a little bit of
19 debate, but in the warning literature, risk communication
20 literature, the utility of a warning, the purpose of
21 having a warning is to provide a signal for some action,
22 and that may be - I would like to give two or three very
23 different examples.

24 Yes, certainly?---In The Netherlands the action is to patrol
25 the dikes and ensure they are secure. In parts of areas
26 prone to severe flash flooding or severe riverine
27 flooding, it would be to evacuate people whose houses
28 might be submerged. In other areas it might be to move
29 stock from low-lying areas, or to move pumps from
30 low-lying areas. So, it is a call to action, but the
31 actions could vary hugely depending on the specific

1 circumstances. In terms of assessing the success or
2 otherwise of warnings, people in the warning literature
3 who look at the whole warning system like myself and some
4 of the people in the emergency services that I work with,
5 we look at the impact the warning has on that ideal of
6 improving safety or reducing damages. But that's one
7 measure and it is a very difficult measure for the reasons
8 I think I try and outline elsewhere.

9 Yes. You go on to say: "The warning task is complex and good
10 effective warnings emerge from a mix of technology, human
11 factors and in the context of a range of priorities and
12 experiences, pressures, beliefs and biases." Are you
13 talking there about the call to action side of the
14 equation; namely, the call to action and what people do
15 may be affected by all of the things that you refer to
16 there?---Yes, but also in the warning chain, the
17 information chain from detecting some environmental
18 condition that means that people should be warned, there
19 are decision making points and people have to make the
20 decision to issue that warning or pass that warning on and
21 they have to make decisions about what the warning
22 contains often, and the points there all affect that
23 sometimes just as much as the actions that we would like
24 people to take on receipt of that warning message.

25 In the next sentence you note that: "It is important to
26 appreciate warnings are not simply for households at risk
27 and that those at risk who may need to be reached include
28 those travelling, undertaking recreation and in
29 institutions and for infrastructure." Can we just explore
30 that for a moment. You seem to be suggesting there that
31 natural hazard warning systems may be home or household

1 centric. What did you want to say about that focus and
2 how could it be improved?---It is not necessarily a
3 criticism. I mean, I think warning systems tend are often
4 house-centric on the basis of safety and the argument is
5 that commercial enterprises have their own ways of looking
6 after their interests. I suppose we could say that use of
7 radio, for example - different dissemination modes help
8 with this. If we use radio, for example, then most of
9 those groups, people travelling, people at work and so on,
10 might get the message. If we are looking at people
11 camping or hiking in an area that might suddenly be
12 subject to flash flooding or a severe fire risk, that is
13 more difficult to make contact with those people. That's
14 the point. In a way it is the most challenging part of
15 the warning process in a sense, to identify the different
16 critically vulnerable groups and to think about how they
17 might get a message.

18 What about schools or places of employment or hospitals,
19 nursing homes, et cetera? Does the bushfire warning system
20 as you know it in Victoria cater for warnings to those
21 institutions where people are not in their homes?---As far
22 as I'm aware the bushfire warning system in Victoria
23 provides the same warnings for those institutions as it
24 does for everybody else. So they might be alerted by a
25 phone call - I don't know this - or by simply looking at
26 the website in the same way as everybody else.

27 Or hearing a warning on the ABC Radio?---Yes.

28 In paragraph 7 you note that: "Warning systems combine official
29 rule-bound agencies with relatively anarchic profit-driven
30 media and telecommunications organisations and people's
31 personal networks." How do the three of those interact,

1 in your experience?---Often not as well as they could,
2 I suppose. What we tend to find is there is an official
3 system where an agency has some responsibility or takes on
4 responsibility, it monitors the environmental conditions,
5 models the data one way or another, produces a prediction
6 and then that prediction needs to get out. Usually one of
7 the main ways that the prediction is disseminated to the
8 people at risk, the households at risk, is through a media
9 organisation. Of course the ABC in Victoria have a formal
10 agreement to do this, but all the other broadcast media
11 are not part of that agreement and so if we want to reach
12 their audiences there has to be - they have to disseminate
13 that warning. So that's when there might be issues about
14 programming priorities, the degree of severity or urgency
15 of the message and so on. Once the message is received by
16 people and they understand it is of some relevance to
17 them, which is a big step, what we typically find is that
18 people mobilise their personal networks and discuss it
19 among themselves.

20 You mentioned receiving the message and understanding it's of
21 relevance being a big step. It is probably a good point
22 in the narrative to discuss that. Is there an issue in
23 relation to people perceiving personal risk or
24 personalising the message and how is that dealt with, or
25 can it be dealt with?---It is probably one of the biggest
26 challenges in any warning system, to have a message that
27 people actually realise relates to their own personal
28 situation, assuming that it does relate, it is meant to
29 relate to their situation. The orthodox ways of trying to
30 achieve that are to tailor the message, to write the
31 message for that particular audience, which might be

1 teenagers, it might be elderly people, it might be
2 farmers, and to disseminate it through a mode that suits
3 that particular demographic. That will be the standard
4 ways of trying to address that issue.

5 Is it the case that the desire or the need to tailor messages
6 may produce a tension between the need for speed and
7 getting a warning out to a large number of people and the
8 need or the desire to personalise or make specific?---It
9 is one of a number of tensions. Another critical tension
10 is that there is a tendency, because we have the capacity,
11 to have centralised, very straightforward warnings that we
12 can distribute to very large numbers of people, and that's
13 one side of the coin, if you like. The other side is it
14 would be good to have them individually tailored, as you
15 say.

16 Just continuing with the rest of paragraph 7, you note there
17 that: "Assessment of warnings has an objective element,
18 namely the accuracy of the prediction and the proportion
19 of those at risk who are reached." But real effectiveness
20 might also require the subjective element you have just
21 spoken of, whether people realise that the warning message
22 applies to them and take action and you note that is hard
23 to measure. Are there studies that have attempted to
24 measure that part of the chain, what people do, or is that
25 an area of research more in its infancy?---No, there are
26 quite a lot of studies that have tried to look at the
27 impact of warnings in terms of damage reduction and
28 improving safety, but it is a lot easier to be able to
29 assess the accuracy of the prediction, the predictive part
30 of the warning.

31 Now, as part of your role at the Bushfire CRC you have been

1 involved in a study that is being undertaken at present in
2 relation to the most recent fires. You are the team
3 leader of one strand of the research?---Yes.

4 The interim report is almost ready, as I understand
5 it?---(Witness nods.)

6 Is part of that research going to involve attempting to analyse
7 the success of the warnings that were received or
8 disseminated during the February fires and how people
9 reacted to them?---Halfway, I'm afraid. In the interim
10 report we have - the interim report is based on a lot of
11 interviews and it looks at the information flow and the
12 sort of messages people received and what they thought of
13 those messages and the sort of action they take, but it is
14 not a quantitative study of that issue. The next phase
15 where there will be a questionnaire survey will achieve
16 that, we hope.

17 You also note that one of the issues that's important about
18 warnings is the level of credibility or trust in the
19 person or the institute that delivers the message. Why is
20 that important?---In the chain, the series of steps that a
21 warning has to go through, has to get over to be
22 effective, it has to reach the people that are at risk.
23 They have to understand the message and they have to then,
24 among other things, take it on board as being important to
25 them. The research shows that if the people at risk don't
26 trust the source or are very dismissive of the source,
27 they are less likely to pay attention to it.

28 Elsewhere in your statement - - -?---Sorry, I use the word
29 "trust", but I also use the word "credibility". I think
30 credibility might be a better way of thinking about it.

31 Elsewhere in your statement, and we will come to this, you are

1 asked to consider some of the warnings that came from the
2 highest levels in this state prior to 7 February and you
3 make special mention of press releases and press
4 conferences given by the Premier, the Emergency Services
5 Commissioner and you make some comments about the utility
6 that that provides; namely, a high level, credible and a
7 source with a high public profile. Can that be a useful
8 aspect of getting out part of a warning?---I think it was
9 very useful for a couple of reasons. One is that there is
10 a lot of credibility. People might not trust the Premier,
11 they probably all do, but even if they don't, the fact is
12 that they know his time is very important and the fact
13 that he is out there talking about this means it is a very
14 salient issue, for starters. Secondly, pretty well every
15 form of media carries such statements. That is one of the
16 big hurdles in warnings, to get the message over multiple
17 sorts of media to the different audiences that listen or
18 pay attention to those types of media and a statement by
19 the Premier or many statements by the Premier and Bruce
20 Esplin and others a few days before seemed to achieve
21 that.

22 In the next part of your statement you deal with some of the
23 goals and purposes of warnings which we have already
24 touched on. At paragraph 11 you note that, "A good
25 warning should empower individuals and communities to
26 respond appropriately," and I think we have dealt with
27 that. In paragraph 12 you note that: "The United Nations
28 platform for early warning uses the term 'people-centred
29 warnings' to emphasise that effective warnings need to
30 keep their ultimate purpose in mind." Is an element of
31 that ultimate purpose the desire to save lives or reduce

1 human suffering as you noted at the outset in your
2 report?---That's correct. The purpose of that emphasis in
3 the UN document is to try to shift attention away from
4 assessing the technical success or otherwise of warnings.
5 As I mention here, a prediction might be 100 per cent
6 accurate, rarely is, but let's assume it is 100 per cent
7 accurate, but it is of no value if people don't take some
8 protective action.

9 As you say in paragraph 13, towards the end of that paragraph,
10 "A strong case can be made that the warning agency has
11 responsibility to ensure that its message has meaning to
12 the intended audience." So is that another way of
13 expressing this people-centred notion that it at the heart
14 of the UN platform?---Yes. The idea there is that, for
15 the message to be properly understood, there needs to be a
16 shared meaning, a shared understanding between those
17 issuing the warning and the intended recipients.

18 An element of that success no doubt is that the intended
19 recipients almost invariably will have needed to be
20 educated about the meaning of the warning and also about
21 the steps to be taken in response to it?---That's right.
22 I would like to point out, though, it should be
23 ideally - it is a two-way educative program because in
24 developing and distributing the warning the people, the
25 agencies, need to know about the needs and expectations of
26 those people who are at risk, as well as educating them
27 about what they can do to reduce that risk.

28 Would it also include a need for those in the position of
29 issuing the warnings to have some knowledge themselves
30 about who are the vulnerable groups or individuals in the
31 area affected?---It is pretty important. Otherwise,

1 I feel one of the issues with warnings and why it is
2 actually very difficult and one reason why they are often
3 cast as failing is that we could be completely successful
4 at warning 80 per cent or 90 per cent of the population at
5 risk, but miss the 10 per cent who perhaps have mobility
6 difficulties or who perhaps are very unlikely to get the
7 warning for a whole range of reasons that might be
8 medical, there might be other reasons, and we would argue
9 they are the critical group we should ensure is captured
10 by a warning system. We can't do that without studying
11 the community.

12 Next in your statement you refer to local needs and again we
13 have touched on some of this. You say in paragraph 15,
14 you make the point that we just explore the mutual
15 dialogue, the two-way education process. In paragraph 15
16 you refer to a recent example of this process in Victoria,
17 being the Ferny Creek bushfire siren project. You have
18 some particular familiarity with that project?---Yes. It
19 is quite a while ago now, but I was involved as a reviewer
20 of the project documents.

21 So you are aware that that's an example of a community
22 initiative that involved a great deal of work and liaison
23 between the entities involved, including the
24 CFA?---(Witness nods.)

25 And resulted in a project which is in place as at today whereby
26 that community uses a siren for a particular purpose
27 during bushfire?---That's correct. The initiative came
28 from the community to develop a local siren alerting
29 system for fires.

30 You note in paragraph 16 that the audience for a warning may be
31 hugely variable and towards the end of that paragraph you

1 note that, "People go to different sources. Some
2 community members may be habitual uses of the internet,
3 others might be more likely to turn to the radio, others
4 might use personal networks. There are different
5 preferred modes of receiving information." How does that
6 then impact on the way that one should take care to
7 disseminate warnings?---Ideally - I mean the community at
8 risk is infinitely diverse. Each individual, we could
9 argue, has a unique preferred way of receiving a warning,
10 but at some level we have to stop, I suppose. But ideally
11 the modes that are the preferred ways for that community
12 at risk to receive their information should be the modes
13 that are used, given whatever is practical, and that
14 means, almost always it means that there would be several
15 modes.

16 So it would be preferable in your view to use the internet as
17 well as ABC Radio and perhaps even give consideration to
18 other modes like phone calls or Twitter sites?---Yes,
19 that's right. They are all reasonably technological
20 means. One could argue that in many communities to ensure
21 that the more vulnerable people - it depends on the
22 community - are reached, we would probably need to get
23 into the local networks, the personal networks or the
24 community networks to try to activate, if you like, the
25 neighbourhood to make sure that people who may not receive
26 warnings via those modes receive them either by direct
27 personal contact or some other way, and that they make
28 sure that they are in a position to take what sort of
29 protective action is needed. But this is tapping into
30 what we call the informal warning system.

31 Is there another benefit to disseminating by more than one

1 means, namely in case of failure of one means or imperfect
2 delivery of one means during a crisis?---That's right. We
3 would argue that reliance on any single mode of
4 dissemination is pretty risky, partly because it is not
5 going to get to everybody no matter what it is and,
6 secondly, any single mode is subject to failure or
7 congestion or interruption.

8 The next aspect you turn to in your statement is timeliness and
9 you note in paragraph 17, "A warning should be delivered
10 in a timely manner so as to allow people to confirm what
11 they have to do and take action in time." Is that a
12 feature you have noticed in your research, that people
13 usually seek confirmation from further sources before they
14 act?---There are two things that come out of the research,
15 main things. One is what you have just said, that people
16 will almost always seek confirmation. Officials will,
17 too. But people at risk will seek confirmation usually by
18 mobilising their personal networks or if they hear
19 something, read something on the web, listen to the radio
20 or TV or ring somebody or vice versa. This is pretty
21 normal and we have found often people - they also might
22 want to ascertain the location of other household members.
23 There are a number of things go on typically before people
24 take action. The other thing we have noticed is that very
25 frequently people receive the warning or at least
26 understand that the warning is important to them too late
27 to do anything useful.

28 Moving down to the warning process, if I can move you on to
29 paragraph 23 of your statement, you refer to the steps in
30 a warning system which appears to be applicable in
31 particular to flood warning systems because of the work

1 you have done in the area, but would also appear to be
2 applicable to fire. In paragraph 23 you say the steps in
3 the process or the links in the chain are prediction, so
4 detecting the environmental conditions that lead to the
5 problem and predicting the severity?---Yes.
6 So obviously that is something done by the warning
7 agencies?---That's right.
8 And may depend on the predictive tools or resources?---Or
9 monitoring the landscape for signs of a fire, yes.
10 The next step is interpretation, identifying the impacts of the
11 predicted event on the communities at risk. Again, that
12 is something that you would envisage being done by the
13 agency with its tools and resources?---That's right.
14 There is perhaps a difference there with different hazards
15 because I've said there identifying in advance the impacts
16 of the predicted event. That is something that is very
17 well refined for flooding, for example, but in fire it
18 would be something that is not as easy to do in advance.
19 In that context of looking in advance at fire risks, has the
20 existence of the Victorian fire risk register ever been
21 brought to your attention?---Yes, it has.
22 As I understand it, that's a mapping tool or a software tool
23 that enables some of that predictive work and interpretive
24 work to be done in advance by inputting data in relation
25 to fuel loads and topography in Victoria overlaid with
26 assets and risks or people at risk in Victoria?---That's
27 right, yes.
28 The next step that you identify in paragraph 23 is message
29 construction and as I understand it that relates to
30 devising the content of the message which we will go to in
31 detail later?---Okay.

1 But again the construction is something in the hands of the
2 agency that delivers the warning?---Ideally drawn up in
3 close consultation with the people expected to understand
4 and act on a message.

5 Communication then is the process of actually disseminating the
6 warning and you have said earlier that should be in a
7 timely fashion and preferably via multiple sources?---And
8 in particular the modes or medium that will reach the
9 groups that are most at risk or the most vulnerable.

10 Then protective behaviour, generating the call to action, if
11 you like, generating the response in the community, and
12 then the review, considering, I suppose, looking at the
13 chain of events afterwards?---That's right.

14 And analysing whether it has been successful and to what
15 degree?---(Witness nods.)

16 If we turn to paragraph 26, you say in summary: "A good warning
17 system should monitor the risk based on an assessment of
18 risk and vulnerability and other issues, be designed with
19 the needs and expectations of the user in mind, interpret
20 predictions", and you say "be capable of operating in
21 normal circumstances and non-routine circumstances." What
22 do you mean by that?---Most of our emergency management
23 system, fire emergency management system is developed and
24 it is well rehearsed in what we might call day-to-day
25 situations, for example fires or floods that occur
26 reasonably regularly. The real test comes when we get an
27 exceptional event and an exceptional event may not be one
28 that's outside our total experience but one that perhaps
29 only occurs every 20 years or so, and that's when systems
30 that are well rehearsed and well oiled for perhaps annual
31 circumstances tend to find difficulty in functioning

1 properly. It is also a situation where we would argue
2 that the whole manner of the event changes completely.
3 There are far more groups involved typically, there is the
4 need to set priorities and so on. Some of the critical
5 systems we might depend on either become overloaded or
6 don't work very well, such as electricity and so on, and
7 the key for any warning system is how is it going to work
8 under those events. Perhaps the difficulty in a way there
9 is that the system is likely to be far more needed in
10 these events.

11 Over the page you set out a number of other matters, most of
12 which we have already explored. About halfway down the
13 page on witness page 0008 you note the desire for two
14 independent modes of dissemination and redundancies in
15 case power fails. In the next dot point you say: "In
16 appropriate circumstances precede the warning message with
17 an alert signal to get people's attention" and you note
18 that might be a way to rise above other messages and media
19 with which we are bombarded every day?---(Witness nods.)

20 Can you see a role for the use of SEWS, the standard emergency
21 warning signal, in that way?---Yes, I can. I think SEWS,
22 that was its intention, I think, to be used to get out
23 there. Warnings to me operate in a competitive
24 environment often with everything else people are doing or
25 listening to, and there is often, not always, but often
26 needs to be some way of cutting through all the haze and
27 the idea of SEWS is to do that. My concern which
28 I mention in the paper is that my interpretation of the
29 protocols for its use in Victoria is that it is difficult
30 to use it in advance of something happening, but that
31 might be simply my interpretation of the set of words

1 there. But certainly it is widely used elsewhere.

2 COMMISSIONER McLEOD: Is that because of the nature of fire,
3 Professor, in comparison for example with flood? If it
4 starts raining heavily, it is usually possible to be
5 fairly certain about the resultant impact, but fire, even
6 in extreme conditions, requires ignition?---That's right.
7 And ignition is very problematical and impossible to predict in
8 advance, other than in a very general sense?---Yes.

9 Is that a kind of unique difficulty with fire and warning?---It
10 could be, if the ignition source was very close to a
11 community that would be negatively impacted, definitely.
12 In that case you would put out - you would use your SEWS,
13 for example, in your message as it was impacting the
14 community, I agree. So it would depend. The ignition
15 source, whether it is by lightning, arson, whatever, could
16 nevertheless be some distance away from the community.
17 But fire in the circumstances you have described is very
18 different to flooding. The only similarity is that we
19 know under those extreme conditions that something could
20 happen.

21 In the particular event, the so-called warnings given on the
22 week preceding the fires or on the day before in a sense
23 were generic warnings where there wasn't any specificity
24 or even certainty?---No, they were just "be careful".

25 Whereas SEWS - would you agree that SEWS really only has a
26 relevance once an incident has been initiated?---Yes.

27 MS DOYLE: You are aware, no doubt, Professor, that that's the
28 way in which SEWS is used, for example, in South
29 Australia. It precedes bushfire warning messages which by
30 their very nature are issued after ignition?---Yes, I am
31 aware of that.

1 Can I take you to the question of content of the warning
2 message and go to paragraph 30 of your statement, which is
3 on witness page 0009. You make some detailed comments
4 about recommended content of warnings. You say that:
5 "Generally messages should set out the expected timing and
6 severity of the event, what is expected to happen, when it
7 will occur, and indicate how people should act." I think
8 timeliness is fairly clear. Why is severity
9 important?---One of the difficulties with almost any
10 warning message, even in situations which most of us who
11 work in the sector would regard as critical, people's
12 often first reaction to a warning is to, as we said, seek
13 confirmation and to assume that perhaps it is not that bad
14 and it may not apply to them, certainly not for a while.
15 The severity message is to help people gain an
16 appreciation of what is coming and to help them make an
17 appropriate decision. There is a big difference between,
18 to use a flood example, a flood that might inconvenience
19 them by blocking the streets and one that will be over the
20 roof of their houses. I think that's what we are looking
21 at in severity messages.

22 If you can go to paragraph 32, you go further and make some
23 specific comments about the way that a message might be
24 constructed, drawing on flood warning guides. You suggest
25 in the first dot point that the message should be positive
26 rather than negative; namely, it should advocate what to
27 do rather than not what to do, stay at home rather than
28 don't leave your home. So that sort of positive language,
29 something that's been demonstrated to have a better impact
30 on people's thinking?---It comes from the psychology of
31 persuasion, that material, and it is intended to try to

1 get people not to just reject the message straight away
2 because it's negative.

3 The next dot point seems to be in a similar vein, but invites
4 sociability rather than isolation. How does one invite
5 sociability in relation to a warning and what is the
6 purpose?---Actually the purpose is that people - the
7 psychology behind it is people like to do something. They
8 would rather take action than just sit there doing
9 nothing. I noticed that in the messages that preceded 7
10 February in the week before by various senior state people
11 there was quite a lot of that, asking people to - with
12 respect to the heatwaves - to look after and check on
13 their neighbours and so on, exactly this sort of thing.
14 We would argue that is, and the psychology of persuasion
15 suggests this is a good approach.

16 "Be vivid." It seems you suggest there using language that
17 can, as you say, arouse emotional interest or be easy to
18 understand, something that will attract attention. So in
19 the context of fire, what sort of terminology or words
20 might be sufficiently vivid or active to gain people's
21 attention?---I have said there, "Avoid driving or walking
22 in areas on fire or in smoke or ember attack." I think
23 the idea is, though, to avoid being vague or abstract, to
24 be precise. So vividness is really about people's ability
25 to grasp the concept or the idea that's being transmitted.
26 To avoid the message sounding impersonal or boring,
27 basically.

28 So, for example, I'm going to ask you to look at the
29 Commonwealth document "Choose your words" in a moment, but
30 that document, for example, proposes that the word
31 "people" or "you" be used rather than "residents", or

1 "home" be used rather than "property". Would you advocate
2 use of those types of simple and direct language rather
3 than abstract language?---Yes. Abstract language doesn't
4 seem to work too well in warnings for the public at risk,
5 so it should be as personalised as possible.

6 You also say in the final dot point there, "Connecting
7 consequences with actions." I take it that's an attempt
8 to say we should connect the cause and the effect to make
9 it clear what will happen if you do not respond to the
10 call to action?---That's right, and also when a particular
11 statement is made, for example do not wear synthetic
12 clothing, it is probably a good idea to explain why, so
13 people then understand the implications of that.

14 You were asked in preparing this report to look at the
15 Commonwealth publication called "Emergency
16 warnings: choosing your words". I would just like you to
17 look at that for a moment. Commissioners, it appears in
18 volume 25 of the hearing book at tab 9, and it is
19 (TEN.004.002.0478). Do you have a hard copy there,
20 Professor Handmer? Otherwise it will be on the screen as
21 well?---I have a copy.

22 You are familiar with this brochure which was released in
23 2008?---(Witness nods.)

24 It sets out a number of aspects in terms of the purpose of
25 warnings and the guiding principles, but the part I want
26 to direct your attention to starts at part 3 of the
27 document, page 0490?---Can you tell me the page?

28 It is page 11 down the bottom of the document and 0490 in the
29 tender page. This chapter is titled "Structure of an
30 emergency warning". It suggests that this information in
31 an emergency warning that should always appear is the name

1 of the warning, the agency issuing it, the type of threat
2 and then these elements: how likely it is to happen, how
3 bad it is expected to be, where it will occur, who is
4 affected, when, what people should do, and how to get more
5 information. Is that a good guide to constructing a
6 message in relation to a natural hazard?--Yes, I think it
7 is. The only thing - if time was desperately short we
8 might alter the sequence, but I think it's a good generic
9 approach.

10 Can you turn to page 13, which is page 0491. There is then
11 some guidance as to language to use. There are some
12 distinct similarities with the suggestions you have made
13 in your statement, that it suggests, for example, to
14 inspire people to take action you need to get their
15 attention, make it personally relevant and motivate them.
16 It suggests perhaps using colourful or persuasive
17 language, not boring or technical. Would you agree with
18 that?---Yes.

19 Can I take to you page 15, which is page 0493. There is a
20 discussion of describing the threat and there are the
21 elements that I have already suggested to you. It says
22 down the bottom: "The words you can use can make a big
23 difference. For example, 'you' rather than 'people' or
24 'residents'; 'homes' rather than 'property'; 'safe' rather
25 than 'vulnerability'; 'risk' rather than 'chance';
26 'threaten' rather than 'endanger'." Would you agree with
27 those sentiments in terms of making the language simple
28 and active?---Yes. I think that's orthodoxy in risk
29 communication, yes.

30 Finally there are some suggestions here about how to describe
31 severity. If you go to page 17, tender page 0495, there's

1 a table which suggests that once one determines whether
2 the severity is low, medium, high or very high, that the
3 words in the column for "high" and "very high" that might
4 be suitable include "destructive", "dangerous", "severe",
5 moving up to "extremely destructive", "extremely
6 dangerous", "extremely severe". Would that type of
7 language in your opinion be likely to be helpful in
8 relation to bushfire risk?---Probably. I say probably
9 because it would depend on the specific audience, the
10 demographics, and ideally the precise wording would be
11 developed in conjunction with the intended audience, but
12 as a general guide it is much more descriptive than just
13 saying there is a high risk.

14 I should just also take you to page 19 in terms of time. Page
15 19, tender page 0497, there's a reference to this
16 question: "When is it expected to happen?" It says, "To
17 express future times use the exact time of day," and it
18 proposes saying something like, if there is a window of
19 time in issue, between 2 pm and 4 pm or before 6 pm, and
20 it says, "Using an exact time makes it easier for people
21 to visualise what they and their family will be doing and
22 how they will be affected. Exact times are easy for
23 people to remember." Now, I assume you would support this
24 as an ideal, but are there some limitations on the
25 capacity to issue warnings like that in some
26 circumstances?---Yes, often it is difficult to be precise
27 about timing. However, if there's no sense of the
28 timeframe that people have to enact their plans or to take
29 action to improve their safety or whatever, it is
30 difficult to see how people will personalise that and
31 actually do something about it. So, my feeling is that if

1 there is uncertainty it should be expressed in the
2 way - ideally in the ways set out here. There are other
3 ways of expressing it, but between times that people
4 identify with or saying that there will be another message
5 in the near future. One issue that might come up and it's
6 been discussed is that we're not sure whether people have
7 10 minutes or three hours. I think in that sort of case,
8 if there is a chance that people will only have 10 minutes
9 to perhaps take life-saving actions, then that's very
10 important to get that message over.

11 So in that example, if one couldn't be sure whether the window
12 was 10 minutes or three hours, I take it you are
13 advocating erring on the side of caution and delivering
14 the message conveying urgency rather than taking the
15 chance to see if three hours then elapse?---I think we
16 have to - you have to do that if it is a life-threatening
17 situation.

18 If I can return you to your statement, we have dealt with the
19 matters through paragraphs 33 onwards. I just want to
20 highlight one other aspect of timing from paragraph 40
21 onwards, so that's at (WIT.044.001.0011). At paragraph 40
22 you say: "To be useful, warnings need to provide those at
23 risk with enough time to take action." At paragraph 41
24 you give a particular example. You say at paragraph 41:
25 "In some parts of the world there might be very short
26 warning times, for example tornados and tsunami warnings."
27 Despite the shorter lead-in times, warnings are issued
28 whenever they can be in relation to those natural
29 disasters?---That's right, but the communities are very
30 well - generally very well prepared and educated about
31 this.

1 So you say that in the United States, for example, there is
2 well-established procedures for people to adopt should a
3 tornado threaten; similarly in Japan in relation to a
4 tsunami?---When I say the United States, I should say in
5 certain parts of the United States, colloquially known
6 tornado alley, the tornado warning system is very well
7 developed and people generally understand the correct
8 precautions.

9 You then in the following paragraphs in your statement provide
10 more detail in relation to these aspects of timing,
11 urgency and severity and dissemination modes. Perhaps if
12 we can move to paragraph 53 where you return to the notion
13 of dissemination, and that's at witness page 0014. I will
14 start actually with what you say in paragraph 52. You
15 make some comments there about timing and use of
16 technology, including websites. You make some comments
17 about the website. It is a matter I should have clarified
18 at the outset. You are a CFA volunteer?---Mm-hm.

19 And in fact on February 7 there was a period of time where you
20 looked at both the publicly available CFA website and the
21 members website; is that right?---Yes.

22 So you make a comment here about the CFA website carrying an
23 urgent threat message and you say the website was slow.
24 Can you just explain what you observed in relation to the
25 public CFA website on 7 February?---Okay. I should
26 clarify it. On this particular example people were
27 calling me and asking me if I could give them advice
28 because they found the website, the public website, wasn't
29 working for them. So, it could have been where they were;
30 they were not in Victoria.

31 These were people known to you?---Yes, concerned about their

1 parents who are in one of the fire areas. So I was able
2 to use the official, if you like, side of the CFA website
3 to see what was happening and the sort of resources that
4 were being deployed and how the fire was progressing and
5 inform them because they found that they did not have
6 useful access to the public site.

7 So you were located for part of the day in the Mount Macedon
8 fire station?---That's correct.

9 In the scenario you just described, someone called you from
10 interstate concerned about their parents located in
11 Victoria?---That's right.

12 The people who called you said, "We can't find out from the CFA
13 website" and I think you are explaining that you used the
14 CFA members website. Were you able to find out useful
15 information about the fire they were inquiring
16 about?---Yes, I was. But it could have been that
17 particular fire, but I was able to find it.

18 That was the Murrindindi fire?---No, it was Labertouche.

19 Moving on to dissemination in paragraph 53 - - -

20 COMMISSIONER PASCOE: Just before we leave that one, Ms Doyle.

21 In relation to paragraph 52, where you talk about the
22 timing and the care needed to avoid unnecessary decision
23 points, mode changes and inevitable delays, are you
24 familiar with the Western Australian system, where it is
25 possible to input the data one time and have it available
26 in multiple modes to multiple audiences?---Is that the
27 Write-it-Once software?

28 Yes?---Yes, I am familiar with that.

29 Can you comment on that in relation to the comment in paragraph
30 52 and any potential you might see for application, for
31 example, in Victoria?---Sure. My understanding is that is

1 a digital system so it only applies on digital output, but
2 that might be most. This system means that once the
3 monitoring - we still have the monitoring, the prediction
4 and modelling and the decision to issue a warning. Then,
5 as you say, using this software the warning is then issued
6 by multiple modes. So, once the decision is made to issue
7 a warning, it should be a lot quicker because it doesn't
8 just go one or two modes, it can go on as many as we like.
9 That's the idea. So it helps - I think it helps a lot
10 potentially or does help a lot at the disseminating side
11 of the system. It doesn't help with the various steps
12 before that, I suppose. The other issue with the
13 dissemination side of it is that the message is a standard
14 message and while it is going over many different modes,
15 so that in a sense it is perhaps going over preferred
16 modes for different sub-audiences, the wording will be the
17 same. I think the next step in the evolution of that
18 system is to try to be able to tailor it automatically or
19 some way to those different audiences.

20 MS DOYLE: I think that really brings into play some of the
21 matters mentioned in paragraph 53. You say that different
22 modes will reach different audiences at different times.
23 You make the point that SMS will reach most who have
24 mobile phones. There may be issues with coverage. Radio
25 can reach people no matter what they're doing. An
26 interesting point I think you had indicated there relates
27 to the fact that even those whose power is lost in their
28 home, if they don't have a battery operated radio, this
29 would seem to be an alternative for all those with a car;
30 namely, you could listen to the radio in the car?---Yes,
31 as long as the fire wasn't raging around the house but,

1 yes, that's right. The car and many mobile phones,
2 perhaps most mobile phones, have a radio.

3 You also note in the next dot point that sirens may be useful
4 outdoors, in particular for travellers, and I think you
5 mention the example of campers?---That's right.

6 And television, you make the point, is obviously limited to
7 indoors?---Yes.

8 Are you making the point there that, in determining by what
9 means and at what time a warning will be disseminated, all
10 the different things that people might do at different
11 times of the day and all the different types of technology
12 they may have access to need to be taken into
13 account?---That's right. Some people may have no
14 technology with them at all or no way of receiving the
15 warning and sirens are generally seen as quite useful in
16 that context, provided they are within earshot.

17 In paragraph 54 you make some suggestions in terms of
18 improvement. You say that ways of indicating high
19 priority messages for specific areas need to be developed.
20 I think that flows from the question that Commissioner
21 Pascoe asked you. Even if one has a sophisticated
22 software tool, the next phase may be to be able to
23 disseminate certain aspects of information generically but
24 then have specific or local add-ons?---Yes.

25 Is that a fair summary?---That's one approach, yes. Sorry,
26 that's one aspect, yes.

27 You then say: "Consideration should be given to having another
28 level of fire danger for particular extreme conditions."
29 What do you mean by that?---I think it has been discussed
30 quite a bit, that when the fire danger index, which is a
31 way fire is assessed, a fire risk is assessed, although

1 the fire danger index, my understanding is, is about the
2 difficult of controlling a fire. When it reaches 50 on an
3 index of 0 or 1 to 100, we are in extreme fire danger.
4 But when we are at well over 100 we are still in extreme
5 fire danger. There is a big difference between a day at
6 50 and a day that is well over 100, so it is not reflected
7 in the way the day is labelled or in many of the public
8 response elements.

9 So are you suggesting there may be a need to consider a new
10 level of gradation or new words to use above 50 or even
11 above 100 in the fire danger index?---Some extreme level.
12 At the moment I think we don't have a way of
13 institutionalising responses for a very extreme fire risk.

14 CHAIRMAN: Are you suggesting some adjective might be
15 appropriate and, if so, what might be the
16 possibilities?---I don't have one at hand, I'm afraid.
17 Whatever I said, people would object to it. But
18 I think - - -

19 There are so many like "devastating" or "catastrophic" or
20 "cataclysmic" and it goes on and on. None of those appeal
21 to you?---They are about the destructive nature of it and
22 maybe that's a good thing because at the moment we are
23 focusing on the fire weather conditions, extreme fire
24 weather. People have suggested in flooding we should call
25 extreme floods "diluvian", with a biblical reference.
26 I am not sure what the equivalent would be in fires.
27 There probably is one.

28 You are preferring not to opt to give one?---If it was a very
29 rare occasion, and it well might be, then we could use one
30 of those expressions such as "catastrophic", but again it
31 refers to the likely damages and impacts.

1 COMMISSIONER McLEOD: With bushfires and flood, Professor,
2 perhaps there is a similarity in the sense that one can
3 drown in three feet of water and one can drown in 100 feet
4 of water. One can die from the effect of radiation at 50
5 on the fire danger index or 150 on the fire danger index;
6 one can die from the same cause. What purpose does the
7 differentiation of the severity of the event have to a
8 person? Is it essentially more about the consequence of
9 property damage rather than loss of life, or I suppose
10 there is also an element of greater risk to human life
11 with a flood of 100 feet or a fire of 150 on the fire
12 danger index. It is clearly very dangerous to life at a
13 lower level but becomes increasingly so with
14 severity?---If I just pick up your distinction or the way
15 you join floods and fire together there. In both cases,
16 of course, as you say, there is a risk to life, a serious
17 risk to life, but it is very different, I would argue, in
18 terms of our ability, for a start, to do anything about
19 that. For example, in a flood, wanting to rescue people.
20 Rescuing people in a couple of metres water is one thing.
21 Rescuing them in 30 or 40 metres of water on some of our
22 major rivers I think would be another matter altogether
23 and we would probably have mass casualties in addition to
24 massive destruction and the only option would be massive
25 evacuation before the flood water came. In the case of
26 fires, it may be that the policy response would be
27 different for different degrees of extreme fire danger.
28 I'm not sure about that, but I am sure that we in
29 Australia we don't have mass house losses at 50. We tend
30 to get them higher up on the fire danger index scale,
31 which suggests there is a gradation in terms of impact as

1 we go higher up the fire danger index scale. That
2 suggests in turn we might have different policy responses.
3 And different human responses, too?---Yes.

4 Presumably if the scale is seen to be greater than - I guess
5 risk increases with scale, does it?---That's right, and
6 perhaps perception of that risk would increase. From a
7 warning perspective, that's an important issue, that even
8 with all the publicity before February 7 and on the
9 morning and so on, there was still a significant
10 proportion of people who just didn't see that it was an
11 exceptional day.

12 COMMISSIONER PASCOE: In relation to the development of such
13 work, given that the current fire danger index is
14 developed on the basis of research, from your knowledge of
15 the data gathering exercises following the bushfires this
16 year and Ash Wednesday in the Wangary, where there have
17 been very severe fires, do you think we are getting to a
18 point where we might have enough data to look at an
19 extension of that fire danger index?---I would like to
20 think we would be getting to the point, but it is my
21 colleagues, the fire behaviourist specialists, that would
22 have to respond to that. I think the point is absolutely
23 right, that we have a lot more data than we had 20 years
24 ago or 30 years ago, so it would be a reasonable time to
25 revisit that.

26 COMMISSIONER McLEOD: Is that an exception to the comment you
27 made earlier that it is better to avoid technical terms in
28 informing the community, but to use general adjectives,
29 whereas there has been quite a concern from a section of
30 the public who have spoken with us that, had they known
31 what the reading was on the technical bushfire danger

1 index, they would have reacted differently, to have
2 understood how significantly it had exceeded what was seen
3 as a baseline extreme danger level?---Yes. I don't think
4 it is necessarily an exception because I'm not suggesting,
5 although I know there has been a lot of comment about the
6 fire danger index not being something that everyone is
7 across and so on, I'm not suggesting that that should be
8 the basis that people make decisions on necessarily. It
9 is available on the Bureau of Met's website if people want
10 it. It is more that we categorise, as we discussed
11 earlier on today, different levels of cyclone, there's
12 different levels of severity for tornados and floods are
13 always categorised according to severity one way or
14 another. Fires are too, of course, low, high, very high
15 in terms of the risk of the fire and the likely difficulty
16 of control, but it stops at a fairly low point. I think
17 that's the issue. It stops at a point where the fires
18 actually in Australian fire history haven't done major
19 damage.

20 It perhaps raises a question: is a numerical system of grading
21 severity easier for most people to understand than a
22 descriptive?---I think the general view in the risk
23 communication literature would be no, but after a few
24 years of education people would get to grips with it. The
25 difficulty with comparing it with, say, cyclones is of
26 course every cyclone season there are cyclones, if not on
27 a particular stretch of coastline somewhere around
28 Australia, so there is a constant reinforcing of that
29 scale. With fires it might be different. It might not
30 be, the way things are going. So, whatever system was
31 adopted, there would have to be some kind of education

1 awareness program to go with it.

2 MS DOYLE: Now, Professor Handmer, in light of all these
3 principles and ideals that we have discussed, I would just
4 like you to work through a couple of practical examples.
5 The warnings that were lodged on the CFA website, you have
6 been provided with the statement of Mr Rees, in particular
7 attachment 31, and I'm going to ask you to look at three
8 pages of that. Commissioners, attachment 31 is in volume
9 2 of the hearing book and that is at tab 31 in that
10 volume. We are going to go to page (WIT.004.001.0532).
11 I think Professor Handmer has it with him, so it is volume
12 2, tab 31, (WIT.004.001.0532) and it is now up on the
13 screen as well. In light of all of the principles that
14 you have referred to and the desirable content of a
15 warning, can we look first at an awareness message. There
16 is no magic to the one that's been selected. It is an
17 awareness message posted on 7 February at 1425,
18 "Camperdown-Dandedite Road fire 2 pm" under the heading
19 "News" title. Can we have that displayed in a way you can
20 see it all for the moment. There is an awareness message.
21 It says, "Initial advice for communities at Pomborneit,
22 Stoneyford, Swan Marsh and surrounds." And then the long
23 text in the middle is the message. Can you in light of
24 your experience make some comments about the good aspects
25 of the content of that awareness message or any
26 suggestions for improvement or any criticisms?---First of
27 all, with all these messages there are issues of layout.
28 The message has - there is a lot of text for a warning
29 message, but it does target - it is trying to target a
30 number of groups. For example, road users are mentioned.
31 There is an assumption there it seems to be targetted at

1 householders. But it is actually - and there are
2 subheadings, but they are buried in the text, so there are
3 layout issues. What I have noticed is that at the
4 beginning of the day the layout, the subheadings were
5 clear, but pretty quickly they all just got merged in the
6 text. This means that if you are looking at this message
7 you have to read the whole thing to get what you might
8 want and that's a bit unfortunate, perhaps, and that's a
9 general comment for the messages. Some more specific
10 points. If we compared what's in here with the advice in
11 the Commonwealth book that you mentioned before, the
12 "choosing your words" book, on the second line it says,
13 "On the south side of the Princes Highway heading in a
14 south-easterly direction." That's about the only locators
15 in terms of what's happening with the fire that are
16 provided. Unfortunately a lot of people don't relate to
17 compass directions. Even though perhaps they should, they
18 don't, so that's straight away a bit of an issue.

19 COMMISSIONER McLEOD: What do you think would have been an
20 alternate formulation there?---I don't know the area well
21 enough, but you might have said "a grass fire is
22 burning" - I don't know what is east of Camperdown, but
23 let's say there is Camperdown East; let's just say for the
24 sake of argument that there is an area called Camperdown
25 East. It would be better to say, "A grass fire is burning
26 at Camperdown East," and we could say "on the south side
27 of the Princes Highway" because we have identified the
28 Princes Highway and the vicinity of the reserve, "and it
29 is heading in a south-easterly direction towards town X",
30 just to give people a bit of a better fix.

31 MS DOYLE: So the use of the reserve and the highway help

1 people get a fix on where it is now, but what you are
2 suggesting is for those of us who are less likely to think
3 in terms of easterly or south-easterly directions, an
4 indication of which town or towns it is heading towards
5 would be more useful?---That's right, because even if we
6 do think in compass points, if you don't know that area
7 really well and know pretty much the exact orientation of
8 the roads and so on, and I would suggest most people
9 wouldn't, even people in that area may not know the exact
10 orientation in compass terms - - -

11 CHAIRMAN: Something like "halfway to Weerite"?---Something
12 like that, that's right. It is something that doesn't
13 require that you know these exact directions, that's all.

14 COMMISSIONER McLEOD: I think you would have to concede it may
15 have a local meaning. It may have little meaning to
16 someone passing through the area?---That's right.
17 I agree. Absolutely. But I have been asked to critique
18 it and so therefore - yes. People are asked to enact
19 their bushfire survival plans. Then "Core advice" is a
20 key heading. It is a bit buried because it should be a
21 subheading. It is a subheading, but for some reason it is
22 buried in the text, as all the subheadings have been. A
23 couple of sentences down there is a sentence that -
24 I guess these are standard messages and with most of these
25 messages the bulk of the text is a generic message which
26 is repeated and that's not a bad thing because that's the
27 sort of advice people need to have. But one could argue
28 that should be - it would probably be good if that was
29 separated out so people could see what the really critical
30 advice for this particular message is. I just draw
31 attention to this: "Even though this fire does not

1 currently pose a threat, people in high risk bushfire
2 areas are reminded to have a bushfire survival plan ready
3 to implement during the summer period." I feel that comes
4 from an early in the season message and it might be
5 perhaps not the most appropriate wording for the morning
6 or afternoon of Saturday the 7th. It is generic material
7 that has been put in the message.

8 MS DOYLE: Also if you go back earlier in the message, it
9 refers to, about four lines down, "At this stage
10 properties in the area of Pomborneit and surrounding areas
11 are asked to enact their plans." The Commonwealth document
12 would have it that even something simple like that ought
13 to be changed to "homes" to get people's attention. Would
14 you agree with that?---Probably a lot of them might
15 actually be farms in that area, so we might say "homes and
16 properties", because it is not necessarily an urban area.

17 In terms of the time, the news title says 2 pm. There is an
18 "effective from" and "effective to" which spans a long
19 period, 1425 to 2225. Have you got any comments on the
20 way that time is depicted and currency is depicted in this
21 message?---The message is, "A grass fire is burning 7
22 kilometres east," so it is something that is actually
23 happening now and they are talking about the response. In
24 terms of when people could expect to be affected, it
25 actually says at this stage - it says at some stage there
26 that there is no threat. I'm just looking - - -

27 The last line, "Even though this fire does not currently pose a
28 threat, people in high risk bushfire areas," so potential
29 for some confusion there about who is at threat and who is
30 not?---Yes, I think it is confusing because people have to
31 know that they are in a high risk bushfire area. Perhaps

1 we should just comment that there are three levels of
2 message in the CFA site. There is the awareness one,
3 alert and urgent threat. Perhaps understandably on the
4 day of the 7th and in the afternoon they got a bit mixed,
5 I think, at times. We could argue that maybe we should
6 only have had two levels or whatever.

7 COMMISSIONER McLEOD: Do you think it is confusing having time
8 expressed in two different forms?---You mean looking at
9 the left-hand side there, those columns?

10 24 hour time on the two first columns and normal time in the
11 third column; 2.30 pm on the one hand against 1506 in the
12 other column?---It highlights the need to think about
13 the - exactly. It highlights the need to think about
14 the people it is targetted to because I didn't even notice
15 it, I'm so used to a 24 hour clock, but I think a lot of
16 people, I agree, would get confused. There is certainly
17 the potential for some confusion there.

18 You are saying, what, perhaps you would put them in in both
19 times. Is that what you are saying?---I would say in the
20 text of the message you would have them in 2 pm, 1 am,
21 that sort of time.

22 But to be consistent in the message itself?---Yes, and also we
23 know that people are all going to be able to follow that.

24 MS DOYLE: Because one of the elements that I think was
25 mentioned earlier in evidence is thinking about
26 the listener and thinking about the fact that they might
27 need to know what they or their families are doing.
28 Although in some households some things might happen at
29 0600 hours, principally mine, it is probably more likely
30 for people to think about 3 pm, the kids are still at
31 school, that kind of thing?---Yes, I think that's right.

1 Definitely.

2 If you can go to the alert message which appears at witness
3 page 0530, there is an alert message for the Kilmore East
4 fire?---Mm-hm.

5 What comments do you have about the information in that
6 message?---Some of the same comments that have just been
7 raised, actually, by Commissioner McLeod. The first
8 comment is in all the messages there are issues of layout,
9 which I think were partly the day, lack of subheadings,
10 hard to find, people have to read the whole statement
11 carefully to find what they might want. There is the
12 issue of content and wording as well. In this case, if we
13 look at the timing in the left-hand columns, this is an
14 alert message, it is not an urgent message, apparently,
15 but the timeframe it is relevant for is 15 minutes, which
16 perhaps it was just at that time of day that was getting a
17 bit difficult to be precise about. Given that it is the
18 15 minutes timeframe, "the fire is not currently posing a
19 threat to communities". I would have thought that was a
20 bit - and this is an alert message. Then it says which
21 communities need to be aware of the fire, and it includes,
22 "However, the communities of Kilmore East, Wandong and
23 Clonbinane need to be aware of this fire. The fire has
24 now jumped the Hume Highway and significant spotting has
25 occurred. The fire is impacting on the outskirts of the
26 Wandong."

27 Mixed messages?---In the previous sentence it said "not
28 impacting"; next sentence it says "is impacting". It does
29 give the size, so again it is saying, if you read the
30 whole message, I guess what you are seeing is it is
31 impacting, if you take that, or it's not. "There may not

1 be any further warnings." It points that out. It makes
2 the point of deciding what you're going to do, and "decide
3 now to stay or go", a clear statement of what to do. It
4 talks about road use and the rest of the message, in fact
5 much of that message is generic in all the alert messages
6 but it is quite confusing, more than quite confusing.

7 We will come to your research in relation to the "stay or go"
8 policy but, as you say, this message was expressed, on the
9 face of it, to be current for 15 minutes and it advises
10 the reader to be "prepared to activate your bushfire
11 survival plan if necessary" and then in the next sentence,
12 "Decide now if you are going to stay or go. Now, the fire
13 is already impacting on the outskirts of Wandong township.
14 Does the suggestion that people in Wandong now decide
15 whether to stay or go fit with the orthodox statement of
16 how the "stay or go" policy works?---Slightly late, but it
17 would depend on the circumstances. Yes, I agree. Can
18 I go to the urgent threat message?

19 The one at page 533, (WIT.004.001.0533) we have an urgent
20 threat message for the Kilmore East fire, 2.30 pm. What
21 are your comments from that?---It takes off from the alert
22 message we've just looked at, which is valid from 1440
23 when the other one ends. Again valid for 21 minutes.
24 This one is, in light of what we have just said about
25 Wandong not being under threat and then having the fire
26 impacting it, this message which is an urgent threat
27 message and therefore the sort of last warning, if you
28 like, it says the fire is burning in a southerly
29 direction, same comments. "The community of Wandong may
30 be directly impacted upon by this fire imminently." Now,
31 we have read in the alert message that it is impacting the

1 town, so there is some confusion which is perhaps
2 understandable given the day. But, for someone following
3 this from outside, there is some lack of clarity here.
4 The word "imminently" is one that is particularly selected
5 by the Commonwealth document "Choosing your words" as one
6 to avoid on the grounds that a lot of people don't
7 understand it. It should be that it's happening now or
8 immediately. Core advice is generic in most messages.
9 I suppose a couple of things about the standard advice
10 which is repeated in all the urgent threat messages pretty
11 much in this website on this day is that it does target
12 different groups, residents, people in vehicles and so on,
13 but it does say that you should stay. It doesn't say you
14 should stay, but it does say you shouldn't travel. Maybe
15 that's consistent with the policy.

16 It days say you shouldn't travel but in the body of the message
17 it gives some very precise advice about what to do if you
18 are in a car?---I know some people have found this
19 inconsistent. I feel that one of the issues perhaps with
20 the CFA website is that it is trying to target a number of
21 different groups and the fact is there are people
22 travelling. Even though everyone was asked not to travel,
23 there were plenty of people travelling in some of the
24 areas, and there are tourists and people recreating and so
25 on, so they are trying to target those groups. Perhaps it
26 introduces ambiguity into the message.

27 COMMISSIONER McLEOD: How would you resolve that?---We want to
28 target the different groups. I don't think we should
29 ignore them. One way of resolving it, a very simple way,
30 is just in layout of this document. For those who are
31 travelling, there is the advice, rather than at the moment

1 it is mixed in.

2 MS DOYLE: Any other comments you have about either the content
3 or the layout of that particular incident
4 information?---There is not much information on the
5 severity of the fire that people might expect.

6 In fact that's a feature of the three we looked at, isn't it?

7 There is no mention in any of those messages about
8 severity?---No, no mention. There is also a couple of
9 minor points. It says, for example, "On no account should
10 synthetic material be worn." It says what should be worn
11 but doesn't say that it should be cotton or wool. These
12 are very minor things, but again referring to the
13 Commonwealth document "Choosing your words", if we say you
14 shouldn't wear synthetics, it would be good to say why.
15 So, there are those sorts of issues scattered throughout.

16 What about the size of the fire? There are mentions, for
17 example, here of 638 hectares. Is that useful or could
18 there be another way of dealing with size of fire?---There
19 are other ways of dealing with size of fire, but again
20 that would be considered in the standard categorisation a
21 large fire, so they are not very helpful. In the rural
22 areas people would find that reasonably easy to grasp, but
23 in interface areas, which the fire was heading towards, a
24 lot of people probably wouldn't be able to conceptualise
25 what that meant.

26 To pick up on the point Commissioner McLeod made earlier,
27 someone may die in a fire much smaller than that.
28 Equally, they may die in a fire much larger than that,
29 depending on the particular circumstances?---That's right.
30 It doesn't help with severity.

31 COMMISSIONER McLEOD: If the message had been simply, "A large

1 fire is burning out of control"?---"And moving very
2 quickly."
3 "And moving quickly," would that have had more impact? Would
4 it have been any less accurate?---I don't think it would
5 have been less accurate, and it is definitely easier for
6 the lay public to understand. Importantly, it is
7 more - it is worded in a way that is more about the impact
8 it is likely to have on them.
9 It would have still required some locality references, of
10 course?---Yes.
11 MS DOYLE: In terms of severity in relation to, say, the
12 Kilmore East fire, there is some element of hindsight
13 here, but given what we now know about the impact of that
14 fire, what sort of terminology might have been useful in
15 the urgent threat message in terms of severity?---I think
16 Commissioner McLeod has sort of highlighted the sort of
17 words that could be used.
18 "Out of control, large"?---Yes, "and travelling very quickly,"
19 perhaps some indication of how fast it is spreading and an
20 indication that, let's say it was spreading very rapidly,
21 so, "this is a very rapidly spreading fire," that sort of
22 thing. I think I mentioned in early discussions that for
23 a while the Bureau of Meteorology in one or two of its
24 regions was adding, after "very severe storm warnings",
25 that "this storm has the potential to kill people and
26 destroy houses." They found it didn't seem to have any
27 impact. Also I noticed that the "Choosing your words"
28 document recommends using against such language, but
29 perhaps there are circumstances when it is useful.
30 By way of comparison, can we look briefly at two South
31 Australian examples. The examples of these warnings

1 appear in court book volume 34, tabs 14 and 15. I think
2 you have a loose copy of those. It is witness page
3 (WIT.024.002.0032). We are just going to look at two
4 single pages. The first is (WIT.024.002.0032). It is up
5 on the screen and I think you have a hard copy. You are
6 aware, Professor Handmer, that there is a two stage
7 warning system in South Australia at present. We are
8 looking at a bushfire information message, which is the
9 first one used in South Australia after ignition. What
10 comments do you have in terms of the content and layout of
11 this bushfire information warning?---First of all, my
12 understanding is this is not from a website. This is a
13 bulletin that would be read out on radio.

14 Yes. The evidence of Mr Lawson in these proceedings has been
15 that this content is read out as well as disseminated to
16 website and opt-in subscribers?---Okay. It is very clear
17 and it is very straightforward. The wording is in terms
18 of locality, it is actually better practice I think in
19 terms of how it describes the fire and locality. There
20 are a couple of things I could say about both
21 statements?---

22 Yes, certainly?---I felt that, while it is very precise, it
23 wasn't clear who it was referring to, who should pay
24 attention to it, so there are minor details. Certainly
25 overall the message is a lot easier to grasp, but I make
26 the point that the CFA website is trying to deal with
27 multiple audiences, whereas this doesn't say who the
28 audience is, actually, so I feel that's a bit of a
29 weakness. I looked for timing information. I couldn't
30 actually see any timing information and I couldn't see
31 anything on severity. So, while it is very concise, it

1 still perhaps has got to come to grips with those key
2 elements.

3 What about the first line, the reference to "poses a threat to
4 public safety" which is repeated in the bottom line. Is
5 that sort of information useful?---It is useful, assuming
6 it is not a severe, a very severe fire.

7 I take it from what you said you regard that as useful but not
8 specific enough in the sense that the public could be the
9 whole of South Australia. There might be utility in
10 referring to particular communities?---Yes. I mean this
11 poses a threat to public safety in Wandong. Again, it is
12 still pretty bland, but at least it has a locality.

13 COMMISSIONER McLEOD: It does have the time indicated at the
14 top of the message. "Time message issued, 12.18." So
15 presumably it is current as at 12.18?---I'm thinking more
16 of when the communities might expect to be impacted by the
17 fire.

18 I see.

19 MS DOYLE: Can we go to witness page 0034, which is the next
20 stage of a South Australian bushfire warning message. The
21 evidence is, and the page itself reveals, that the
22 standard emergency warning signal is played for 10 seconds
23 prior to this warning and is then to be read. The text is
24 in some instances similar, although obviously the fire has
25 moved on?---Yes.

26 And then there is a reference to taking shelter in a home
27 immediately. What comments do you have about the content
28 of the warning message?---It is quite prescriptive. It is
29 quite clear on what people should be doing, I think, and
30 the fact that it is preceded by the alert, we would expect
31 to make it much more likely that people would hear that

1 there was a warning - know there was a warning message
2 coming and actually catch that message.

3 As with the previous message, you would say one area for
4 improvement is attempting to give a timeframe or a window
5 during which particular communities might be threatened or
6 impacted?---Yes, it doesn't really say which communities.
7 It does say that it is about to happen, it is going to
8 happen right now, "you should take shelter immediately,"
9 but to me it doesn't say who, which I find a bit strange.
10 Returning to your statement, if we can return to paragraph 57,
11 which is at witness page 0016.

12 COMMISSIONER McLEOD: While that's happening, can I ask just a
13 small question from what you said about the lack of
14 indication of when the fire may impact on a community that
15 is in prospect for that to happen. Given the
16 unpredictability of fire and also concerns about perhaps
17 public liability issues, do you think it is dangerous for
18 a fire authority to be too specific as to the particular
19 time, particularly if the emphasis is on to give as much
20 warning as possible, which may push out the time at which
21 a particular community might be impacted, that that
22 carries with it a greater degree of risk of not getting
23 your estimate of the time that the impact may occur
24 wrong?---I think that's right.

25 I would think there would be some who would suggest that it's a
26 bit - you need to be very careful about that sort of
27 thing, other than to be fairly generic?---The legal
28 liability issues I don't know about. As you say, the
29 earlier a warning is given, the greater the uncertainty.
30 It is always a trade-off, pretty well always a trade-off.
31 The earlier it's given, the more helpful it may be too, to the

1 community concerned?---That's right, but there is more
2 likelihood that it will be incorrect.

3 Yes?---I think we generally argue that the only way to deal
4 with it is to put it within a window of time and that
5 might be large, as we were discussing earlier. The window
6 might be quite large, the fire might impact some time
7 between 2 and 4 o'clock, which is two hours or four hours
8 away from now, but at least it gives people an idea.
9 I agree that fires, especially in extreme wind conditions,
10 are very difficult to predict. But without giving some
11 indication I think it can be difficult for people to know
12 what they should do and whether it is still safe, for
13 example, to do certain activities or to leave or what they
14 should do in terms of staying, that sort of thing. There
15 are those issues that need to be considered when thinking
16 about this timing question.

17 MS DOYLE: Turning back to paragraph 57, we won't go through
18 this in detail but you set out there some comparisons that
19 we have already discussed about warnings for floods and
20 cyclones compared with warnings for fire. You make the
21 point in paragraph 61 that a high level of success remains
22 elusive because even in the case of flash flooding, for
23 example, warnings have not been as successful given the
24 lead-in times?---In Australia generally there would
25 be - the official view would be that there are no warnings
26 for flash floods except for warnings about the
27 meteorological conditions likely to produce flooding,
28 which is again perhaps similar to a high fire risk day.
29 You bring this discussion to a head in paragraph 63 on page
30 0017. You note that it highlights some key points.
31 "Although the objective side of warnings is very reliable

1 for those hazards, cyclone and flood, achieving safe
2 behaviour is still a constant challenge and, as with
3 bushfires, enormous effort is put into the monitoring and
4 detection with limited effort on achieving shared meaning
5 and sound decision making with those at risk." You don't
6 doubt, though, that there are substantial efforts put in
7 in Victoria to educating and informing the community
8 during bushfire seasons in terms of Community Fireguard
9 brochures, et cetera?---Actually it is interesting
10 re-reading some of this. I think there is limited effort
11 in terms of budget for cyclones, floods and bushfires. A
12 very small proportion of the budgets of cyclone risk
13 management and fire risk management goes into community
14 safety, but there is still a substantial effort, no
15 question, in each of those areas. But what I was
16 referring to there, I think, was in particular the fact
17 that it is a tiny fraction of the total budget.

18 Websites. Can we go to question 5, which starts at page 0018,
19 and you note in paragraph 67 that web-based material has
20 really become the primary source of information in our
21 society. In paragraph 69 you make some points about who
22 uses the internet. You say that even though it seems
23 ubiquitous, in 2006 about a quarter of Victorians didn't
24 have internet access. So, although that is a declining
25 proportion, that needs to be kept in mind. That comes
26 from the census data, is that right?---That's right.

27 So it remains the case that the web is not a fix all. One
28 would need to keep in mind promoting messages through ABC
29 Radio and other means?---That's right. The point there is
30 that a proportion of households, and they are likely to be
31 people who are more vulnerable, elderly people and so on,

1 do not have web access. It is also an interesting thing
2 that people who promote the web as a vehicle for warnings
3 have an implicit assumption that people are out there
4 actively seeking their warnings on the web. We don't have
5 evidence for that.

6 That's an important point you make at point 3: "Websites offer
7 a passive form of warning. That is, they don't alert you
8 to come and read them, although you will find the message
9 if you go and look for it"?---That's true. There are a
10 variety of ways of overcoming that and making websites
11 active through all kinds of tools that can send the
12 messages to you now, Widgets, Twitter and so on. But,
13 nevertheless, the basic principle is that a website is a
14 passive form of warning.

15 It could be used in conjunction, though, couldn't it, with
16 those other tools you mentioned. If there was a SEWS
17 signal played on the radio or an automated phone call or a
18 text message, part of which suggested looking at a
19 website, that might combine the call to action with
20 finding more information on the website?---It could, or it
21 could simply be that the material on the website is sent
22 to your mobile phone or whatever by one of these devices
23 and there are several possibilities with that.

24 You note over the page on 0019 some issues about currency and
25 reliability and the issues which may arise when a website
26 is under heavy demand. We touched on this when you spoke
27 of your own experience on 7 February. Is there a way to
28 address the situation when websites are under heavy demand
29 and therefore slow down or even become
30 inaccessible?---They tend to slow right down, that's
31 right. There are a number of ways of addressing it.

1 Probably the simplest way is for people to take the
2 information off the site automatically and feed it onto
3 other sites or other systems. In the fires on
4 February 7th the material from the CFA site was re-posted,
5 if you like, via Twitter. There was an unofficial site,
6 CFA updates, which was a Twitter site, and that is still
7 active, actually. That was one of a number of sites that
8 on the day took material unofficially from the site.
9 There is a way of doing it which is quite legitimate and
10 CFA encourage it. So, that's one way. What that does is
11 take the load off the site. Another way is to ask people
12 not to use it or to restrict access, but that doesn't seem
13 very promising to me, given that we actually want people
14 to use it, but that's a standard response. Otherwise,
15 there are a number of technical ways of doing this which
16 I outline in the paper. They are basically about reducing
17 the degree of interactivity with the site, so that when
18 you go into the site you don't actually - what you get is
19 just sitting there. The amount of processing power that
20 site needs to use is limited one way or another. Things
21 like graphics, logos and so on, which we have more and
22 more of them on our sites, are pretty hungry for memory.
23 The idea is not to use them in these emergency situations.
24 In one sense it is an argument for moving to a different
25 website mode in a major emergency when you know the demand
26 is going to be great. I don't know whether I mention it
27 here, but after the tsunami the British Commonwealth and
28 Foreign Office or Foreign and Commonwealth Office website
29 on travel advisories and so on switched to a text only
30 mode for precisely this reason.
31 And that reduces the memory use?---That's right. It can handle

1 a lot more inquiries.

2 I note in paragraph 72 you suggest, if we just deal with
3 websites bit by bit, you suggest first of all that it
4 would be useful for there to be one website rather than
5 the DSE and the CFA websites?---A lot of people are
6 arguing this, that there should be one website, but it is
7 a trade-off, I want to say, as well, because if there is
8 one website, all the problems we are talking about in
9 terms of website overload and so on are exacerbated. The
10 solution of course is that there are two sites but they
11 mirror each other's content.

12 So two sites with the same content or multiple sites with the
13 same content may help?---Yes. I think a single site in
14 terms of content is the ideal, but if we look at the
15 practicalities and the reliability, we are much better off
16 having a number of sites.

17 Is there also potential to enable information within a website
18 to be hived off, namely to enable people to look at
19 particular messages pertaining to particular parts of
20 Victoria so that they are using different pages or
21 different information at the one time?---Yes, there are a
22 range of devices and so on that can be embedded in sites
23 to do that, and even to send them to the people concerned.

24 You set out all these matters working through to paragraph 80
25 in the statement. Paragraph 77 is where you deal with the
26 RSS feed. This is the capacity you spoke of for the
27 material on an internet site to be mirrored, if you like,
28 over on a Twitter site?---Yes, but not quite. The RSS
29 feeds really just take key information. They don't take
30 the whole information of the site. That is one reason why
31 they can actually feed information on to sites like

1 Twitter or even mobile phones if the system is enabled.

2 They take headliners, basically.

3 Dealing with sirens, which is question 6 - - -

4 COMMISSIONER PASCOE: Before we leave the websites, a question

5 about the Bureau of Meteorology site which had, we are

6 told, 70 million hits on the day and is used to having a

7 massive - - -?---It is the most popular in Australia,

8 I think, the most popular government site.

9 I don't know whether you have looked at the features of that

10 site and what enables that site to cope with the heavy

11 demand vis-a-vis the sites that we have just been talking

12 about and whether there are any lessons we can learn from

13 the bureau website?---I'm sure there are, but I haven't

14 personally investigated them, but a lot of the bureau's

15 material is in very basic text form and I think that's

16 probably one of the key features of enabling that site to

17 handle such loads. But I think that would be a

18 worthwhile. I think it is the fourth most popular site in

19 the country.

20 MS DOYLE: In question 6 onwards, paragraph 81 at witness page

21 0021, you deal with sirens and you talk about the

22 historical use and you mention the Ferny Creek program.

23 One note of caution appears in paragraph 83. You say,

24 "Usual reaction may be to assume they apply to others or

25 seek further information." Is there a way of redressing

26 that or improving that?---There are several possibilities.

27 The one that's usually mentioned is that we just educate

28 the people locally or, if the siren is developed in

29 partnership with the local community, as it was in Ferny

30 Creek, then that issue will be very much less. But if

31 communities change and there may be a large number of

1 people as tourists or visitors, then that's not going to
2 work very well and so most modern siren systems have voice
3 facilities. They can have a siren followed by a message
4 saying that there's a fire coming or you should leave or
5 whatever, so I think there are a number of ways around
6 this. One way that's quite popular in some parts of the
7 world or gaining popularity is to use mobile highway signs
8 or signage systems along with the siren. They have other
9 advantages in the sense that in some cases they can be
10 seen or read a very long way away, even if the siren is
11 not audible. So, there are a number of ways of addressing
12 that issue, but they are typically not done.

13 You make the point in paragraph 86 that it does require
14 continual effort to keep people, including the changing
15 population of an area, aware of the use to which that
16 siren is put?---That's right. As I have said, there may
17 be ways around this, using the voice capabilities and
18 signage and so on and I think perhaps with very mobile
19 populations that might be a better approach.

20 Turning to new technology, question 7, this is a matter you
21 discuss in paragraphs 91 onwards and you refer to the new
22 technologies which have emerged. You make the point in
23 paragraph 93 it is important not to overlook our
24 longstanding communication technologies, including radio.
25 In paragraph 95 you say that it is important to
26 distinguish between new technologies that deal with the
27 centralised systems, such as CAP, and those that relate to
28 individualised information. I take it from what you say
29 here there is certainly a role for new technologies to
30 play and it is a field that continues to
31 develop?---I think the new technologies, in terms of

1 delivering a message, as we were discussing, to the people
2 at risk, have only very recently started to play a major
3 role, but it has been quite quick and now most people in
4 our society, I would say the majority of people by far use
5 either a mobile phone, text, are very familiar with
6 texting and the internet as their normal means of gaining
7 and sending information or whatever. So we have to use
8 them if we want to reach particular audiences and there
9 are many variations of those modes.

10 Because you mention in paragraph 98 Facebook sites that are
11 mostly post-fire, but Facebook sites, MySpace sites and in
12 paragraph 99 the Twitter site as new technologies being
13 used by portions of the community that ought not be
14 overlooked?---That's right. Some of these played a role,
15 like Twitter sites, in warnings. There is anecdotal
16 evidence that people got warnings on Facebook because they
17 were looking at some aspect of Facebook and suddenly some
18 message came across. But people weren't using Facebook,
19 as far as I can see, for warning purposes but it fulfilled
20 that role.

21 At paragraph 100 you refer to phones and mobile phones and you
22 make the point obviously they are very familiar. For
23 landline phones, about halfway through paragraph 100, you
24 note the technology which enables locations connected to
25 landlines to be selected which could be used to delimit
26 areas. That might be useful, for example, in any
27 automated phone warning system?---Yes. That's the idea,
28 yes.

29 You point out the advantages, but also the disadvantages.

30 There may be lack of mobile phone coverage, there may be
31 issues with phone traffic?---And there is a privacy issue

1 with unlisted numbers and so on. But, yes.

2 Are you familiar with the recent announcement by the
3 Commonwealth government to now establish a national phone
4 automated warning system?---Yes, I am familiar with that.
5 You refer to the common alerting protocol. It, as you mention
6 there, is really a mode of standardising the content of
7 warnings to ensure that it is the same over different
8 modes of dissemination?---Yes. The common alerting
9 protocol relates to what we were discussing a while ago,
10 the write-it-once concept. As you say, it is a
11 standardised message, it has a standardised format and
12 then the idea is that this message can then be
13 disseminated over any number of digital modes. So it has
14 that advantage of speed and also has advantages in being
15 able to go on multiple modes that perhaps would have to be
16 manually uploaded in the past.

17 Turning to question 8, the standard emergency warning signal,
18 again we have already principally dealt with this, but you
19 note in paragraph 110 some people, it has been said,
20 didn't hear the alerts and perhaps SEWS might have
21 assisted?---Yes.

22 Of course, you make the point there that there would be a need
23 to, if it were to be used, be sure that people understand
24 what it is for. So that may be a task for the
25 future?---Yes, although it is becoming very widespread in
26 other states, so I think it is less of a task than it
27 might have been.

28 You summarise some of these issues in paragraph 112, namely
29 that at the moment or there may have been a mismatch
30 between its name, the signal, the emergency warning
31 signal, public expectations and guidelines. So, if it is

1 going to fulfil its promise, it must be made clear that it
2 is intended for warnings but to trigger people to listen
3 to the content that follows?---Yes.

4 You were asked a specific question in relation to question 9,
5 namely the SMS sent out after the fires, in relation to
6 which Commissioner Esplin has given evidence. You are
7 aware of the reviews he had in terms of people's level of
8 recall or whether they remembered receiving the message.
9 Although it was post-fires, do you think that that message
10 was successful or had the capacity to be successful if
11 repeated in other incidents?---Certainly I think it was
12 very successful. 81 per cent of people recalled the
13 message and something like two-thirds of them actually
14 went and listened to the ABC or sought additional
15 information, so that's probably as successful as any
16 single dissemination method is going to get. But, as
17 I think you have implied, it was at a time of heightened
18 fire awareness so we might find that it is not as well
19 received normally. Secondly and importantly, if
20 19 per cent of people didn't get it or didn't recall
21 getting it, I think that's very important to know who
22 those people are because, as I said before, they may be
23 the very people we need to be most concerned about.

24 Turning to the other matter you were asked to address because
25 of your background in terms of "stay or go" research.
26 Just for everybody's reference, Professor Handmer's 2005
27 article in relation to "stay or go" has already been
28 tendered. It appears in volume 19 of the hearing book at
29 (TEN.001.001.0138) at tab 11. His chapter or a chapter of
30 which he is a co-author in the 2008 Community Bushfire
31 Safety Book appears in the same volume, volume 19, at tab

1 12 (TEN.001.001.0149). That is just in order to be able
2 to cross-reference the Professor's research in the area.
3 You say in paragraph 119 that: "Public education campaigns for
4 natural hazards are characterised by very high
5 expectations, short-term programs, small budgets and
6 partial success." Has that been your experience in
7 relation to the dissemination of the "stay or go" policy
8 in Victoria?---Yes. I think actually it has been quite
9 successful. The reason for making that statement is that
10 in fire emergency management and public education we look
11 for 100 per cent coverage, it seems to me, that that's
12 what we seek, whereas when we compare in other areas of
13 marketing and persuasion a few per cent change, say, in
14 the fortunes of a political party or in a major product
15 translates into massive success, whereas in our field it
16 is a dismal failure. So it is a very challenging area and
17 so while I make that statement about partial success, we
18 might still achieve 20 per cent change, but we still have
19 far too many people who are not aware of what they should
20 do for their safety.

21 By way of example, at paragraph 121 you say: "Public education
22 and awareness campaigns are generally based on the
23 knowledge deficit paradigm. Information is provided to
24 those who should know it. The information is taken on
25 board leading to improved risk knowledge and perception
26 and this in turn will lead to actions." That is the
27 assumption that public educators have?---That's right.
28 Is there evidence for such a direct link between sending a
29 message and people understanding and responding?---There
30 is a partial. The link works for some people a lot of the
31 time or some of the time because it doesn't take account

1 of people's world views and attitudes and other
2 priorities, among other things, and what we find is in
3 many cases there can be no correlation at all between
4 one's attitude and behaviour. A good example is car
5 parking in the city.

6 Going to the specifics of the policy and how some of that plays
7 out, if you can turn to paragraph 131 at witness page
8 0029, you refer to the slogan "Houses protect people and
9 people protect houses". Obviously your research has dealt
10 in some detail with the historical basis for that
11 proposition. But you say at 132, "There are also a number
12 of important assumptions that to a greater or lesser
13 extent are implied rather than spelt out as part of the
14 policy." The key assumptions you then list in paragraph
15 134, and the first of those is that houses provide
16 protection from radiant heat. You refer to that as an
17 assumption. Why do you bundle that up under that
18 heading?---I think elsewhere I say "assumptions" or
19 "conditions". The policy is no different to any other
20 policy . It depends for its proper implementation or its
21 successful implementation on a number of conditions. What
22 I have tried to do here is set out what I see as the main
23 conditions for successful implementation of the policy.
24 They can be called assumptions. I call them assumptions.
25 Or conditions?---Yes.

26 The next is: "People need to know what to do and to be
27 physically and mentally prepared before the event, capable
28 of making judgments about their property and taking the
29 decisions needed." So you say the evidence for that is
30 mixed?---Yes.

31 Whereas in relation to houses and radiant heat there is good

1 historical evidence - - -?---Historical evidence, yes.
2 The evidence that people know what to do is mixed, because
3 in the research done in South Australia, Victoria and
4 north of the border what we found is - and Victorians are
5 by far the most familiar with policy and what to do, and
6 I guess I should point out that there is a bit of an issue
7 where almost all the research has been conducted in rural
8 areas and that may be quite different to an interface
9 area, that there is a lot of different ways of
10 interpreting the policy and that a significant proportion
11 of people, 20 per cent, 30 per cent, actually have a view
12 that they will wait and see, which is exactly what the
13 policy asks you not to do, because if you wait and see,
14 your contingency plan, which is often implemented, is to
15 leave at the last moment.

16 Which feeds into the next point: "Last minute evacuations are
17 very dangerous and the largest cause of preventable
18 fatalities." And you refer to the historical evidence
19 there?---Yes.

20 Each time we refer to the historical evidence, no doubt that
21 will now need to be seen in light of the new evidence
22 coming out of both this Commission, any related police
23 investigations but also the Bushfire CRC report?---That's
24 right. By historical evidence I suppose it is an
25 important point to us that the community safety policy in
26 Victoria and now nationally is based on the analysis done
27 by us and many others on the major named bushfires in the
28 20th century in Australia, up to February 6th. Yes,
29 that's the best we could do, I think, given that was the
30 evidence in front of us. Now we might have different
31 evidence.

1 Part of that I think relates to your next point, fire behaviour
2 and intensity. The orthodoxy that underpinned "stay or
3 go" up to 6 February was that a firefront is typically
4 preceded by an ember rain and then the front passes within
5 a short period of 15 to 30 minutes. It may be that there
6 is some new evidence or new material about some fires that
7 don't adopt that pattern. Would you agree with
8 that?---Yes, possibly. As I said, it is up to my
9 colleagues in the fire behaviour area. The major
10 fires - some of the major fires we looked at had a
11 relatively orderly firefront, for example, compared to
12 this one.

13 You then make points in relation to the relevance of the
14 outside of a property, the gardens and yards. Then the
15 next point, the law covering emergency management, which
16 is obviously outside your area. Risk; you accept there is
17 no zero risk option and that one is trying to modify
18 behaviour to at least minimise the risk?---That's right.
19 That's a real issue because a lot of our contacts in the
20 industry feel that there is a strong push to zero or a no
21 loss of life expectation which they would regard as
22 unachievable.

23 Then you say one of the assumptions or conditions is that
24 education and awareness programs reach everyone, which is
25 unlikely to be the case all the time, I take it from what
26 you have said?---Yes.

27 The other matters are spelt out in detail in the paper, but one
28 element that it might be useful for you to explain is
29 under the heading "People" at paragraph 143. You say
30 that: "People need to have an appropriate knowledge and
31 capabilities. This is to be accomplished in the absence

1 of what would be considered training." Are you driving
2 there at the difference between education, promotion and
3 training; namely, householders aren't required or
4 generally don't submit to formal fire training?---It may
5 not be formal fire training, but one could make the
6 argument that - and I have set out the sorts of things
7 that people are expected to know and be able to do under
8 paragraph 142, above this one. One could make the
9 argument, and I feel this is reasonable, that they are
10 expected to know a lot about fires and expected to know a
11 lot about themselves in a major fire or what it would be
12 like, when a major fire is coming, how they would react
13 mentally and physically. It is very difficult. We know
14 from other studies that people have a lot of trouble
15 conceptualising how they would react in a very severe
16 stress situation. Yet, they might have been to a number
17 of meetings, read the brochure, but many people would not
18 have read through the whole brochure. It takes a couple
19 of hours to read through the whole bushfire safety
20 planning brochures. So, I guess in one sense this is just
21 highlighting that there is no attempt to, and maybe it is
22 difficult to, assess people's competencies for this task.
23 Perhaps there should be.

24 As you say at paragraph 145, even knowledge of the risk doesn't
25 automatically mean people know what it means for them, for
26 their household members, for their property. So there may
27 be a gap between theoretical understanding of risk levels
28 and how it will play out for you on the day?---It's
29 perhaps a bit more than that. There are quite a lot of
30 studies in Australia and overseas that show that people
31 who live in bushfire or wildfire risk areas will

1 acknowledge and know that they live in bushfire or
2 wildfire risk areas. But that doesn't mean, as I say in
3 this paragraph, that they know it means they themselves
4 might be killed by a fire or their house might be burnt
5 down by one, or the sorts of actions that they could take
6 to reduce those possibilities. It is highlighting that I
7 think there is a bit of a gap from a generic understanding
8 that, yes, there is a risk of bushfires and an
9 understanding that "This means for me that I need to take
10 particular actions if I want to reduce that risk."

11 COMMISSIONER McLEOD: Do you think, Professor, in some
12 situations the literature and the material that's made
13 available to people perhaps underestimates or under states
14 the potential risks to personal life living in bushfire
15 prone areas brings?---I definitely think it understates
16 the mental preparedness that's required, definitely. I'm
17 not sure about the other. Again, before February 7th we
18 would have said no, I think it's reasonable. But it is
19 certainly something that I guess I and many others would
20 like to revisit.

21 We might come back to that when we come back to "stay and
22 defend and/or go", which I think has been foreshadowed to
23 be later in this examination.

24 MS DOYLE: Well, dealing here with what Professor Handmer has
25 said are the key assumptions and/or conditions, that is
26 certainly one of them. The capacity to act is also
27 something that you refer to as something that underpins
28 the policy or the assumptions about the policy in
29 paragraph 148. You make the point that even those who
30 know enough might not be able to do enough, either because
31 of disability, illness, situations that arise on the

1 day?---The public education programs or safety programs
2 for hazards tend to assume generally that everybody has
3 certain minimum capabilities. What I have tried to do in
4 paragraph 148 is just highlight that that's probably not
5 the case. It doesn't matter if these proportions are very
6 small or if they are uncertain, because what does matter
7 is that there is a proportion of people who will not be
8 able to undertake the sorts of things that they need to do
9 for their own safety. There is always going to be a
10 proportion and if they don't have people there to help
11 them, their neighbours, other members of their household
12 or the emergency services, then they are in a lot of
13 trouble. I feel that our awareness programs will not have
14 any impact on people who cannot take the actions for
15 whatever reason.

16 COMMISSIONER McLEOD: But current policies, as they have been
17 expressed, are quite explicit about the elderly, about the
18 young, about the sick and the infirm, those who are not
19 physically fit. There is certainly quite explicit
20 recognition in the policy framework, isn't there, that
21 those sorts of people shouldn't seriously consider staying
22 to defend?---That's right.

23 You are saying it goes beyond that?---It does go beyond that,
24 but just to pick that point up, one of the things that is
25 quite striking in a way about the 7 February interviews
26 we've done is the numbers of people that had people in
27 those categories you have mentioned in their houses and
28 generally often decided to leave at the last minute, but
29 nevertheless had not thought ahead about it. It was quite
30 striking the proportion of households - we can't say
31 proportion because it is not a quantitative piece of work

1 at this stage - but there were a lot of households who had
2 vulnerable people of those categories you have mentioned
3 in the household and who had not thought ahead about them.
4 We were quite struck by that. The other side of the point
5 you've raised is that there are people - this is based on
6 work that shows that a proportion of Australians at work
7 at any one day will be affected by drugs, medicinal drugs,
8 illegal drugs, alcohol, and it might be a significant
9 proportion, even in industries where safety is paramount,
10 and we are making the assumption that people who are at
11 home in leisure time, the proportion would be higher,
12 their decision-making capability would be impaired.

13 MS DOYLE: In fact, that was an element in some of the deaths
14 in the Ash Wednesday fires, alcohol impairment leading to
15 bad decision-making on the day?---Yes, that's right.

16 CHAIRMAN: Would this be a convenient time?

17 MS DOYLE: It would be, because I'm going to ask Professor
18 Handmer to go to a different document briefly.

19 (Short adjournment.)

20 MS DOYLE: If the Commission pleases, I just need to take
21 Professor Handmer back to a table in his statement which
22 I overlooked when we considered the website warnings.
23 This appears at (WIT.044.001.0038). It is a table form of
24 answer that Professor Handmer has given in part to a
25 question that was posed for him in relation to the types
26 of warnings disseminated on 7 February. It is
27 (WIT.044.001.0038). Do you have the first page of the
28 chart, Professor Handmer?---Yes.

29 Across the top there are a number of questions which we have
30 looked at under the rubric of the website warnings, but
31 you were asked to comment on the matters including

1 content, specificity and timing of these warnings. You
2 were asked to comment, if we look down the left-hand
3 column, on different types of warnings, the general
4 warnings at the start of the season through to more
5 specific examples?---Yes.

6 As I say, we have done the websites, but if we can just briefly
7 have you explain how this chart works, we won't go to
8 every line of it, but how the chart works for the other
9 types of warnings. You were asked a question about
10 general warnings at the start of the season, the sort of
11 education or campaign warnings and under "content" or
12 "summary" you note in that column, "They are adequate
13 given their intention. They are primarily rural focused."
14 What aspect were you drawing attention to there?---I'm
15 just trying to see where you are.

16 "General warnings, adequate"?---Yes. That column is a summary
17 in answer to the question of how close these are to what
18 we might consider good warnings for natural hazards. When
19 I looked at the material that was provided by the
20 Commission to me in terms of general warnings at the start
21 of the season, it appeared to me that it was primarily
22 focused at rural towns rather than urban interface areas.
23 There may well have been information that was targetted at
24 interface areas, but I didn't see that.

25 You make the point it would be useful information for those who
26 are already engaged?---That's right. Very general
27 information of this nature is unlikely - it doesn't matter
28 what the area is - is unlikely to engage people who are
29 not into it at all.

30 If you go to point (b) on the next page, warnings or
31 information provided during the season. You point out in

1 the second column, "They have more salience as they are
2 about current information, although they are vague as to
3 the areas of the state at issue." Is that again a
4 reference to the distinction between rural and other
5 areas?---Yes, it is, but it is a reference to the fact
6 that they don't mention - there is no mention of areas of
7 different risk and there is no mention in any of the
8 material, really, at all, except the brochures that are
9 regularly available, about the vulnerability of different
10 groups, which is an important part of the total risk
11 picture.

12 Item (c) is what we might call more predictive information, the
13 weather forecasts and warnings from the bureau, for
14 example. You note they are useful in the general form of
15 weather predictions which are familiar to people and they
16 may be valuable. But, as you say in the second column,
17 they are predictions only. Is one of the aspects there
18 that they are not a call to action; they are just a
19 description of the prediction?---That's right. I should
20 point out - I would just like to add that these weather
21 information and predictions and warnings were for the
22 public . They were not the much more specialised
23 information that can be or is provided by the bureau to
24 fire and emergency service agencies.

25 You make the point a couple of columns on that the timing of
26 these is usually good and scaled, although people may not
27 be aware of the uncertainty attached to them?---There is a
28 lot of extra detail in the bureau's website on particular
29 places, so it is possible - if people are aware of that
30 and interested in their town, there is a lot of
31 information available about the fire danger index and so

1 on for that particular spot. But I think most people
2 probably don't get to that.

3 That feeds in a little to what you say under (d) and (e). (d)
4 is information about total fire bans on page 0040 and
5 information about the fire danger index. In relation to
6 fire ban, you were provided with extracts from the CFA
7 website about what a total fire ban day is and when it is
8 declared. You say, "The basic idea is generally
9 well-publicised and understood, but as a warning it may be
10 confusing." Why is that?---For the reasons I think we've
11 already probably covered, that a total fire ban day in
12 Victoria is normally declared when the fire danger index
13 is at 50, but the same wording is used for one like the
14 Saturday or even worse. A week later the fire danger
15 index was much higher or predicted to be much higher.

16 If we move over to (f), the ad hoc high level warnings, you
17 have already spoken about those and you have made the
18 point that those issued by Commissioner Esplin, Premier
19 Brumby, and we should add there Russell Rees, contained
20 good information prior to the fires about the general
21 level of risk?---That's right. I have re-reviewed those
22 statements again and I think they were actually very clear
23 about not only the risk in physical terms, but also the
24 types of people who might be most vulnerable and the sorts
25 of things that perhaps people could do. Could I just go
26 back to the total fire ban issue, because you
27 mentioned why do I think it might induce complacency. The
28 other point is, again drawing on our research that isn't
29 quite in your hands, a lot of people mentioned that they
30 had experienced total fire ban days before, they didn't
31 see what the fuss was about. So, at least for some people

1 living in high risk areas, it is an issue.
2 Is that in part because a total fire ban is actually a
3 directive as to what you can and can't do as opposed to
4 what might happen to you?---Probably. It doesn't reflect
5 the severity. It reflects a degree of severity but within
6 that there is a wide range of possible severity or risk.

7 COMMISSIONER McLEOD: Do you think, Professor, there is a
8 particular group of people who may choose to leave and be
9 aware that their choice would be to leave once they were
10 certain that there was a real risk associated with where
11 they are living, but who in the absence of confirmation of
12 a real risk being present because of reasons that might go
13 to inconvenience and so on, are unlikely to respond to
14 encouragement to leave early, i.e. the day before, but who
15 then await a specific trigger on the day to activate their
16 pre-determined position to leave early, which is
17 predicated on them being able to get early enough warning
18 to be able to do that safely, and that they are people who
19 are particularly at risk if they don't get an early
20 warning and if perhaps the fire arrives suddenly without
21 warning, they are more likely to be people who are less
22 well prepared?---Maybe there are several points in the
23 question or comment. We haven't actually done any
24 specific investigation of that issue about whether people
25 will leave early and so on, that group, but what we can
26 say is there is no question that perhaps the great
27 majority of people are waiting for a trigger, some
28 official, ideally, trigger to leave or to do something.
29 Therefore, the fact that they are waiting for this, and as
30 you point out it perhaps doesn't come early and it means
31 they are at a higher risk, probably, but the point about

1 when there is a definite risk as opposed to simply a
2 generic statewide threat I think is a very important
3 differentiation and I think that's absolutely right. When
4 there is a definite risk to that particular area, if they
5 know about it, people's attitude changes quite a lot.
6 People have to know about that. It has to be conveyed to
7 them. That's a critical factor.

8 Or for many people in the most seriously hit areas, that
9 wouldn't have been any earlier than around about noon on
10 the Saturday?---I can't think of too many areas when it
11 would have been that early.

12 Maybe a little bit later than that, even later than
13 that?---Yes, I think that's absolutely right.

14 Because there have been some observers who have said "leave
15 early" can mean leaving as late as 10 am in the morning,
16 but clearly there were no fires, of the ones that caused
17 the greatest damage, that were burning at that time?---The
18 10 am - leaving in the morning is a precautionary action
19 which is not related to a specific risk, that's right. So
20 people I think are not inclined to take it. But, as
21 I said, we haven't examined what people's attitude to that
22 is directly, but we do know that they were waiting for
23 confirmation of the risk, if you like, definitely.

24 Which is a personal perception that isn't embraced by the
25 policy advice that they would have received if they'd
26 sought it or were open to it?---Yes, I guess that's right.

27 MS DOYLE: Another element of the warnings before the fire, and
28 we have dealt with (f), but if we go to (g), media
29 releases, there were other media releases that didn't
30 necessarily issue from the Premier's office, but made the
31 point in the lead up to 7 February that it was going to be

1 a day of high risk, et cetera, press releases issued by
2 DSE, CFA and the like. You say these were good, in the
3 second column, for awareness raising, but not so strong on
4 actions. I take that to mean not so strong in terms of
5 the call to action or telling people what to do?---Yes.
6 These messages, some of them did mention the urban fringe
7 areas and so on. What I noticed is, though, that they
8 tended not to say localities and maybe there's reasons for
9 that, but still, because I don't think a lot of people
10 realised that they might be in an area that's
11 considered - I'm not sure how urban fringe was defined in
12 these press releases, for example. They generally didn't
13 say what people should do, except the standard advice, and
14 maybe with hindsight they could have had slightly
15 different advice or emphasised things differently.

16 In evidence in this Commission a media extract was played of
17 the deputy chief fire officer, Greg Esnouf, who was asked
18 - I think it was 5 or 6 February - about this, he gave
19 this sort of advice, but he was then asked whether there
20 were any particular areas of the state at risk and he
21 said, "All of the state on this day". Does that perhaps
22 expose a tension as at 5 and 6 February as to who to warn
23 and how specific to warn?---The whole state was at risk,
24 no question. And then I guess you look at the
25 vulnerabilities. If you had to make a choice, had to make
26 a call, you would then look at the most vulnerable areas,
27 which are almost always going to be the urban interface
28 areas of the big cities, partly through experience, partly
29 through just the settlement pattern.

30 We have done the website, so we can move to item (j), the ABC
31 radio, which starts at 0044 and just to remind you,

1 running along these columns, the first column is your
2 summary where you note that it was good, the official
3 emergency channel, much praise and also - - -?---Good
4 potential. Excuse me for interrupting. I think the
5 question was about the potential, so I was answering about
6 potential.

7 And you note two sides of the coin, "Much praise but also
8 assertions that it lacked specific locations and was out
9 of date." In terms of content in column two, you refer to
10 "Good material, a mix of their own reports, official and
11 unofficial." What are you referring to there? Does that
12 include their more talk-back sort of function as opposed
13 to reading out the official messages?---There were the
14 official messages, as you say. There were interviews with
15 CFA headquarters or regional staff. There were also
16 interviews and comments from their own reporters on the
17 ground in some of these areas, as well as from local fire
18 captains or firefighters and also people simply calling
19 them or sending text messages with, if you like, informal
20 situation reports, so there was quite a mixture.

21 Is that sort of material valuable?---I think it is because,
22 let's put aside for the minute people sending in text
23 messages and things, but interviews with local fire
24 captains and so on is telling people reasonably exactly
25 what the situation is on the ground in those locations and
26 as soon as that's spoken, that is broadcast to the state.
27 The alternative is to put that information on the website
28 which, as we know, takes a number of steps and time to
29 load that onto the site and so on, so I think it is
30 actually very valuable. Perhaps it was - unfortunately
31 I think it did get a bit behind as things developed, but

1 it probably was the only source of real-time information.
2 The third column, just to remind you, the heading is
3 "Generality specificity. Could the warnings be better
4 targetted." And you note that there was general
5 information provided about the state but also that attempt
6 you've just referred to to provide locality-specific
7 information?---Yes.
8 Which may have become more difficult as the day went on?---Yes.
9 The next item you refer to is commercial media and you say the
10 potential was good but in practice limited. You note that
11 they broadcast the official warnings but then continued
12 fairly much with standard programming on the day itself.
13 It seems that you don't regard them as having been a
14 principal source of information on the day
15 itself?---I think there might have been one radio station
16 that made a bit of an effort, if you like, but generally
17 they didn't switch over. Later in the day, I think when
18 people realised how serious the situation was, there was a
19 shift, but at that stage it wasn't about warnings.
20 You make the comment in relation to commercial media in the far
21 right-hand column: "As many people listen to this media,
22 arrangements are needed to ensure that early warnings are
23 broadcast, not simply notices that an event has occurred."
24 That would of course need to be looked at in conjunction
25 with understanding what segment of the population and what
26 demographic listen to the ABC and then perhaps make an
27 attempt to deal with the others through commercial
28 media?---Ideally. The other side of it is that the ABC is
29 the official carrier of these messages and I think because
30 it had such a semi-monopoly on the day, that commercial
31 radio has made it clear they would like to have an

1 arrangement that also benefited them.

2 There has been evidence in this Commission from Mr Lawson from
3 South Australia that the CFS there has an arrangement with
4 a commercial station which broadcasts in the same way that
5 the ABC does. Is that one possibility, other memoranda of
6 understanding with commercial media?---I think it is
7 actually very important. We know the ABC in the urban
8 areas has quite a modest proportion of the market. In
9 rural areas it is quite different. The fact is, though,
10 it is probably the only radio station with complete
11 statewide coverage.

12 Informal warnings you note have a high potential in the first
13 column but of course, as you note in the second column,
14 the information is generally in a form suited to the
15 individual recipient. One of the issues, it seems, that
16 emerges from this is although it may be very specific and
17 quite rapid, of course there is less control over the
18 accuracy and credibility of the information
19 disseminated?---I think the credibility tends to be very
20 high, but the accuracy may not be.

21 You note in the third column from the left under that heading
22 that, "Dissemination mode is suited as that most trusted.
23 More important is that it works while official sources
24 collapse under the demand." So does that include things
25 like Twitter picking up perhaps where official modes were
26 lacking on the day?---Yes. It does include that.

27 The last matter I wanted to take Professor Handmer to relates
28 to his earlier research in relation to "stay or go". Your
29 2008 book chapter appears in volume 19 of the court book.
30 It starts at tender page (TEN.001.001.0149).

31 COMMISSIONER McLEOD: Sorry, that number again please?

1 MS DOYLE: Sorry, that was the beginning of the bundle. If we
2 go to (TEN.001.001.0151), the last three digits are 151.
3 That's the first substantive page of the chapter of which
4 you are a co-author. Do you have that, Professor
5 Handmer?---Yes, I do.
6 0151. This recently published book brings together in this
7 chapter a review of the evidence for the Australian
8 approach to that policy as at 2008?---Yes.
9 And you are a co-author of this with other researchers in the
10 area, including Katharine Haynes, whose particular area of
11 expertise is the civilian deaths database?---That's right.
12 This article outlines the AFAC policy and then at page 0153 the
13 historical evidence for the policy. As you did in your
14 previous work, including your 2005 article also in this
15 folder, you rehearse the historical material we have here
16 going back to 1939, but importantly after Ash
17 Wednesday?---That's right.
18 So you set out here the conclusions drawn after Ash Wednesday
19 about building survival and loss of life. Those are the
20 two cornerstones or the two main strands of research which
21 have led to the development of the policy?---Yes. I think
22 there are three main strands. If you like, there is the
23 building survival issue which you mentioned, 90 per cent
24 of houses surviving if someone is present, 30 per cent
25 otherwise; there is the fact that people make the
26 difference so, as you said, people's actions are
27 important; and the fatalities that occur during late
28 evacuation. There are those three strands.
29 Certainly there was robust data. You have case studies here
30 about Hobart in 2006, Canberra in 2003 and Ash Wednesday,
31 robust data supporting those three strands?---Yes.

1 Can I take you to page 0159, discussion of the results. You
2 say halfway down the page there: "Knowledge of the policy.
3 On the whole our research has found residents in fire
4 affected areas have a high level of awareness of the
5 policy and this is to be expected due to their frequent
6 and recent bushfire experience. Despite this awareness,
7 the comprehension and translation of the policy into an
8 appropriate bushfire response has been varied." You then
9 note four issues?---Yes.

10 You have touched on some of these already. A lack of
11 pre-season household planning; then the next element, that
12 the prepare, stay and defend is often interpreted as, you
13 say there, "stay and defend until I feel threatened",
14 another way of saying "wait and see"?---Yes.

15 "Wait until I get the official word"?---I guess what we noticed
16 was that a lot of people - it varied by place - said they
17 would stay, their plan was to stay and they might have
18 made some preparations for this, but they intended also to
19 leave when the situation got bad. In some cases in their
20 minds was that they would leave when the firefront
21 arrived, rather than wait until the firefront passed and
22 then left. So there were some problems here with
23 interpreting the risk of different options.

24 The third element you note there is a lack of clarity about
25 what "leave early" actually means, including when to leave
26 and where to go?---Yes.

27 So your research has revealed that people not only say "I'll
28 wait and see", but they don't have a clear understanding
29 of what the advice "leave early" means?---Well, at the
30 time of most of these case studies the advice in Victoria
31 was pretty clear. It meant leave by 10 o'clock on the

1 day, on a total fire ban day. That was the policy, fairly
2 prescriptive, but more recently it changed to not have a
3 particular time.

4 So the policy statement has shifted from "leave before 10" to
5 "leave early"?---Yes, so when we did these case studies it
6 was clear that you should leave before 10.

7 On the next page, 0160, under the heading "Deciding to stay and
8 defend or leave early", you say, "Decisions to stay and
9 defend or leave early are complicated by a range of
10 factors beyond concerns for personal safety." In essence,
11 I think you are saying there that people may be
12 over-confident about the survivability of their house but
13 also of their own capacity, mental and
14 physical?---Actually, I'm not quite saying that. What
15 we've noticed is people had very little confidence,
16 actually, the opposite, in the survivability of their
17 house and that tended to trigger their very late and in
18 many cases very dangerous evacuations. We have
19 interviewed quite a number of people in these case
20 studies, not in the recent fires, who lost confidence, got
21 in their car, drove through flames, and their house didn't
22 get scorched. So, it is about that and it is about
23 people's mental ability to cope with the noise and smoke
24 and so on of the fire.

25 You say under "Commitment to stay or contingency planning"
26 that, "A key element to successful defence is having the
27 commitment to stay throughout the fire." So I think you
28 have just described the phenomenon of the person who plans
29 to stay but at the last minute is unsure?---Yes.

30 In the next paragraph down it says Brennan, another researcher,
31 "described several features that distinguished households

1 committed to staying from those that are not. These
2 include having a plan developed and understood by all
3 household members, not leaving the premises to seek advice
4 or information or to watch the fire, and identifying
5 defence as a system, not just the application of a few
6 suggestions." So I take it from that that those who are
7 more likely to stick with it are those who have devised a
8 plan with elements and steps rather than just adopted a
9 vague idea about what they might do?---I think there is
10 something else I would like to add about that. Of course,
11 all our evidence is historic. That was a 1998 fire or mid
12 to late 90s fire around Macedon, I think. What we have
13 noticed in the current fire was that a lot of households
14 had multiple decision paths. So they might have had a
15 general plan to stay, for example, and then it was quite
16 common that some members would leave and then perhaps some
17 would come back, then other members would leave or bring
18 the others back and there was a lot of to-ing and fro-ing.
19 It is something that we haven't really documented before,
20 but it clearly has, if it wasn't an issue in the past, it
21 has become a sort of interesting behaviour issue and it is
22 another, if you like, challenge for how any safety policy
23 is implemented.

24 There has been evidence in this Commission which tracks that
25 path of people leaving the home and returning to the home
26 as a group or individuals, so it is something that has
27 been explored in the current research?---Yes.

28 Can you go to page 0161. There is a heading "Clarification of
29 leave early" and you note that, "There is significant
30 evidence that the 'leave early' message is not well
31 understood. Our researches revealed decisions about

1 leaving early are often not made prior to the beginning of
2 the fire season", and then furthermore you note the
3 trigger to leave is often advice from the authorities or,
4 in the worst cases, smoke and flames itself. Is that
5 another feature that has emerged in the current research
6 about these fires?---Definitely.

7 You note under the heading "Trauma" that, "Staying and
8 defending can be positive, but there is research that
9 notes that trauma and depression are often experienced by
10 people affected by a fire event, including those who
11 defend their property." So you note that the emotional
12 cost of staying and defending needs to be weighed against
13 the increased chance of house loss. No doubt that trauma,
14 although it is early days, is something that you have also
15 seen in the current batch of research?---Yes, although not
16 in this way yet. I mean there is a lot of short-term
17 trauma straight after an event; it is a question of what
18 it's like a bit down the track. One thing I should say
19 about these comments here is that in doing this research,
20 of course, we focused on people who have stayed and
21 defended.

22 Yes, by definition?---So it is quite possible, in fact some
23 people in the field argue that the thousands of people,
24 the late evacuees who we didn't interview, are just as bad
25 or worse off because they drove through flames and felt
26 they were going to die and that sort of thing. But we
27 really haven't interviewed many of those.

28 Over the next page, 162, under "Conclusions", you note that,
29 "The policy is well supported by published evidence, case
30 studies and an examination of the civilian death data."
31 Obviously there is also other strands to the research,

1 including building safety. You note that, "Empowering and
2 encouraging people to decide whether they will prepare,
3 stay and defend or leave is probably the single most
4 important strategy for protecting people and property from
5 bushfires." But you then note some issues for practice.
6 One, clarification of "stay and defend", and you note that
7 people have to understand it requires a decision and
8 commitment to a decision?---Yes.

9 Clarification of "leave early". People must understand what
10 "leave early" means and where to go. Next, there should
11 be an emphasis on the need for residents who intend to
12 leave early to still prepare their properties for
13 bushfire?---Mm-hm.

14 And then you note what are the physical prerequisites for
15 staying and defending. Earlier in your evidence you
16 mentioned vulnerable groups and Commissioner McLeod asked
17 you about the elderly and young. You will no doubt be
18 aware that the statistics in terms of these deaths
19 indicate 23 children died and some elderly people
20 died?---Yes.

21 Is it possible, then, that those vulnerable groups were caught
22 up in the mix of people who did not activate or, because
23 of the fact that they were dependent on others to activate
24 it for them, leaving early enough?---That's possible. It
25 is also possible and there is some evidence emerging that
26 in some cases households with children, small children, or
27 with the people who required constant care just really had
28 a lot of trouble focusing on the fire. They were too busy
29 attending to the needs of the children. We believe that
30 wouldn't have been the case 30 or 40 years ago.

31 So it seems there are two elements here. There is a need for

1 householders to consider how they will cope if they have
2 vulnerable members of the family or visitors in the
3 home?---Exactly.

4 And elsewhere in your evidence and elsewhere in this chapter
5 you note that there may be a need to consider how the
6 policy and how warnings attach to places other than homes,
7 like schools, hospitals, nursing homes?---Businesses.
8 Yes.

9 I have no further questions for Professor Handmer, but
10 I understand there are three groups interested in
11 cross-examining him. I'm not sure if they have made an
12 agreement between themselves as to who is to go first.

13 COMMISSIONER McLEOD: Can I ask a question first? Professor
14 Handmer, you have given us a good description in your
15 documents of the history of "stay and defend or go" policy
16 which really has its earliest origins in the 1939 fires.
17 If one reads Judge Stretton's report of his inquiry into
18 the 1939 fires, one thing that strikes you is that his
19 reference to communities is almost confined to references
20 to timber workers and their families?---That's right.

21 Timber workers and their families?---And miners, I think.

22 And miners, which I think is a very obvious indication of the
23 change in the demographics in the areas that were affected
24 both by the 1939 fires and the more recent ones?---Yes.

25 Many people I think in recent years, as the urban interface has
26 spread out towards the hills, have chosen to live in the
27 hills for a variety of reasons, including lifestyle
28 choice, but don't have the same background and experience
29 of living in the bush as many of the people who have come
30 from traditional rural families who have had bred into
31 them, in a sense, an understanding of the impact of

1 bushfires. That obviously creates a special challenge for
2 us and for the bushfire authorities in seeking to perhaps
3 educate a group of people who have had less experience
4 living in these sorts of vulnerable environments, which is
5 exacerbated by the fact that very big experiences like
6 this don't occur all that often?---Fortunately.

7 When they do, they can have catastrophic effects. Do you have
8 any impressions from the research that you have done that
9 there may be differences in the way those sort of groups
10 that I have loosely described have to living today in that
11 kind of environment in the decisions they take in relation
12 to their own preparation and their own understanding of
13 risk and how they deal with it?---I would say that the
14 communities that we are referring to, one of the striking
15 things is that they are quite diverse, and within any
16 given community, not necessarily all of them but many of
17 them, there are people who are very well prepared, took
18 great precautions, if you like, to be prepared, sprinklers
19 on their house, all that kind of stuff, separate water
20 tanks, diesel pumps. There were plenty of others who were
21 blissfully unaware it was even a particularly high fire
22 risk day and they can be right next to each other. So
23 I think it is probably that we are looking at a situation
24 where there is a lot more diversity in the preparedness
25 and mental attitude that you mention rather than any kind
26 of homogeneity like the bush being better prepared and the
27 city not. I think what we are looking at in these areas
28 is probably a very mixed scene which creates challenges,
29 as you mention. Another aspect, though, is that people,
30 I think, who have moved into these areas do expect that if
31 they were very high risk areas, then why was it developed?

1 Why aren't there procedures or precautions put in place by
2 government? I think there is that attitude a bit, too,
3 which isn't so much the case in the bush, although some of
4 the research that we have done has found, a bit to our
5 surprise, some of the same attitudes in traditional alpine
6 high country areas in Victoria.

7 Have you discerned any difference at all between people who, if
8 I could describe it as living on acreage as distinct from
9 people who are living in a kind of suburban-type
10 environment in a township, particularly in terms of the
11 extent of their preparation and their sense of awareness
12 of risk and how to best manage that?---I think all I can
13 say is there is some anecdotal material. We are not going
14 to have a good grip on that until we complete the survey,
15 but the anecdotal evidence is more or less as you say. I
16 suppose what I would say is that the difference I have
17 noticed, if there is one, is that the people on acreage
18 who have lived there for a while just seem to have a
19 number of ways of dealing with the risk. So when the roof
20 blew off their house, which wasn't in the plan, they had
21 some other way of ensuring themselves and their families
22 or whoever was with them survived. That might be one of
23 the differences, but it is only anecdotal evidence at the
24 moment.

25 MS DOYLE: Can I just note for completeness that Professor
26 Handmer's statement, in error, part of the attachment in
27 relation to the media briefings et cetera that he was
28 given was left out in error. We will supply that to the
29 parties and that should become part of exhibit 96 along
30 with tabs 1, 2 and 3 in folder 36.

31 <CROSS-EXAMINED BY MS MCLEOD:

1 If the Commissioners please, Fiona McLeod for the Commonwealth.
2 Professor, I want to ask you some questions about warnings and
3 your recommendations. I expect to be about 20 minutes.

4 Professor, can I ask you: You made a number of suggestions
5 for ways to improve warning messages and the ideal that
6 warnings should be a call to action or a signal to action,
7 and I'm looking at your statement in particular at page 12
8 at the moment. You also mention a number of critical
9 tensions exist and one example you gave was being too
10 general in a warning or too specific in a warning. There
11 are a number of critical tensions that exist in the
12 drafting of these statements, are there not, these
13 warnings?---Yes.

14 Would it be fair to say that documents like the Commonwealth
15 "Choosing your words" and the common alerting protocol,
16 things of that nature, represent something of a gold
17 standard but there must always be discretion to local
18 agencies to fashion a warning to suit the circumstances
19 and the population?---They probably are, as you say, a
20 gold standard, although I'm not sure that one really
21 exists, but all right.

22 Working towards a gold standard, perhaps?---Yes. In terms of
23 there must always be discretion, it is a good idea, of
24 course, because, as you're implying, the local authorities
25 or whatever we are referring to here should have the best
26 grip on their local communities. I'm hesitating slightly
27 because so long as it doesn't delay the message and in
28 some states there is this arrangement where, say, with
29 flood warnings, the SES adds local material to the
30 standard flood warning message. I think it is reasonable
31 to say that after a couple of decades many of the messages

1 don't have that additional material. That doesn't matter,
2 you could argue, except that if we've got that process and
3 people expect it or if we think it should happen and they
4 are told it will happen and it doesn't happen, I think
5 that creates a problem between expectations and what is
6 actually delivered. So that's my hesitation on that.

7 With all aspects of the warning system there has to be a care
8 about complacency in the community. So, for example,
9 taking paragraph 49 where you talk about the degree of
10 severity, you say information on expected severity should
11 be included and you gave the example of the depth of a
12 flood. This is paragraph 49 of your statement?---Yes.

13 Do you have a scale or index in mind appropriate to fires where
14 you talk about the need for information on expected
15 severity?---No. I would hope that my colleagues who work
16 on fire behaviour and the fire danger index could provide
17 us with one.

18 We would be looking at either a numerical scale or language
19 that would be appropriate to convey an indication of how
20 bad a fire was at a particular time?---Yes.

21 Bearing in mind that, if you keep saying fires are at the
22 extreme limit or the danger is at the extreme limit, that
23 of itself might build complacency in a community?---That's
24 right. I think that has to some extent happened a little
25 bit in Victoria.

26 Just looking at the question of timing that you just mentioned
27 in paragraph 51 of your statement, you say, "Ideally the
28 community should be given information and warnings about
29 the expected arrival time of fires." Commissioner McLeod
30 asked you about the risk of inaccuracy of the estimates
31 and the potentially dangerous consequences of inaccuracy.

1 Can I ask you how you would suggest you deal with those
2 tensions in information in a warning about
3 timing?---I think, as we discussed, probably that it is a
4 serious issue. In the second half of the paragraph I try
5 to outline some of these issues and how difficult it can
6 be with fires. It seems to me that if agencies can't
7 provide a window of time that the fire is likely to arrive
8 in, then we probably have some problems, actually.
9 I think they should be able to provide a window. If the
10 window is very, very large, but there is a finite chance
11 that the fire could arrive within, say, 10 or 15 minutes,
12 then I think that has to be emphasised.

13 One of the positives, can I suggest, of giving people
14 information about the timing or likely timing of arrival
15 of a fire is that it allows people to take refuge or make
16 last minute preparations?---That's right.

17 And one of the potential down sides might be to lull people
18 into this sense of complacency that they have got time
19 before they take action?---Yes, I think that's exactly
20 right. I would like to just add, though, that based on
21 what we have done, experience and research after the
22 February 7th fire, so many people were waiting for some
23 kind of official trigger or notification and we don't
24 really purport to have one, but people were expecting it.
25 So I think this reinforces the point that it is probably
26 worth looking at what can be done in this area.

27 Perhaps that gives rise to two aspects. The first is, as
28 Commissioner McLeod noted, it is almost impossible to
29 predict fire ignition points?---Yes.

30 Particularly on a day like 7 February, and then it takes a
31 certain amount of time for the fire agencies to catch up,

1 as it were, with information about where those fires are
2 and what their behaviour will be, and the second aspect is
3 that this fire weather was, at least until this date, in
4 many respects unprecedented weather in terms of the impact
5 it had on spotting the fire, weather that created its own
6 phenomena, as it were?---That's right. Can I just make a
7 point there that we know I think from the evidence as
8 presented to the Commission that quite a lot of fire
9 modelling was done which was reasonably accurate in terms
10 of predicting the spread of the fire, so certainly this
11 capability to a large extent exists.

12 The issue might be in getting that information to the agencies
13 in a timely manner?---Or to the people, people at risk
14 I think.

15 You also say it would be ideal to have information about the
16 areas likely to be impacted. Obviously, if people were
17 listening to warnings and they heard their specific
18 location mentioned, that would be a direct warning to them
19 to take action?---Mm-hm.

20 Is there a danger in being too specific with areas, that people
21 would then think, "I don't need to take action because my
22 location isn't mentioned"?---I think that's right. It has
23 always got to be a bit of a trade-off, selecting the right
24 scale. I am reminded of tornado warnings in Oklahoma. It
25 might seem a bit obscure, but they only have a few minutes
26 to give a warning and in their area they use counties.
27 Apparently everyone knows the counties, it is a
28 medium-sized area and they have found they can have a high
29 degree of certainty about their predictions of a tornado
30 hitting a forecasted area, say, the size of a county. It
31 is not a village, but it is not a very large area either.

1 So it is a question of picking an area where you weigh up
2 your certainty against specificity.

3 So if, for example, the agencies had information about
4 the likely behaviour of the fire and the spread of the
5 fire, there needs to be a balance between identifying
6 specific towns in the path of the fire and broader
7 geographical areas. Is that what you are
8 suggesting?---Yes. You don't want to miss a town that you
9 are pretty certain is going to be hit by a fire.

10 Paragraph 54, your summary of suggestions for improvements. In
11 (i) your suggestion is that there be ways of indicating
12 high priority messages for specific areas linking with the
13 desirability of indicating degrees of severity. Do I take
14 it from your earlier answer that you would leave this up
15 to others to determine whether that be a scale, a
16 numerical or other sort of scale, or whether there is
17 certain language to be framed?---That's right. It comes
18 out of the fact that in the afternoon of the 7th,
19 especially from mid-afternoon on, all the messages on the
20 websites were urgent threat messages and there was
21 really - there were hundreds. There were actually I think
22 over 1,000 of them. It was quite difficult to see
23 which - it is an open question; were there degrees of
24 urgency. I think there were, but there was no way of
25 separating it out. Even reading every message didn't tell
26 you that because there wasn't any timing information. So
27 it is just trying to - in a situation where it is almost
28 overwhelming, what priorities are there.

29 CHAIRMAN: Can I just interrupt. It is only slightly related
30 to this, but it is the matter of identifying the fires.
31 If one identifies the fire by the source, which generally

1 is the way it is approached, there is the risk that people
2 will not apprehend the warning because they think it is
3 too far away?---Yes.

4 As to Kilmore and Murrindindi, the criticism has been expressed
5 by some people that they didn't identify it with
6 themselves. Is there a better way of identifying fires
7 than by reference to their source so that the fact that
8 there is a degree of immediacy becomes apparent, rather
9 than doing what the simple thing to do is, identify them
10 by source?---That's a good challenge. Thank you. Because
11 fires are spreading, as you know, they spread quickly and
12 they might change direction, it is a bit difficult.

13 Ideally we would identify it by the place of impact, which
14 is how we tend to identify, say, floods. That's something
15 I will have to take on notice.

16 Thank you.

17 COMMISSIONER McLEOD: That's the safe course.

18 MS McLEOD: In respect of the standard emergency warning signal
19 at page 24 of your witness statement, you say in paragraph
20 110: "Unless those at risk were familiar with the SEWS
21 there was no reason to believe it would have had much
22 impact. It is clear some people, maybe few, expected the
23 signal and ignored advice and warnings while waiting for
24 the signal". We have heard evidence that SEWS was used on
25 7 February in at least a couple of places, one being
26 Boolarra, and the intention to use that signal having been
27 advised to the community at a CFA meeting or a fire
28 meeting, and other evidence that suggested it was played
29 perhaps in Marysville, although the population didn't have
30 any particular understanding of what that meant. I'm
31 sorry, Boolarra was a siren, not the SEWS, but it was an

1 audio siren played over the township. Your evidence,
2 I assume, is that it is very important to have community
3 understanding of what the siren or an audio signal like
4 SEWS would mean before it is played?---Yes, because -
5 well, in the case of SEWS it is a bit different to a siren
6 because it is broadcast on radio and it is immediately
7 followed by a message spelling out whatever the problem
8 is. A siren, most sirens - in the case you mentioned, the
9 town had a knowledge of what the siren was for. If that's
10 not the case, you could argue that on February 7th most
11 people in most places would have been aware, if they heard
12 a siren, or should have been aware, that it was about a
13 fire. But that's not something we could normally take for
14 granted.

15 You mention that some, maybe a few people expected the signal,
16 this is the SEWS signal, to be played and some may have
17 ignored other warnings while waiting for it. Does that
18 underline the importance of the coordination of the use of
19 various warnings ?---It is probably a very difficult issue
20 because SEWS is an official signal. It can only be used
21 throughout Australia when it is authorised by government
22 to precede official broadcasts read verbatim and these
23 particular comments actually were from people in
24 Marysville, but they were talking about informal warnings
25 being delivered over their local community radio station.
26 Under present rules throughout Australia SEWS could not be
27 used in those circumstances anyway, so it is just a bit of
28 a difficult problem. It might be irresolvable. One way
29 around it, possibly, which is one of the arguments often
30 used against SEWS, is that radio stations have their own
31 signal when they are about to broadcast news or something

1 of importance and they should use those. If they are not
2 using SEWS, they should use their own news identifier to
3 alert people that something is going to be broadcast.
4 There is a tension between that, no doubt, and the need to have
5 uniformity in community understanding about what the
6 signal means so that, if you come from Queensland where it
7 is played on the beach if there is a cyclone approaching,
8 you understand that it is a signal to receive further
9 information or listen out for further information if you
10 move to Victoria, for example?---There is no question, if
11 you are looking at national uniformity, it is a good way
12 to go. But the other side of it is that all stations have
13 their own identifiers when they are about to play news and
14 so on, and that's what their audience - allegedly, this
15 argument goes - is comfortable with. So there are
16 arguments both ways.

17 Assuming just for the sake of argument that the Royal
18 Commission recommended the consideration or reintroduction
19 of SEWS in some circumstances with a uniform approach, the
20 Royal Commission of course generates interest in itself in
21 terms of the handing down of interim findings and that
22 generates some publicity. Do you have any view about the
23 time that it would take to introduce changes to the use of
24 SEWS to the community before the next fire season?---In
25 Victoria?

26 Yes?---I think it wouldn't take much time at all, given that it
27 is widely used and it is well set up in Victoria, as it is
28 throughout Australia for use. It just hasn't been used as
29 much here as elsewhere. But the system is here.

30 And "much time" means in time for the start of the next fire
31 season?---I would think so, but you would have to really

1 ask the people who have to actually do that work.

2 Can I ask you to turn to paragraph 138 on houses. Just so

3 I understand, you were asked a number of broad-ranging

4 questions about your recommendations and room for

5 improvement, and houses was one of those questions, no

6 doubt?---Actually this was more in the context of what the

7 conditions were for the policy. That was the broad

8 question. Houses was, if you like, one of the conditions

9 or assumptions on which the "stay or go" policy is based.

10 You say in paragraph 141, quite properly, that it's not your

11 area of expertise, building standards. Do you see that at

12 the end of paragraph 141?---Yes.

13 Are you aware generally that the Australian standard has since

14 1999 included provisions to improve the resistance of

15 buildings to bushfire attack not only from burning embers,

16 which is one thing you mention, but also radiant heat,

17 direct flame contact and a combination of those three

18 forms of attack?---Yes, but it is a risk based standard,

19 which means that in many areas the standard of the housing

20 has been lowered.

21 Do you express that view as a member of the Bushfire CRC or is

22 this something that you have explored yourself in your

23 research?---As a member of the Bushfire CRC.

24 COMMISSIONER McLEOD: Is it worth mentioning, counsel, that we

25 will be coming back to this issue later in our

26 proceedings?

27 MS McLEOD: Certainly I had anticipated that we would come back

28 to these very issues later on with - - -?---Justin

29 Leonard, I think.

30 And certainly the building codes individuals. I will just ask

31 you this, following that indication. We should be asking

1 the building specialists to comment on those standards,
2 shouldn't we?---Absolutely. I think we should be asking
3 the bushfire building specialists to comment on the
4 standard.

5 At 156 you talk about the fire danger index. We have heard
6 some evidence about the extreme levels on the fire danger
7 indices being levels above 50?---Yes.

8 And the position now is that there can be a calculation using
9 the various algorithms of numbers above 100, although
10 traditionally they were limited to 100?---Yes, that's my
11 understanding.

12 The figures above 100 haven't been supported by suppression
13 research to actually indicate what it means if you have a
14 figure of 101 or 150, have they?---Some of my colleagues
15 would argue that figures above 25 are not well supported
16 by research, partly because it is very hard to do research
17 on these very high-level fires.

18 Given that, are the fire danger indices an appropriate scale or
19 measure to use in giving the public information about
20 severity or do we need to do more research there?---It is
21 pretty well established up to 100, as you mentioned.
22 Above that there is debate, and that needs to be sorted
23 out by the fire behaviour specialists. But, to go back to
24 your question about the public information provision,
25 I don't think it is a matter of the exact numbers. We are
26 talking in terms of what we might say to the public. We
27 have at the moment a system that goes "high", "very high",
28 "extreme". What some of us are saying is we need
29 another word.

30 Another word for "extreme, extreme"?---And I'm afraid I can't
31 help the Commission at the moment, but I wish I could on

1 this one. So the important thing there is that there is a
2 higher level of fire danger, not necessarily exactly what
3 it is in terms of the index.

4 But the indices are not the appropriate tool to use at this
5 stage, in your view?---Probably not because I think the
6 public are not familiar with these.

7 Can I ask you to turn to your chart of recommendations?---I
8 don't know it was recommendations. It was observations.

9 Observations, thank you. In particular item (c), concerning
10 the weather information predictions and warnings from the
11 bureau?---Yes.

12 It is page 0039, or the full number is (WIT.044.001.0039). You
13 make a number of recommendations or observations in
14 relation to the bureau warnings. Just carrying through
15 your headings from the first page so we can follow this,
16 the first column concerns the warning content?---The first
17 column is a summary, sorry, and then the second column is
18 the content, I think. I was asked the question as to how
19 potentially useful this particular mode of disseminating
20 warnings or this source of warnings would be in terms of
21 improving capacity and to take action during a bushfire.
22 So that's the first column.

23 So the first column, the summary, referring to your earlier
24 research, you make the comment that forecasts are valuable
25 to those doing weather dependent work and recreation; most
26 others do not alter their plans because of weather
27 forecasts?---Yes.

28 That was your 2007 research, communicating uncertainty via
29 probabilities?---Yes.

30 And also your older research on flood warnings?---That's right.
31 Would you agree as a general statement that people may have a

1 high level of daily awareness of weather forecasts but
2 don't necessarily change their behaviour unless their work
3 or activity is dependent on the weather?---That's right.
4 That's what we found.

5 You have mentioned and no doubt you are aware that there was
6 intense media coverage of the weather forecast leading up
7 to 7 February across various forms of media?---(Witness
8 nods.)

9 And that many people were aware of those through news
10 information and so on. Some or a percentage of those
11 changed their behaviour or put their fire plans into
12 action and some did not?---That's right.

13 As a broad assertion, would you accept that there is a high
14 degree of community awareness of the bureau products, and
15 Commissioner Pascoe mentioned the huge volume of hits on
16 the website as one example of that?---Yes. Could I go
17 back to something you just mentioned. The trigger for
18 people changing their plans - we don't know this, but
19 I would suggest - it is just as likely or more likely to
20 have been the total fire ban, based on the bureau's
21 weather predictions but announced by the CFA.

22 You have beaten me to the punch. The Bureau of Meteorology
23 provides the information, and it is the statements issued
24 by the agencies themselves that are actually the triggers
25 for action, are they not?---Yes.

26 We know that certain products issued by the bureau, including
27 those annexed to Mr Williams' report, do give specific
28 fire information about the predicted weather conditions
29 on, in this case, 7 February; and you indicated that there
30 were other specialised products that were issued that were
31 localised to particular areas?---That's right.

1 For example, on 7 February there were three spot fire forecasts
2 requested out of Kilmore, the ICC at Kilmore?---Yes.
3 And responded to by the bureau. Those are the sort of products
4 that can give specific and localised information that's
5 very useful to the fire agencies?---Yes, but they are for
6 the fire agencies of course.
7 Yes. So do you suggest that there be some way of disseminating
8 that information, the specific localised
9 information?---I think if the bureau produces a product
10 that is very high quality forecast for a particular area,
11 I can't think of any reason why it shouldn't be available
12 on their website for those seeking that information,
13 because people who are seeking that level and quality of
14 weather forecast information will almost certainly go to
15 the bureau's website to look for it.
16 If you assume that the spot fire forecast contained quite a
17 depth of information that those fighting the fire are able
18 to interpret, there may be issues with putting that
19 information up raw, as it were, on the web site if people
20 didn't understand it?---Yes.
21 But there is a balance of course to be achieved so that local
22 people get local information; do you accept that?---Yes.
23 CHAIRMAN: How much longer do you anticipate you will be? I'm
24 concerned about others who wish to ask questions. How
25 long do you anticipate you will be?
26 MS McLEOD: Less than five minutes.
27 MR LIVERMORE: About 15 minutes, sir.
28 MR GARNER: Fifteen minutes.
29 CHAIRMAN: What do you suggest, Ms Doyle?
30 MS DOYLE: I have made some inquiries.
31 CHAIRMAN: You know the difficulties of inconveniencing two

1 other witnesses.

2 MS DOYLE: We are under tight time pressure, but it is possible
3 for the lay witness to commence a little later if we need,
4 say, 20 minutes after lunch. It sounds like we need more
5 like 30, but I think even that will be all right. I have
6 had a message sent about that.

7 CHAIRMAN: Does that mean we should - - -

8 MS DOYLE: Finish the Commonwealth, and then resume at 2 or
9 slightly before 2 so that Professor Handmer can then be
10 cross-examined by the State and Telstra.

11 CHAIRMAN: All right.

12 MS McLEOD: The fourth column across concerns timing. You make
13 the observation that people may not realise how much
14 uncertainty accompanies weather information, predictions
15 and warnings. Is that a reference to the actual weather
16 forecast, is it?---Yes, on which fire predictions and so
17 on will be based, especially in terms of the wind
18 conditions and so on.

19 So the wind change charts that are issued by the bureau
20 contains specific statements about the
21 uncertainties?---Yes.

22 You would agree that that's a good thing to include, to
23 indicate that degree of uncertainty?---Yes, very
24 important, actually.

25 Then of course the weather and other variables are built into
26 the warnings issued by agencies?---Yes.

27 And is it your suggestion that there be a communication of the
28 uncertainty of all those variables when put together when
29 issuing statements out of the fire agencies?---No, not to
30 the public, I think. But I think it is important, now
31 that you have raised it, that the fire agencies

1 incorporate or whoever is doing the prediction, fire
2 prediction and thinking about creating warnings, include
3 that uncertainty in their calculations.

4 You would expect them to do that?---We would hope so, yes.

5 The last column concerns potential improvement. You have
6 indicated it could be useful to explain what the weather
7 means for people by specific groups and what actions they
8 should take. Can I suggest to you that the best person to
9 provide that information about the uncertainties in the
10 prediction would be the fire agencies
11 themselves?---I think that's right. That's fair.

12 Just one last question concerning paragraph (e) on the next
13 page and the provision of information concerning the fire
14 danger indices. Your evidence that you gave before was
15 about the fire danger indices and the research that's
16 needed to underpin levels above 100?---Yes.

17 And no doubt that translates into your comments in this
18 table?---Yes, it does.

19 MS McLEOD: Thank you, Professor.

20 MS DOYLE: I would suggest that if we resume at 2, we can have
21 cross-examination by the State and Telstra.

22 CHAIRMAN: Yes.

23 <(THE WITNESS WITHDREW).

24 LUNCHEON ADJOURNMENT

25

26

27

28

29

30

31

1 UPON RESUMING AT 2.00 PM:

2 MR GARNER: If the Commissioners please, Garner for Telstra.

3 I have some questions on telephony emergency warning
4 systems.

5 CHAIRMAN: Yes.

6 <JOHN WILLIAM HANDMER, recalled:

7 <CROSS-EXAMINED BY MR GARNER:

8 Professor, I want to ask you some questions about section 9 of
9 your witness statement which deals with the police SMS
10 sent out on 2 March and SMS messaging generally. You are
11 aware, are you not, that an SMS uses less network capacity
12 than a voice call?---Yes.

13 Are you also aware that an SMS is a store and forward system
14 which will send and resend the message until it is
15 successfully delivered?---Yes.

16 Would you agree with me that those features of SMS messaging
17 make it appropriate as an effective rapid warning medium
18 in a technical sense?---Absolutely, yes.

19 Can I ask you to look at paragraph 100 of your witness
20 statement. There you say that, "A range of calling
21 systems exist that have the capacity to call multiple
22 numbers at once, delivering various voice or text messages
23 within specified areas or to specified numbers." You go
24 on to say that, "For landline phones current technology
25 enables locations connected to landlines to be selected by
26 GIS-shaped files which can be used to delimit any areas."
27 You then go on to say that, "A major limitation with this
28 approach has been with unlisted numbers and related
29 privacy concerns." You are aware, are you not, that this
30 major limitation has now been overcome by recent
31 amendments?---Yes, it is in the past tense, but, yes, I am

1 aware it has been overcome.

2 Yes, and pursuant now to amendments to the Telecommunications
3 Act the IPND database can now be used for the purpose of
4 preparing a geo-coded database?---Yes.

5 And that can be used for an effective telephony warning system;
6 would you agree with that?---Yes.

7 And the IPND includes unlisted numbers as well as listed
8 numbers; do you agree with that?---I don't know that for
9 sure, because in the time between when this was first
10 prepared and now, a lot of these changes have been taking
11 place.

12 So you don't know one way or another as to what the IPND
13 includes?---No. I take your word for it, though.

14 In the context of an SMS early warning system you say in
15 paragraph 118 of your statement that telephone exchange
16 failure after a power failure is often a problem. You are
17 aware, are you not, that telephone exchanges are generally
18 battery powered rather than mains powered?---Yes.

19 And the mains power is used to constantly recharge the
20 batteries?---Yes.

21 Are you also aware that typically those batteries will continue
22 to operate for up to eight hours after the mains power is
23 interrupted?---I wasn't aware it was as long as eight
24 hours. In the studies we have done after especially
25 cyclone emergencies in the past there have been a lot of
26 issues around this. I knew it was a number of hours but
27 I wasn't aware it was eight hours.

28 Mr Beresford will give evidence on behalf of Telstra that
29 typically for telephone exchanges it is an eight hour
30 period. So, if I can ask you to accept that or assume
31 that for the time being?---Certainly.

1 COMMISSIONER McLEOD: That assumes, I suppose, the damage isn't
2 on a landline.

3 MR GARNER: We are talking about the functionality of the
4 exchange ceasing as a result of loss of power to the
5 exchange.

6 COMMISSIONER McLEOD: Yes. I thought the Professor's reference
7 was generally to loss of communications through power
8 failure.

9 MR GARNER: I think the reference in the statement was to loss
10 of exchange power.

11 COMMISSIONER McLEOD: Okay. I stand corrected.

12 MR GARNER: Mr Beresford will also give evidence that most of
13 the impact caused by loss of functionality in Telstra's
14 exchanges occurred after the firefront had passed and
15 that, for example, the Marysville, Taggerty and Kinglake
16 exchanges continued to function until the early hours of
17 8 February 2009. Again, if I can just ask you to assume
18 that to be correct for the sake of these questions?---Can
19 I clarify something, if you wouldn't mind?
20 Yes?---In much of this document I was asked and I replied in
21 the general about the systems. I wasn't referring
22 particularly to failures or otherwise during the fires,
23 unless I particularly say that.

24 I understand that, Professor. I'm just testing your statement
25 in paragraph 118 that telephone exchange failure is often
26 a problem. I want to suggest to you that in the context
27 of telephony warning system it is not likely to be a
28 problem because the nature of the exchange is such that it
29 will continue to operate for some hours after the
30 firefront has passed?---I would accept that, yes, in the
31 case of a firefront.

1 You would also accept, would you not, that for there to be an
2 effective - - -?---Provided the exchange itself is not
3 damaged. Yes, okay.

4 Yes, confining this to loss of power to the exchange, which is
5 what you were talking about in paragraph 118, and you
6 would accept, would you not, that for an emergency warning
7 system to be effective it must be delivered prior to the
8 firefront passing?---That's the ideal.

9 I suggest to you, therefore, that loss of power to an exchange
10 is unlikely to be a problem for this kind of emergency
11 warning system?---It depends where the exchange is. If
12 the exchange is upwind of the place that's been warned,
13 then it could be a problem, although as you say it will
14 run for a number of hours, eight hours. Also looking - if
15 we just focus on exchanges, I think you're right. But it
16 does depend where the exchange is. I just make that
17 point.

18 Why does it depend where the exchange is, Professor? If the
19 exchange is continuing to run for typically eight hours
20 after the firefront has passed through the area where the
21 exchange is situated, you are going to have to have
22 delivered your message well prior to that time, are you
23 not, for it to be effective?---I suppose the point I was
24 making there is in response to your assertion that if the
25 exchange is situated where it could be damaged by a fire,
26 it may not be the fire we are concerned with, but a fire
27 in a day or a week when there are fires everywhere, then
28 that may not - what you are saying may not hold.

29 I understand that, Professor, but I was asking you about
30 paragraph 118 where you are talking about loss of exchange
31 functionality through loss of power, not fire damage. I'm

1 not talking about fire damage to an exchange. Put that to
2 one side. I'm talking about loss of functionality through
3 loss of power?---Well, it is the same question, in my
4 opinion, because we might lose - I'm just saying it
5 depends where that exchange is located. If the exchange
6 is located in a position where, when it loses power, the
7 community is not affected for some time, then it may still
8 fail at the critical moment. That's what I'm saying.

9 I'm putting to you it won't fail at the critical moment because
10 if it loses power it will continue to operate typically
11 for up to eight hours after the firefront has passed
12 through?---It will continue to operate for eight hours
13 after it loses power I think is what was said. All I'm
14 saying is that I can foresee situations where power could
15 be lost and there could be a gap of more than eight hours
16 before a town that we are concerned with, through that
17 exchange, is hit by fire.

18 Which gives you plenty of time to provide warning to that
19 town?---Yes. I'm saying it might fail at the critical
20 moment. That's all I'm saying.

21 In paragraph 102 of your statement, Professor, you say that, "A
22 limitation with many systems is the capacity of the local
23 phone system and that unless emergency systems can
24 override normal phone traffic, they may find lines
25 congested." You would agree with me, would you not, that
26 an important component of an effective telephony-based
27 emergency warning system is the need to monitor and manage
28 the load on a telephone network through which the mass
29 outbound calls or SMS messages are delivered so as to
30 ensure that those messages are delivered
31 successfully?---Yes.

1 Would you also agree with me that the operator of the networks
2 through which the mass outbound calls or SMSs are
3 delivered is best placed to monitor and manage that load
4 on the networks?---I would like to think so.

5 Professor, you are aware, are you not, that there are a number
6 of different mobile telephone networks in
7 Australia?---Yes.

8 And that those different mobile networks have different areas
9 of coverage or coverage footprints?---Yes.

10 And that for some of those mobile networks there may be better
11 coverage, for example, in rural areas than there are for
12 other mobile networks. Do you agree with that?---Yes.

13 Would you also agree with me that the effectiveness of any
14 telephony-based emergency warning system would be improved
15 if mobile phone users who reside in a rural area or
16 frequently visit that area select an appropriate network;
17 that is, one which has coverage in that area?---To me
18 that's a commercial question.

19 It goes beyond a commercial question, does it not? I'm saying
20 that for the effectiveness of a telephony warning system
21 it is important for a user to be connected to a network
22 which has coverage in the area where the user will
23 be?---Yes. I would like to think that people who live in
24 these areas would do that.

25 Yes, so it is not just a commercial decision, it is a sensible
26 decision, is it not?---Yes, but you included people who
27 are travelling in the areas. I think that is a separate
28 issue. I think if it is talking about people living in
29 the areas, then absolutely. But I think people travelling
30 through these areas have a lot of things to balance in
31 selecting a provider.

1 People who travel frequently to an area, typically for example
2 a holiday maker who has a holiday house in a rural area,
3 it would be wise for him or her to select a network which
4 has coverage in that area, would it not?---Probably, but
5 there are a lot of issues with selecting networks. This
6 is just one of them.

7 I also put it to you that another important aspect of choice of
8 mobile phone network and equipment is that the user choose
9 an appropriate handset and that there are many handsets
10 which are specifically designed for rural areas. Were you
11 aware of that?---Yes, I was.

12 And is it not also important that a mobile phone user who
13 resides in an area where there may be limited coverage
14 takes steps to augment that coverage by, for example,
15 acquiring an antenna which can be affixed to his or her
16 car. Would you agree with that?---That would make sense.
17 An alternative is that the coverage be extended.

18 That's a matter outside the control of the particular user, is
19 it not?---It is.

20 Professor, you don't profess to have any qualifications or
21 expertise on the technical aspects of fixed or mobile
22 telephone networks and in particular how telecommunication
23 companies dimension those networks, do you?---No. I have
24 expertise in the experiences of people using them in
25 warnings.

26 But no direct experience or qualifications or expertise on how
27 a telecommunication company would dimension its
28 networks?---No.

29 You have no personal knowledge of how Telstra dimensions its
30 fixed or mobile networks, do you?---No.

31 It is accordingly the case, is it not, that you are not

1 qualified to give an opinion on and don't know as a matter
2 of fact how resilient the telephone system was on
3 7 February during the bushfires?---No, I don't think
4 I have made an observation on that.

5 I'm not saying that you have, but you are not in a position to
6 do so, are you?---Well, we are asking a lot of people
7 about their experiences with the phone system and in due
8 course we will have that material and then we might be in
9 a better position.

10 So you will have some anecdotal evidence about that?---We are
11 doing a survey of many thousands of people, so we may have
12 more quantified evidence. But at this stage, based on our
13 interviews, there is no evidence that the phone system as
14 a whole had any problems, except when towers were
15 destroyed, which is beyond the control of anyone.

16 Thank you, Professor.

17 <CROSS-EXAMINED BY MR LIVERMORE:

18 Professor, my name is Livermore. I appear for the State of
19 Victoria. The Commission has heard evidence from a number
20 of witnesses, Professor, about the importance of education
21 and information being supplied to people well before the
22 day of an emergency when a warning may or may not arrive.
23 I notice in your statement that you were focused, probably
24 because of the questions asked of you, upon the wording of
25 warnings generally on the day of the emergency or
26 thereabouts?---That's correct, because of the questions,
27 although I was asked and we did go through the warnings,
28 generalised warnings, at the start of the season.

29 Do you agree with the proposition that education and
30 information provided over a period of months, if not
31 years, is very important to the effectiveness of a warning

1 on or about the day of an emergency?---Yes.

2 Is that because the engagement of a particular person in an
3 education or information activity before the day of an
4 emergency is likely to react more appropriately to their
5 safety if a warning is given on the day of the
6 emergency?---That's part of it. That's definitely part of
7 it. The other part of it is that they are aware that
8 there is likely to be a warning, the form it would take
9 and so on.

10 Is another part of it that if a person has been educated and
11 informed weeks or months prior to the date of an
12 emergency, they are more likely to react appropriately for
13 their safety on the day of the emergency if they don't
14 receive a warning?---It would depend on the details of the
15 education program, but given the sorts of education
16 programs that have been undertaken in Victoria, that would
17 be a reasonable proposition.

18 In relation to warnings on the day of an emergency, in
19 particular in relation to fire, there are a number of
20 factors that may result in any particular person not
21 receiving a warning on the day of the emergency?---Yes.

22 And that may be because a warning simply hasn't been given in
23 time for the person to receive it?---Yes.

24 That might be one reason?---Yes.

25 Another reason might be the person might have their radio
26 turned off, their computer turned off and be sitting in
27 their house and it is simply incapable of delivering a
28 warning to them?---Well, through electronic broadcast
29 media, yes, but there are other ways of delivering.

30 Yes. I noticed that in the material that was provided to you
31 you were not provided with the quite lengthy and detailed

1 material published by the CFA in relation to its Fire
2 Ready Victoria strategy, the "Living with fire" framework,
3 the "Bushfire blitz material", the Community Fireguard
4 group material, the bushfire planning workshop material
5 and various other information products, including those
6 relating to radiant heat and other matters. Are you
7 generally aware of that material in the activities that
8 the CFA engages in to inform and educate communities that
9 live in high bushfire risk areas?---I am. I am generally.
10 Other witnesses have described that material and those systems
11 as variously best practice or the benchmark for activities
12 of that type. Can you comment on the quality of the
13 CFA's - - -?---I think the material is very good quality.
14 At the moment we are trying to - many of us are trying to
15 think about how we can get more from them, have more
16 impact, so I always hesitate to say they are the very best
17 practice because I think we can probably do a bit better.
18 That by its nature changes, doesn't it, over time
19 anyway?---Yes.
20 And no doubt is likely to change when you finish the research
21 that's currently being undertaken?---Yes.
22 You were shown an example of a warning that was given in South
23 Australia and you were shown a printout of a CFA
24 website?---Yes.
25 I want you to have a look at a document titled "Fire
26 information release", if it could be brought up on the
27 screen. It is (WIT.3004.001.0190). It is a fire
28 information release, urgent threat message, that was
29 attached to the statement of Mr Caughey, the witness
30 Mr Caughey. I'm asking you to look at this document,
31 Professor. There it is there. This is the CFA version of

1 the South Australian document that you were asked to look
2 at earlier. If you look at that document, and it can be
3 scrolled down if you need to, are you familiar generally
4 with that form of document that the CFA uses?---I'm just
5 checking. Yes.

6 If I can first ask you about the template, as it were. Do you
7 have any comment to make on the template that that
8 material is contained in?---From what I can see, and of
9 course it is a bit different from having it in front of
10 me, it looks like it covers most or a lot of the critical
11 issues, for example timing, location.

12 In terms of the content, it describes a grass and scrub fire
13 burning four kilometres east of Kilmore, south of Saunders
14 Road, a southerly direction, estimated to be
15 1400 hectares. "The communities of Whittlesea may be
16 directly impacted upon by this fire within two hours." Do
17 you have any comment to make on the way that material is
18 provided?---Well, I think it is a bit clearer than some of
19 the material we looked at before. It seems to be a bit
20 more location specific. There are generic issues about
21 compass directions, but I think they are dealt with a
22 little bit better by having the locations there. And it
23 gives a timeframe, which is good.

24 Then if we go down and there are some headings here, and
25 I think you referred to this earlier, "Core
26 advice"?---Yes.

27 And there is some information provided there. I would ask you
28 to look at the fourth dot point which says, "If you are
29 caught on the road, don't get out and run", and then gives
30 four sub-dot points of specific instructions on what to
31 do. Do you see that one, Professor?---Yes, I do.

1 I think it has been suggested in some quarters that this form
2 of message carries with it some ambiguity or is capable of
3 causing some confusion. What I want you to do is comment
4 on this proposition, that all it does is identify to a
5 person who may be in that position of being caught on the
6 road what they should do if they are caught in that
7 position?---Yes. Okay. Would you like me to respond to
8 that?

9 Yes, and take your time reading it?---I don't have a problem
10 with it, personally. I agree with you. But I think we
11 are thinking of people who are looking at this whole
12 message here who, if there is a possible ambiguity in it,
13 they will find it. So I think in designing these messages
14 I would argue that we are poor people to be doing it. We
15 need to have the people who are part of the intended
16 audience to look at this and see what they get out of it.
17 I do think people have said there is ambiguity in the way
18 that's done, so I accept that. I might not see it myself,
19 but I'm not talking about myself. I'm talking about other
20 people who may see this slightly differently. I feel that
21 when it talks about tourists or people travelling through
22 the area, maybe it makes it less ambiguous, if we could
23 word it that way, and in some of the messages I looked at
24 on the website that was the wording that was chosen, so it
25 is not a big change. Can I just make a comment on the
26 previous dot points?

27 Feel free?---As with the website, the advice is great advice,
28 but it is quite wordy for a warning. Just glancing at it,
29 one needs restrained editing instincts. We could make it
30 a lot tighter, I feel, without losing any of the key
31 message. It is general comment about many of the warnings

1 I have seen.
2 You would consider it important, though, wouldn't you,
3 nonetheless, for an urgent threat message to provide some
4 information to people who might be caught on the road in
5 the area where the fire is posing the threat?---I do, and
6 I think this is one of the strengths of the CFA's
7 messages, is that they are targetting a number of
8 different groups. But all I'm saying, or I think many of
9 us would say, is that maybe a way of reducing the
10 ambiguity while retaining that multiple audience
11 characteristic of the message, which as you say is very
12 important, is to say "residents", "travellers" or
13 something to section it up a bit, that's all. It is a
14 simple thing.

15 It is. Thank you. And your evidence is not that you are
16 expressing a preference to the South Australian message
17 you were shown earlier as compared to a CFA message such
18 as this one?---Perhaps not such as this one, except that
19 the South Australian one is a bit more punchy. I often
20 think a lot of CFA material is very sound but perhaps it
21 is directed more for people who like to read a lot of
22 material - it is not a criticism; I like to read a lot of
23 material - whereas the South Australian one is minimalist
24 and it would be seen, I think, as good practice in
25 warnings to try to just head that direction, that's all.

26 There is a real problem, isn't there, especially with the
27 Write-it-once with the breadth of the audience that you
28 are trying to get the information to, some people being
29 more inclined to respond to perhaps a few short sentences
30 and others wanting more information and more
31 detail?---Yes, that's right. I agree. The challenge is

1 to retain the material that's in the CFA messages and
2 package it in a way - well, I think the challenge is to
3 retain that material but to package it, and this is
4 heading in that direction, in a way that makes it clearer
5 for somebody in a particular target group or target
6 audience to find the bit that's for them.

7 COMMISSIONER McLEOD: One of the challenges, I suppose, is
8 while there might be an attempt there to provide specific
9 advice to a certain class of citizens, there are also
10 other classes of citizen who might be at risk who don't
11 receive equivalent advice in the interests of brevity.
12 For example, people who haven't adequately prepared their
13 homes, who haven't left early, may well be in a quandary
14 as to what advice they are being given as to what they
15 should do because in terms of the policy position they are
16 inadequately prepared, but nevertheless they are people at
17 risk, as are people in cars. Now, they don't get any
18 advice in a message of that kind. Maybe there isn't any
19 easy advice to give to such people, but there are probably
20 other classes you could consider too. So it is hard to
21 anticipate that a warning could provide comprehensive
22 advice to all classes of citizens covering all of the
23 different circumstances. Is that a fair comment?---Yes.
24 The more you try and cover the field, the more complex the
25 message becomes, the larger it becomes?---It may not be
26 impossible, but it is very difficult.

27 CHAIRMAN: Could I just raise in that context a specific
28 example. Are you familiar with the material prepared by
29 the police in relation to people who died on 7 February in
30 general terms?---Yes. I haven't seen the specifics.
31 Are you familiar with the fact that some 21 of those were under

1 17 or thereabouts?---Yes.

2 I just raise the query that insofar as - your attention has not
3 been specifically directed to that issue, but do you
4 include children under 17 in the category of vulnerable
5 people?--Normally in disasters - there is a lot of
6 argument about this, because the logic is that children
7 perhaps under, let's just redefine it, under 12, are
8 subject to intensive monitoring, this is what we say in
9 our society, so really the problem is more the distraction
10 of the adults to the children, you could see it that way.
11 Teenagers are in a different category, perhaps, and
12 I think in the disaster literature, the global disaster
13 literature, they are a category that is very poorly
14 represented.

15 To some extent the issue then arises if you want to really
16 address the problem of - I will leave out the
17 teenagers - children 12 and under, that needs to be a
18 specific need to address the parents of children 12 and
19 under on the basis that the considerations as to the
20 trauma their children might expect or the risk of loss of
21 life creates separate problems again that, as I perceive
22 it, and there is reference made to the CFA materials, that
23 doesn't at all address that problem, except by occasional
24 references in those materials to "children", without
25 more?---I think that's right. We have done a historical
26 review of the material that's been used, the published
27 material, and I think it is fair to say that in the past
28 there was more reference, oddly enough, to specific groups
29 and to children than there is now.

30 It is an area that has been relatively under-developed
31 generally?---It is an area where in terms of publicly

1 available material prepared by governments is largely, for
2 one reason or another, downplayed.

3 If there were something of the order of 15 or thereabouts
4 children who died on 7 February, that's a reason for at
5 least looking more closely at that particular category of
6 victims?---Yes, and I would go a bit further and say look
7 at the CFA materials, which as we have heard are near best
8 practice or best current practice, but they don't target
9 - and there might be good reasons for this - but they tend
10 not to target particular categories of people, vulnerable
11 or otherwise, so it is a generic comment. I would say it
12 is not simply children.

13 COMMISSIONER McLEOD: If I could just close off. Would it be
14 better, do you think, Professor, to have a standard
15 checklist for advice to people caught up in a bushfire,
16 you know, bang, bang, bang, which is standard advice which
17 would include some of the material on here which is really
18 standard advice?---Yes.

19 It is not specific to the incident, it is not specific to the
20 nature of the development of the particular fire. Surely
21 the purpose of this advice is to give warning to people of
22 an incident and an approaching danger, rather than to be
23 giving comprehensive advice to people who may be caught in
24 a situation of that kind that has a common application to
25 all such incidents, particularly with a website. It is an
26 easy thing to have an icon that you can click onto for
27 standard advice in relation to what to do if you are
28 caught in a bushfire, so as not to confuse, perhaps, the
29 issue with what its primary purpose is, to give an easily
30 digested simple message to people who are potentially at
31 risk in a particular locality?---I'm sure that

1 seems - that's right. One reason that it would be
2 considered pretty sound in the risk communication
3 literature for doing it this way, including all this other
4 generic material, is that it is at this moment that people
5 are most receptive to that additional advice, that's all.
6 They should have done it before, but many people we know
7 haven't paid as much attention as we would like, and at
8 the moment the fire risk is heightened they are more
9 likely to take that information on board. I think that is
10 one reason why it could be there. But the checklist idea
11 is used in some areas and it seems pretty sensible to me.

12 MR LIVERMORE: But the people in fire prone areas, they have
13 been, with the CFA material, to take that as an example,
14 they have been given this core advice message over and
15 over again in many different ways, haven't they, over
16 weeks and months?---Yes, although I think we shouldn't
17 overestimate the proportion of people that actually
18 receive and take that on board, that's all.

19 Yes. The engagement is another issue?---Yes.

20 Are you aware of the processes the CFA has in place for
21 engagement, such as street meetings, clubs, societies,
22 local groups, to try and get the message through and
23 engage more people?---Yes, I am aware of them and also
24 that the activity level varies greatly across communities.
25 Have you got any suggestions as to how the engagement level
26 could be increased?---I make a few in my statement, but it
27 is our biggest challenge, given the budget for these
28 things is a very small proportion of the total fire risk
29 management budget.

30 It is really the million dollar question in all of this, isn't
31 it? Rather than the use of the word "extreme" or

1 "serious" or "people" or "resident", it is the engagement
2 in the information and education process, isn't it, that's
3 really the key to it all?---Yes, and the possibility that
4 we may have come nearly as far as we can with the standard
5 methods, I think.

6 If I can just ask you a couple of questions on the "prepare,
7 stay and defend or leave early" policy. The conclusion in
8 your book that you were taken to, namely, "The 'prepare,
9 stay and defend or leave early' policy is well supported
10 by published evidence, our case studies and an examination
11 of bushfire related deaths. It is also supported by other
12 chapters in this volume that examine the legal issues,
13 building safety and some of the case studies in
14 detail"?---Can I just qualify that?

15 Yes, please?---It is well supported by published evidence in
16 terms of outcomes. We have identified in this chapter,
17 and we went through it earlier today, the issues and
18 problems with implementation.

19 Yes, and in your statement what you seek to identify under the
20 heading "Challenges for the policy" is really to look at
21 implementation issues?---Yes. Implementation issues; it
22 is meant to be future focused.

23 Yes, and you state at the bottom of paragraph 129 that the
24 purpose is to suggest emerging issues that are likely to
25 challenge the implementation of the policy as it currently
26 stands. What follows thereafter, Professor, even though
27 it hasn't concluded, have you drawn upon some of the
28 material that you have gathered in the research task that
29 you are currently engaged in?---In writing this statement
30 I didn't, but having said that, we have obviously got a
31 feel for it since then and I think it might change the

1 emphasis a bit, but the basic conditions remain.

2 The point you make in your statement is that all the research
3 work that's been done to date shows that the policy is
4 supported by a strong evidence base, but this evidence is
5 drawn from history and the history that it's drawn from is
6 really all the major bushfires that have occurred in
7 Australia in the last century?---Yes. I would actually
8 say it is drawn from history and it is also, because of
9 that history, drawn I feel from a more rural orientation.
10 I think those are two important factors. It is no
11 different to any other policy. It is based on the past,
12 whereas we are looking at perhaps changing circumstances.
13 And implementation issues are not unique to this policy either,
14 are they?---No.

15 No matter what policy you have, you would have a variety of
16 implementation issues?---Yes.

17 Notwithstanding that the policy is drawn from history, the
18 history that it's drawn from is a variety of different
19 types of bushfires, different types of issues. I'm not
20 saying they are the same as the 2009 ones, but they are
21 drawn from a variety of different experiences, aren't
22 they?---Yes.

23 Certainly as at February 2007 the policy was the best that we
24 could come up with on all the available evidence as at
25 that date?---Yes, it was.

26 Thank you, sir.

27 <RE-EXAMINED BY MS DOYLE>:

28 Just one matter arising. If the screen could go back and show
29 the fire information release that was put up on the
30 screen, (WIT.3004.001.0190), and I would ask that that
31 stay on the screen, but I'm asking Professor Handmer to

1 look at a page in attachment 31. So we are looking back
2 at the screen on the urgent threat message that
3 Mr Livermore showed you. Professor Handmer, I have had
4 handed to you attachment 31 to Russell Rees' statement,
5 being the information from the website you looked at
6 earlier, and I have asked you look at witness page
7 (WIT.004.001.0452). I have had a look at these two
8 documents and it seems to me that they contain the same
9 text. If you would just like to look at the example from
10 the web page, it is an urgent threat message for the
11 Kilmore East fire and it starts with incident information,
12 the grass and scrub fire burning four kilometres east of
13 Kilmore, south of Saunders Road. If you go through the
14 text you will see that it is the same content as the
15 document you were given in different form by
16 Mr Livermore?---Yes.

17 What perhaps wasn't explained to you in full was that the
18 document you were shown is annexure 10 to Mr Caughey's
19 statement and that he was the information officer for the
20 Kilmore fire based at the Seymour RECC, the regional
21 emergency coordination centre, on the day of the fire, and
22 that his evidence is that annexure 10 is a document that
23 he filled in and emailed to the IECC?---(Witness nods.)

24 Is it your understanding, perhaps drawing on your experience as
25 a CFA volunteer, that the fire information release
26 document that you were shown by Mr Livermore is a document
27 that CFA staff use inside the organisation, on this
28 occasion being sent from a RECC to the IECC?---Yes.

29 Whereas the web-based information, although the wording is the
30 same, it is the web-based information that the public have
31 access to?---That's my understanding. But can I just say

1 this morning when we looked at this we said there were
2 three issues and layout was one of them. It is a key
3 issue with the material in the website, is the layout, and
4 that is what's really different.

5 One thing that is different about this particular example which
6 should be pointed out is that it does have a timeframe.
7 It says, "The communities of Whittlesea may be directly
8 impacted upon by this fire within two hours," just
9 sticking to page 0542?---Yes.

10 Which distinguishes it from the other examples we looked at
11 this morning?---In fact, when I was looking through this
12 before, yesterday I did see very few examples that I could
13 find, at least on a quick revisit, that actually contained
14 that timeframe, which is why I didn't pick them to look
15 through again.

16 Whether in fact as at 1553 that was accurate information is an
17 operational question. You would need to know more
18 information about when the firefront hit Whittlesea to
19 know whether that was useful advice?---You would.

20 I have no further questions for Professor Handmer. May he be
21 excused?

22 CHAIRMAN: Yes. Thank you, Professor Handmer. You are
23 excused.

24 <(THE WITNESS WITHDREW)

25 MS NICHOLS: Commissioners, the next witness is John O'Neill,
26 and his statement is found at tab 19 of volume 36 of the
27 hearing book. I call John O'Neill.

28 <JOHN COLIN O'NEILL, sworn and examined:

29 CHAIRMAN: Take a seat, Mr O'Neill. If you have a strong
30 voice, and I suspect you have, you needn't worry too much
31 about the microphones. But it is important that you be

1 close enough to them that we don't have to suggest that
2 you knock your knees on the witness box and come
3 further?---If you can't hear me, you can suggest that.
4 MS NICHOLS: Mr O'Neill, do you live at Old Kinglake in Steels
5 Creek?---Old Kinglake Road in Steels Creek.
6 With your family?---Yes.
7 Namely your wife Adrienne and your children, John, who is 18,
8 Matthew 16 and Catie 14?---That's correct, yes.
9 And at the time of the bushfires in February had you lived
10 there for about five years?---Yes, we had.
11 With the assistance of the Commission's lawyers, have you
12 prepared a witness statement in relation to the fires of
13 7 February?---Yes, I have.
14 Do you wish to make a correction to paragraph 24 of that
15 statement?---I do.
16 The fourth line down, where you say, "I think the time was
17 about 5.45 pm", should that read "6 pm"?---Yes, it should.
18 With that correction, is your statement true and correct?---It
19 is.
20 Commissioners, I tender that statement.
21 #EXHIBIT 97 - Witness statement of John Colin O'Neill.
22 MS NICHOLS: Mr O'Neill, your property in Old Kinglake Road is
23 about 78 hectares, is that right?---Acres.
24 Acres, I beg your pardon. Can I ask that we be shown the map
25 that relates to Mr O'Neill's property. It is attachment 1
26 to your statement. Is your property, which is on the
27 eastern side of Kinglake national park, indicated where
28 that figure is with the letter A?---It is, yes.
29 Can we have a look at the second map. Does that locate Steels
30 Creek in relation to the surrounding areas, including
31 Kinglake, Strathewen and St Andrews?---It does, yes.

1 Can we now have a look on the screen at the photograph of
2 Mr O'Neill's property. This is not attached to the
3 statement, Commissioners. Does that photograph,
4 Mr O'Neill, depict your property prior to the 7 February
5 bushfires?---It does, yes.

6 It is slightly blurry, but the building on the far left-hand
7 side of the screen, is that the house in which you lived
8 and still live?---That's the main house. The one you are
9 pointing to now, that was our neighbour's house. There is
10 one acre stuck into our property. I can't point it to
11 you, but the one on your far left of the screen, that
12 house no longer exists. That belonged to Hannah Sky, our
13 next door neighbour.

14 The next house along?---The next building along was the
15 laundry. It no longer exists, and the water tanks behind
16 it. The next major roof you see is the main residence for
17 the property and that exists today.

18 Your property is quite developed. There are a number of other
19 buildings on that property?---There are.

20 Can you describe what they are?---I can. If you keep moving
21 sort of to your right along there, the next building you
22 see there, that was a three car garage. If you go to the
23 north of that you will see there was a swimming pool in
24 behind that tree with a wooden deck on it. There's a pump
25 house in there and, like, machinery shed. Keep going
26 right. That was a studio, quite an extensive building
27 that had billiard tables, antiques, storage, table tennis,
28 stuff like that. Then if you come back down your screen
29 again, you will see what is referred to in my statement as
30 a DPU, dependent person's unit, for want of better words,
31 a second house on the property. Across the creek, and you

1 can identify the creek line sort of in the middle that
2 runs right through the middle of this photograph where you
3 have a row of trees dividing the paddocks, you will see
4 another building across in the paddock. That was a hay
5 barn and tractor shed, sprayers, slashers, stuff like
6 that, and that was also destroyed in the fire.

7 Can I ask you about the sources of water that you had on your
8 property. Obviously there is the dam - - -?---There is a
9 dam there. That had an electric pump on it which I had
10 placed also a generator beside. It feeds all over the
11 property on the southern side of the creek right up to the
12 front gate and on the top or the bottom right-hand corner
13 of this picture there is a series of taps all in steel
14 risers, plastic underground with steel above ground. It
15 also fed into an extensive irrigation system around the
16 DPU and the main residence which irrigated all the
17 gardens. Apart from that dam there was also the swimming
18 pool which had a capacity of 90,000 litres of water which
19 was full. Adjacent to that was a tank of 22,000 litres, a
20 domestic water tank in concrete. Also beside the studio,
21 another 22,000 litre concrete tank, just to the right of
22 where your pen is. You can't see the DPU but it has
23 another 22,000 litre tank which is semi in the ground and
24 semi out again, it is sort of where the carport is, about
25 where you are now. Back where our laundry used to be
26 behind that, there were two concrete tanks, again,
27 capacity each of about 22,000 litres. Variously then
28 there was a 2,000 litre tank beside the laundry for
29 feeding the vegetable garden. There were two,
30 2,000 litres beside the pump shed-cum-machinery shed near
31 the pool also which I used to, as I said, would pump them

1 into the domestic tank there. There was also a tank down
2 beside the barn and that was of 2,000 litres steel. So
3 all the tanks were either steel or concrete, so there was
4 a tank behind that as well that took off that roof. The
5 pump shed itself had a transfer pump, which transferred
6 from the pool area up to the domestic water tanks behind
7 the laundry and it could also be fed up to several taps
8 around the pool as well, so you could draw water at that
9 point as well. Obviously the DPU had its own electric
10 pump, domestic, for feeding that house. Also at the
11 laundry was a domestic pump for feeding the main house.
12 Separate to that there was a pump, electric pump, on the
13 2,000 litre tank which fed the vegetable garden. Then for
14 firefighting purposes, in the event you didn't have any
15 electricity, which we didn't, we had a twin-impeller
16 firefighting pump on the pool deck which was connected to
17 a commercial 40-metre firefighting hose reel that you get
18 on the side of any commercial building. In fact, that's
19 where I scored it from in my line of business. Also there
20 was another one of them connected to the dam where there
21 was another firefighting pump, so there were two pumps at
22 the dam, one electric and one petrol. It fed up to near
23 the DPU and then another 30 metre hose reel. So we had
24 plenty of water and plenty of pumps.

25 Thank you, Mr O'Neill. We can finish with the picture now.

26 Can I ask you about your fire plan a bit more generally.
27 You say that when you moved into the area and started
28 living on the farm, you and your family developed a fire
29 plan?---(Witness nods.)

30 Before I take you to the detail of it, you say that you

31 discussed it and at least every year sat around the table

1 with the family reviewing it?---That's correct.

2 And that was at the instance of your wife?---Pretty much, yes.

3 How did those conversations go?---"We'd better talk about our

4 fire plan, we're coming into fire season again." Okay,

5 here with go. Then we would talk about it seriously and

6 we would make sure, you know, "Catie, you're on water.

7 Are the pumps ready? Have you checked them?" And we would

8 do all that. We have a mud room in the house, for want of

9 a better word, where you come in and kick your boots off

10 and hang coats up and stuff like that. We'd have jeans

11 and cotton shirts and stuff at the ready in that area.

12 Plenty of buckets would always be available. We would

13 make sand bags up every year. We didn't buy commercial

14 plugs for the down pipes. We just got, for want of a

15 better word, Myers bags, the heavy duty plastic bags, fill

16 them full of bricklayer's sand, tie a knot in them and

17 have them placed around where every downpipe was so they

18 were easy to pop up in and block off the downpipes and

19 then you could fill your gutters with water and stuff like

20 that.

21 With the sand bags, when would you prepare those?---We would do

22 it early. Probably October/November.

23 So would that be a ritual that you would do at about the start

24 of the fire season each year?---Pretty much, yes. Because

25 what would happen is the ones from the previous year, the

26 UV would have killed them, so you've got to pick them up,

27 they'd fall apart, so you would just make new ones about

28 that time every year.

29 Is that something in which your whole family would

30 participate?---I think my wife did it this year. It is

31 usually my job, but Adrienne did it this year. I'd been

1 busy at work so she took that upon herself.

2 So you have the sand bags, the extensive pump and water supply
3 system which you have already described. You would have
4 your clothing and part of your plan, you say, was to have
5 mop and buckets placed around the house on high risk fire
6 days?---That's correct.

7 Can I ask you how you and your family defined high risk days
8 for the purposes of implementing your plan?---It is
9 something you have to take, you have to judge, I suppose,
10 based on weather forecasts leading into something like the
11 7th of February. I mean, it was pretty obvious. There
12 was plenty of warning around in that week. Even without
13 the media, it didn't take a genius to work out it's been
14 40 degrees for quite a while, everything is getting really
15 dry. It's fair to say a day in the end of November or
16 December where the temperature may not have been as hot,
17 there might still have been a bit of moisture in the
18 ground, but yet they might put out a day of total fire
19 ban, so you are guided by that as well. So you work on
20 what the weather forecasts are and what sort of warnings
21 have been put out. We pretty much try and keep up with
22 the warnings.

23 When you say the warnings, from what sources?---Predominantly
24 CFA and whatever is on the commercial stations and 774.
25 I'm just a 774 listener, anyway, so you pick up on that
26 stuff because every year they kick in that the fire season
27 is on and be prepared and they go through all that stuff
28 every year.

29 And you mentioned total fire ban days before. Of what
30 relevance would a declaration of a total fire ban day be
31 to you in implementing your plan?---It is relevant in the

1 fact that you wouldn't take a trip to Albury on a day of
2 total fire ban. You'd be too far away. You'd try and
3 stick around, you know, you wouldn't go on a holiday on a
4 day of total fire ban. It would also, depending on how
5 you judged - because days of total fire ban are called on
6 the bottom of the scale or the top of the scale, for want
7 of a better word. I don't know what scale they're using,
8 but from my point of view I can say, "All right, it's a
9 day of total fire ban because it's high wind, it's not
10 really that hot and they might be worried about
11 lightning", or a day of total ban in relation to 40 degree
12 days and some severe warnings coming out of the CFA, it
13 puts us on a higher alert level and therefore we act
14 accordingly. We may not fill the buckets if we
15 think every day a total fire ban, but on that particular
16 day we were of heightened alert enough to say that I think
17 we ought to be as prepared as we can for this one.

18 Otherwise, apart from on those high risk days, you would, as
19 you have said in your statement, be sure that the gutters
20 and plugging were cleared of leaves?---Yes, we would.

21 We have seen a photograph of your house, but what about the
22 actions you took to clear around the immediate vicinity of
23 your house?---Well, we don't let leaves lie around on
24 footpaths and stuff like that. We are constantly annoying
25 the neighbour that used to be there with the blower going
26 and picking up leaves and stuff like that. We use that
27 irrigation system to not just keep the garden alive but it
28 keeps the area damp. We didn't have any native shrubs
29 immediately up against the house.

30 Was that a deliberate choice?---No, not particularly. But it
31 was - if I was planting the garden, and I have to replant,

1 that is what I will be replanting anyway, stuff with low
2 oil contents. I wouldn't be putting in acacia where we've
3 got camellias and where we've got pinoaks and ash and
4 hawthorn and stuff like that. Our house is pretty much
5 surrounded by that sort of material in the immediate -
6 when I say immediate, the five metre or 10 metre zone.
7 Apart from that, yes, we've got some beautiful bush, or
8 had some beautiful bush.

9 You say that you kept first-aid supplies and battery powered
10 flashlights on hand?---That's right, yes, and ladders and
11 stuff like that.

12 And that's something you would have available every fire
13 season?---Every fire season, yes.

14 You also say that you had participated in a Community Fireguard
15 group, including attendance at CFA education
16 sessions?---Yes.

17 For what period of time had your familiar participated in
18 that?---We went to a meeting that Hannah put on up at the
19 CFA community centre a few years ago and then every year
20 she brings in the relevant booklets issued by the CFA on
21 how to prepare and with the checklist and the tick the box
22 sort of stuff. That's as much as we - you know, we didn't
23 spend hours or weeks or months or years sitting in
24 listening to CFA talks or anything like that, but we were
25 very aware of all the information they were putting out
26 there and had attended that. The telephone tree was only
27 set up a couple of years ago, probably three years ago by
28 a resident who doesn't live there any more, not because of
29 the bushfire, he just sold prior, and that was very good
30 in that it sort of kept the lines of communication clear
31 among the immediate neighbours. There were about 17

1 houses in Old Kinglake Road and Brennan Avenue combined.
2 It is only one way in and one way out on Old Kinglake
3 Road. So, instead of everyone ringing around and crossing
4 lines, it's groupings, so there is someone at the head of
5 your tree and there is someone on top of that again. So
6 I found that that was good, and it also helped you find
7 where people lived and who they were and so it was good
8 from that point of view.

9 You mentioned Hannah Sky. She was your neighbour?---She is now
10 back there in a caravan, but yes, she is my neighbour.

11 And she was a member of - an educator in the Community
12 Fireguard program?---That's correct, yes.

13 And you indicate that she had assisted you and your family on
14 many occasions to discuss what sort of preparations might
15 be helpful for your fire plan?---Yes, she did.

16 She kept you up to date with best practice, as you call
17 it?---She did, yes. She kept us up to date.

18 Another part of your fire plan was to monitor the ABC. Is that
19 774?---Yes.

20 And to look at the internet. By that do you mean the CFA
21 website?---Yes, the CFA website.

22 Overall, your plan was that in the event of a bushfire you
23 would stay in your home and defend it?---That's correct,
24 yes.

25 And you say that your plan was to defend the main house but not
26 the other buildings?---That's correct.

27 Why is that?---Well, as you have seen in that photograph, it is
28 quite a developed property and there is only five of us,
29 so that decision was based on basically the manpower that
30 we have. So that was always our plan, we defend the main
31 home.

1 Can I ask you now about 7 February?---Yes.

2 You say that leading up to that day you had seen weather
3 forecasts and so on. So, as you have already said, you
4 understood that it was a high risk day?---Yes.

5 The first thing in the morning after getting up, you went down
6 to Melbourne, is that right?---I went to Northcote, yes,
7 and did a love job for a friend of mine, poured some
8 concrete, yes, which was a bit of a crazy thing to do.
9 Anyway, the heat must have been getting to me.

10 How far away is Northcote from Steels Creek?---I can do it in -
11 I don't know whether it is legal or not - 40 minutes.

12 And your wife made the preparations such as putting buckets and
13 mops around the house while you were gone?---She did.
14 Yes, she filled all the buckets, got all the mops out.
15 I think she had three mops for sure, that I'm sure of, and
16 she just stuck them in the buckets. There was a series of
17 about 12 buckets around the verandah, because the house is
18 all wood, completely, inside and out.

19 It is weatherboard?---It is weatherboard, internally and
20 externally.

21 Just out of interest, approximately how many times had your
22 fire plan preparations got to that stage during January
23 and February?---I think once before. We went to the
24 bucket filling stage last year, in the previous season.

25 So after you arrived home, which was at about 10, you didn't
26 take any particular activity until about 1?---Not until we
27 noticed the smoke coming over the hill. Then that
28 automatically set something in alert off. I knew that
29 there's a problem, because smoke - when you're living
30 where we're living, and we have had to deal with it in
31 previous years, with smoke coming from that direction.

1 Which direction, sorry?---Well, basically coming from the west,
2 west-north-west, which is in the direction of Kinglake.
3 It makes you anxious and edgy, so you go looking for
4 information, which we did.

5 Where did you look?---I rang the telephone tree first. I rang
6 a fellow called Rod Fallon who was on top of my tree. He
7 wasn't there, so I left a message. Then I rang a guy on
8 top of the tree, David Allen, who informed me, as I say in
9 the statement, that it was coming from Kilmore and it was
10 high in the sky and a long way away. There was a lot of
11 discussion about what he was going to do should a bushfire
12 actually come and I didn't challenge him at the time but I
13 thought he was mad as a snake saying he was waiting to see
14 what was going to happen. I said, "Have you prepared to
15 leave," you know. I should have said to him, "Why aren't
16 you leaving now?" Anyway, that was his decision and
17 I just informed him and he knew what our decision was, but
18 I re-informed him that we would be staying put.

19 You also spoke with your neighbour, Ms Sky?---I went to see
20 Hannah to see if she had any inside info, for want of a
21 better word. She said she could see smoke and that was
22 enough for her and she was quite edgy and anxious to get
23 out of there. It was extremely hot. It was 48 degrees on
24 the verandah. Regardless of how high the smoke was, she
25 said she was going and I said good luck and off she went.

26 When you were having these discussions, was that some time
27 shortly after about 1 o'clock?---Shortly after about
28 1 o'clock.

29 At that time you also checked the CFA's website for
30 warnings?---We did, yes.

31 Did you find anything of any use to you?---At some stage in the

1 afternoon shortly after that - there was nothing in
2 relation to Steels Creek. Something came up about
3 St Andrews, I don't know what time that was, I can't
4 recall, 2, 3 o'clock, whatever, because we were monitoring
5 and then it came off again as a false alarm. So at this
6 stage smoke was still high in the sky, so we continued to
7 just hang around the pool and try and keep cool.

8 Did you check the ABC for information about your area?---We
9 did, but there was nothing coming out of that.

10 You say that some time between about 2 and 3 Mr Fallon rang you
11 back and suggested that you check the Bureau of
12 Meteorology website?---That's correct. He says, "It'll
13 show up like a cloud, it'll show that it is emanating from
14 sort of the Kilmore direction," and he suggested "It's
15 high in the sky and it's not much to worry about."

16 Did you check the website?---I did, yes.

17 Is that what you found?---Pretty much.

18 Was it useful?---Not really.

19 You say you were anxious and wanted further information. Even
20 though your plan was always to stay and defend, why was
21 obtaining further information about the fire relevant and
22 important to you in that afternoon?---Well, because at
23 that stage you could fire your pumps up. If you knew
24 there was a fire half an hour away or an hour away, well,
25 you could get your pumps going. We had plenty of water.
26 We could pump for two hours. We got to pump for 10 or
27 15 minutes, that was it. We might have saved some more
28 buildings if we could have been able to pump a bit more,
29 because we could have wet a few more buildings down
30 instead of just concentrating on the one house. So, time
31 is important. As it turns out, we had no time. Well, no

1 time; we had 10 or 15 minutes. But if we had known there
2 was a fire coming our way and it will be here or there is
3 a probability 90 per cent it will be here in two hours,
4 there is a million things we could do more than what we
5 did.

6 You say at about 4 o'clock your friend, Mr Peter Warburton,
7 came to your place and he and you left for the Healesville
8 racetrack to make some preparations for the following
9 day?---Yes, get your priorities right; make sure there is
10 plenty of cold beer for the next day. So we went to
11 Healesville to stock up the bar.

12 At the time you left, there was smoke in the sky but you
13 checked for information and you didn't have any
14 information about what the threat was to your area?---The
15 only information we were getting from neighbours was that
16 it's high in the sky, it's a long way away, it's emanating
17 from Kilmore.

18 Can I ask you how far away is it between Kilmore and your
19 property?---I would be guessing, but I'd say as the crow
20 flies 100 to 120 kilometres.

21 When you left for the racetrack, that was about 4.15?---That's
22 correct, yes.

23 And you were listening to the ABC Radio on the way down in your
24 car?---Yes.

25 Was there anything that you heard on the radio that assisted
26 you when you were travelling?---Yes, we did. Just after
27 we left we heard there was a grass fire in a paddock over
28 near Yarra Glen, so instead of going how we would normally
29 go to Healesville from our property through Gulf Road and
30 Old Kinglake - Old Healesville-Yarra Glen Road we decided
31 we would go via Yarra Glen itself, just have a look and

1 see what it's all about. When we got on the
2 Healesville-Yarra Glen Road we could see that there was a
3 grass fire at what's known as Train Trak vineyard and
4 there were several CFA appliances there and it seemed to
5 be under control, so we continued on. It wasn't, you
6 know, it was 10, 15 kilometres from Yarra Glen or from
7 Steels Creek, it was going in a different direction. It
8 looked like they had a grass fire on a hot day and there
9 were plenty of people there.

10 You arrived at the racetrack at about 4.30 and you say you
11 continued to listen to the radio while you were
12 there?---We did, yes.

13 At about 4.45 the mood of the presenters seemed to
14 change?---Yes. My memory - I don't remember them saying
15 anything specific, but I think seeing the grass fire in
16 Yarra Glen and we sensed there was a change in mood,
17 without anything specifically relating to us being said,
18 and I just got a funny feeling, I don't know, a
19 premonition you'd say, "I think we should go home." Pete
20 was of the same opinion. I said, "Look, let's go."

21 So you left the fridge unstocked of beer?---No, there was half
22 in there and half in the back of the van, so we weren't
23 going to run out either way. But we left the job. It
24 wasn't complete, but we put half of it in there, so if the
25 races had gone on as planned there would have been enough
26 cold beer.

27 So you returned back via Old Healesville-Yarra Glen Road and
28 saw fires on the way back?---We did, yes. There were
29 fires in what we called Macintyre's paddocks.

30 Having arrived home by 5.30, Mr Allen who you had tried to call
31 earlier in the day phoned you and said he could see a fire

1 burning at Everard Ridge and that he was evacuating.
2 That's in the Kinglake national park?---That's in the
3 Kinglake national park.
4 How close is that to your property?---Very. I don't know;
5 within two or three kilometres.
6 So what did you then do when you heard that?---Started shouting
7 at the kids to get the hoses going. I fired up pumps. We
8 moved cars and we started hosing down the house.
9 I watched all the residents leaving, you know, in a hurry.
10 All the people who live up Brennan Avenue and Old Kinglake
11 Road were getting out.
12 Is this further along Kinglake Road into the national
13 park?---Further along Kinglake Road, yes. No, they live
14 adjacent to the park. There's another, like I said to
15 you, about 16 other properties in there but they are all
16 in the bush, none of them cleared. I don't know if many
17 of them were home on the day, but I watched a lot of cars
18 leaving and they were leaving in a hurry and the wind was
19 up, of course. You could hear this thing coming. It was
20 very noisy.
21 It sounds like an understatement, Mr O'Neill. You say in your
22 statement that it sounded like 10 or 20 steam trains
23 rumbling?---It did, yes. This thing was rumbling towards
24 us. My last memory of it before we got into the house of
25 the outside was it just turning this horrible purple, red,
26 black, rolling, coming at you, you know, this fire. That
27 was the head of the fire coming. And when it hit, it was
28 just like - it was like a tornado hitting us, like a
29 little hurricane, because trees just were being pulled
30 into it. They weren't falling, being pushed; they were
31 going into the fire. If you look at our place today you

1 can see the tops of trees all twisted off. They didn't
2 just fall off, these things were twisted. So, we got in
3 the house, we dropped the hoses, which wasn't our
4 intention because part of our plan is always take hoses
5 inside with you because otherwise they'll burn when the
6 firefront is passing and that's exactly what happened.
7 But you had about 15 minutes from the time at which you arrived
8 home until when the firefront hit you?---When the
9 firefront actually struck us, that's correct.
10 And what happened while you were inside the house while the
11 firefront was - - -?---Very noisy. Everyone got on the
12 floor in my office, apart from myself. I decided I'd stay
13 on my knees and look out the window. There's no point in
14 us all being on the floor if the house is catching fire.
15 The smoke - that's the thing that surprises the most, the
16 smoke. Regardless of what Adrienne had done to block the
17 bottom of all the doors with wet towels and all that sort
18 of stuff, the house immediately filled with thick smoke.
19 It was instant and it was choking. The breathing was
20 difficult, and that's why they got down on the floor and
21 we all were using hand towels soaked in water to breathe
22 through. I watched out the window and within that first
23 minute of coming inside, my neighbour's house just - it
24 was like it was picked up. It didn't start with a flame.
25 Ms Sky's house?---Yes, Ms Sky's house. I wouldn't use the word
26 "exploded". You hear that word bandied around. I've seen
27 plenty of explosions. It didn't explode. It was just
28 picked up into a ball of sparks. The barn, when I looked
29 in the other direction, was on fire, but the windows and
30 the house itself was being beaten really hard. The noise
31 was unbelievable. It was like - I've never been in a

1 plague of locusts, but you know when you watch a movie and
2 you see a plague of locusts and they're whacking into
3 everything, that's what it was like. There were big trees
4 crashing everywhere and progressively everything is going
5 up around you. You see the laundry start - it actually
6 didn't explode like Hannah's did because it was an
7 asbestos building with a verandah on it. It caught fire
8 on the edge of the verandah. That was radiant heat off
9 her house, I figured afterwards. It went up. At some
10 stage we decided I should patrol the house as well,
11 because I had a ladder up into the roof space. Then
12 Adrienne's advice was, "Well, don't go on your own,"
13 because you couldn't see a thing in the house. We had
14 torch lamps but it was very dark and very smokey. So we'd
15 do patrols and Matthew kept timing us. That's how I was
16 pretty - I'm pretty adamant on the time it took to pass
17 us, which was about 45 minutes. So that's what we did.
18 Then the smoke became - at one stage I had to go out into
19 it because the verandah started to burn. For the want of
20 those two buckets of water the house would have burned,
21 possibly with us in it, but anyway, I went out. When
22 I went out into that fire storm, it was like someone was
23 placing a huge tube, like a sandblasting tube of embers
24 and heat and just blowing it straight at me. That is how
25 intense it was. He opened the door, I stepped out, took
26 two or three steps, threw the buckets of water on the
27 verandah enough to put it out and got back in. I don't
28 know, it might have taken 15 or 20 seconds and I was all
29 burnt around here. I don't have a lot on the top, but it
30 got a bit burnt too. That was what it was like. Then
31 I touched the glass. It was red hot on the house, and the

1 smoke, my wife and kids were having difficulty breathing.
2 So there is a downstairs in our place because it is built
3 on the slope, so I said, "Let's go downstairs. John's
4 room hasn't been opened yet." This is the bottom corner
5 of the house. "There might be a bit of air in there."
6 There wasn't a lot, but there was enough and we ended up
7 in there on the floor, literally with our noses on the
8 carpet, and thank God it passed, is all I can say.

9 After it passed, you spent several hours fighting the
10 fire?---We did. Yes, about seven hours afterwards. It
11 was just pretty hectic. The house burnt again. Matthew's
12 room, which is downstairs, it started to burn. The
13 weatherboards were going. I literally pulled the - there
14 was a downpipe and I pulled that off. I ripped off the
15 weatherboards; threw water on the carpet; threw water on
16 the floor. The mulch was on fire everywhere. Retaining
17 walls were on fire. The other buildings; I mean, my pump
18 shed had a lot of chemicals in it. I'm a landscaper.
19 I do a lot of concreting. I had piles of formwork down
20 around some of those sheds. Everything was burning. It
21 was still very intense, and ashy and smokey. Anyway, we
22 just kept going because, if we didn't, the house would be
23 gone. But, in the meantime, we had to then change. The
24 whole pumping strategy thing had to change because the
25 pump on the pool was gone. I took up the generator to the
26 DPU and put that on the tank and the pump that was there.
27 We had burnt holes. We managed to make enough to do it
28 two or three metres away from the tap, and we just ran
29 bucket brigade. My youngest daughter just kept filling
30 buckets and we kept running.

31 All five of you did that?---All five of us, yes.

1 By the time it got to about 11.30 it was - - -?---11.30,
2 I think we just collapsed with exhaustion more than
3 anything else. But we could sense that we had won the
4 battle; we had got there. I mean, we were still putting
5 out fires the following Wednesday. But we were safe. We
6 knew we were safe then. That's when I went down to check
7 the vehicles down at the dam. The fire had burnt under
8 Adrienne's cars and around it but hadn't set it on fire.
9 We had enough separation between the vehicles. That is
10 something I learnt out of a job I did at a compost plant,
11 because they self-ignite. A friend of mine in Sydney lost
12 many millions of dollars worth of machinery because the
13 habit was for all the guys to park all the machinery at
14 night. If you get a fire in that situation, just one
15 machine after the next goes. So we kept all the vehicles
16 apart. Then I met Henry Ver Hoven. He had fought the
17 fire next door. He is up on sort of the junction of Old
18 Kinglake Road and the sealed road, which is Steels Creek
19 Road. I think after that we went and checked some of the
20 neighbours' houses. They were gone. Ran into Ivan
21 Filsell, another man who had stayed and defended. Went to
22 a property which was very close. The barn was just
23 starting to catch fire. But myself and Matthew couldn't
24 find a bucket or anything there to put it out. So we
25 pulled some - there were some valuable saddles and - you
26 do silly things. Bags of carrots out of our fridge,
27 thinking about our horses. We checked our horses. They
28 were all right. So we threw stuff like that out into the
29 clear and saddles and ribbons and a generator and pulled
30 out a trailer and stuff like that. You wonder why you do
31 this. It is funny how your mind is thinking. Then you

1 think, "Shit, I should be at home." So we hightailed it
2 back home again. Anyway, that's just part of it.
3 So you did go home?---Yes.
4 You say you continued to put out small fires around the
5 property for three days afterwards?---Yes.
6 Was it just your family on your property dealing with the fires
7 during that period of time?---It was, yes. We didn't see
8 anyone in an official capacity until probably 1 o'clock
9 the next day, and that was police. They were basically on
10 a reconnaissance mission. That morning - it is in a
11 separate statement to this statement - we went up the road
12 and helped the fellow clear the road in and, you know,
13 discovered some of our neighbours hadn't been as lucky as
14 we had been, and directed the police into what was left.
15 That was that end of it. But, yes, we were still putting
16 out fires. The mulch; I'm very keen on mulching because
17 this climate change thing seems to be kicking in and we
18 are not getting enough rain. So mulch is a good thing for
19 keeping moisture in the ground. But it is not a good
20 thing for fires because it is very hard to put out. It
21 keeps going. Three or four days in we were still putting
22 out mulch, and logs would flare up in the creek and stuff
23 like that.
24 At some point you decided to drive your children down to
25 Melbourne?---That was on Sunday afternoon. I made contact
26 with my sister-in-law. She came up as far as she could.
27 She could only get as far as Lilydale airport. Because
28 I had helped the police in their endeavours, and I knew
29 there were roadblocks and if I went out I wouldn't get
30 back in, I got them to give me sort of a letter to say
31 that I was helping them with their endeavours. That

1 allowed me to get out and in again. But I didn't go much
2 further than that until the Monday then to source a tank
3 and try to make the house sort of, for want of a better
4 word, campable, liveable. But we got the kids out on the
5 Sunday and they went away for the week, which was good
6 because it was pretty traumatic for them.

7 After that were you all reunited at your property?---Yes, a
8 week later or so; a week or so later. Myself and my wife
9 stayed with the property because, as I said, these fires
10 in the mulch just kept popping up. If we had left, you
11 could still lose your house. But, coming back to
12 authorities, some CFA guys turned up on the Sunday
13 afternoon. They couldn't do much anyway. It had all been
14 and gone by that stage. It was like the charge of the
15 light brigade, but gone over that way somewhere, so don't
16 worry about it. But they came around and said, "Are you
17 all right?" They mopped around the retainer wall that was
18 still smouldering. I wasn't really interested in what
19 they were doing. They weren't there when you thought you
20 might need them. I'm of an attitude you look after
21 yourself. In a situation like that, whether you want to
22 look after yourself or not, that's the situation you were
23 in and you had to do it.

24 Mr O'Neill, you say finally that you were extremely relieved
25 that you were not forced to evacuate your house?---Yes.
26 Why is that?---Well, put it this way, your house is probably
27 one of the biggest investments you ever make, if not the
28 biggest; not just financially, emotionally. There is a
29 lot goes into your house and your home and what's in it.
30 Say, for example, there was a situation where forced
31 evacuations existed in Victoria and we had been put out on

1 whatever, Saturday morning, or Friday night, I wouldn't
2 have a house, I wouldn't have a home, I wouldn't have all
3 that stuff that was in it. I believe strongly I have a
4 right, as long as I'm not being stupid, to stay there and
5 defend my property. As long as I'm able to do it, I'll do
6 it. I'm not quoting you out of movies, but your home is
7 your castle. There is too much in it. I can't go there
8 to be forced out. A cop came down to me the next day and
9 he said something about, "Maybe you should have been
10 evacuated." I said, "You'd want a bigger gun than that,
11 mate. Simple as that." That is the sort of situations
12 you will find yourself in. I don't care with breaking the
13 law if it comes to looking after my house. I will send
14 them out, I will hide in the bush and I will wait. There
15 are a lot of other guys who would do the same. I think it
16 is important. Education is important, yes. And we were
17 prepared; maybe not 110 per cent, but this experience will
18 make me closer to 100 per cent than what I was the last
19 time. So I think that's important.

20 MS NICHOLS: Thank you, Mr O'Neill. Do the Commissioners have
21 any questions?

22 COMMISSIONER McLEOD: Mr O'Neill, just on the last point, just
23 give us the benefit of your thoughts on what you might do
24 to improve the defendability of your house next
25 time?---I would put a sprinkler system on the house
26 itself; not necessarily on the roof, because it is a tin
27 roof. But conventional wisdom now is that you put it on
28 your eaves pointing towards your house, just little short,
29 all in copper or steel, because if it is on the roof and
30 the wind is blowing it takes the water away so it is
31 useless; whereas these it will blow it against your house.

1 I would do that. My pumping situation in relation to
2 tanks above ground, I'm going to underground tanks now.
3 I'll make sure all my tanks go underground. In the pump
4 house someone had repaired in the steel manifolds with
5 bits of plastic. They burnt out, so therefore that null
6 and voided that whole system. So I would make sure you
7 use non-flammable piping above the ground everywhere.
8 Again, we didn't have native trees right up against the
9 house, but I wouldn't go there. I think our vegetation,
10 the camellias and the pinoaks in particular absorbed a lot
11 of the radiant heat. Our house is not far from Hannah's
12 house, and it is even closer again to her laundry. That
13 stuff didn't go up. It all got shrivelled and dried up
14 and everything else; and it is coming back, some of it.
15 It absorbed the heat, I think. Pretty much that's it.
16 I wouldn't go anywhere. I wouldn't pour concrete for
17 anybody on a day of total fire ban again, and I wouldn't
18 worry about the bar in Healesville. Other than that, that
19 sort of stuff would help; just twigging on your pumps and
20 generators and equipment, you know; just a little bit more
21 equipment.

22 Just one other question. You talked about 17 neighbours.

23 Could you just give us a broad idea of the fate of your
24 neighbours, and particularly in terms of those who may
25 have stayed to defend their properties, how did they
26 fare?---Okay. Out of, say, for example, the 17 people in
27 the road, we and five others stayed to defend. Two lots
28 of the people who stayed and defend didn't make it. They
29 were fatalities. Two of the others and ourselves, that
30 makes three out of five, did survive.

31 Their houses survived?---And their houses survived. There are

1 two houses in the bush past us. One belonged to a guy
2 called Dave Twentyman. I spoke to Dave. He is an
3 electrician. He specifically built this house - it is mud
4 brick, timber and tin roof - specifically to survive in
5 the environment that he is in, which is right in the
6 middle of the bush. The other guy - I can't think of his
7 second name - he lives at the top of Brennan Avenue. He
8 was the iconic photograph in The Age of the house that was
9 built out of hay bales and the double-glazed windows and
10 everything. He survived too. He had built his house also
11 with bushfire in mind; as much as they could with no
12 chinks in their armour or gaps in their house. Then you
13 come to our house and you think, "The bloody thing is a
14 matchbox." It is the old style of building where the
15 rafter comes over the top, there are gaps underneath and
16 there is no bargeboards on one side. But then again it is
17 in a different position too. We are just on the edge of
18 the bush, on a bit of an upslope from the creek. It has
19 been there 100 years. So I can't speak for who was there
20 in 1939 or 1983 or 1962 or whenever, but it survived and
21 it is still surviving to this day. So whether it is
22 topography of where it is sitting or whether that's
23 because it has been people like us with it every time,
24 I don't know.

25 CHAIRMAN: Just to follow on from that, in relation to the two
26 couples who did die, did they appear to have defensible
27 houses? Do you know enough about - - -?---I know enough
28 about one of them. Can I mention their names?

29 Yes?---The Barnetts. The Barnetts were the last property on
30 Old Kinglake Road. They had what I would say in place
31 systems to defend their house, but I don't think they were

1 living in a defensible position. Now, you are more privy
2 to the information than I have, but the police alluded to
3 the fact that their pumps hadn't even been turned on.
4 They possibly got hit by two firefronts, the one that came
5 from the Yarra Glen direction first and then the one that
6 came from Kinglake. They might have been looking the
7 wrong way. I don't know. I can't speak for the dead.
8 But they had in place, yes, steel and glass and tin
9 rooves. The Aherns had Besa block and steel rooves and
10 sprinkler systems on their houses and steel pipe and
11 everything else. But it is pretty hard to say if that's a
12 defensible position. That's what I'm saying here.
13 I think the first thing you have to understand is there is
14 no point deluding yourself saying, "I'm going to stay and
15 defend my property" if your property is in a position that
16 is not defensible. You haven't got that decision to make,
17 whether you stay and defend, if you don't live in a
18 defensible position. So I think you need to live in a
19 defensible position. Then go to stage 2. "Am I staying
20 or am I going," and prepare accordingly. But, just coming
21 back to forced evacuations, I feel that if a policy of
22 forced evacuations arose in Victoria I think it would make
23 the population more complacent. They would work on the
24 basis that, "Well, let's not worry about it too much.
25 We're not going to be here anyway. We'll be evacuated.
26 We'll be gone." Evacuations wouldn't have applied in this
27 situation. This fire came without any warning, so there
28 wasn't ever going to be any evacuations. If anything did
29 happen, they were all late. Late evacuations are not
30 where you are supposed to be. So, you know, for want of a
31 better word, creating a nanny state where you do

1 everything for them and you make it all easy saying,
2 "Look, don't worry; you will get your house back. The
3 insurance will cover that. We will get you out of there
4 on time," that makes it more complacent, I think; rather
5 than saying, "Wait a minute; you live in the bush. Coming
6 with that comes responsibility. You've got to be
7 responsible for where you live and responsible for your
8 actions. You can't expect the government or the fire
9 brigade or the police or someone to come and rescue you
10 every time." That's what I believe.

11 You have mentioned the experience was an unpleasant one for
12 your children. Would it have been a factor affecting your
13 decision as to whether you prepared and went or prepared
14 and stayed and fought if the children were significantly
15 younger?---Oh, yes, if we had babies or 3 and 4 and
16 5-year-olds even up to 8 or 9 or 10. It depends. Bush
17 kids are different too, you know.

18 You regard your children as bush kids?---I'm not referring to
19 mine as bush kids, but kids who live in the country are a
20 bit more resilient, I think. They live in that
21 environment. They kick around in the paddocks. They can
22 drive when they are 10 or 11, in the paddock. They are
23 more resilient kids. So maybe a 10-year-old in the bush -
24 I could drive a tractor when I was 10. My boys were
25 driving a column shift around the previous property when
26 they were 10 and 11. They can do stuff. But, coming back
27 to your question, if I had babies in the house, no,
28 I wouldn't. I would probably still stay to defend.

29 Because you had to?---Because of what I said earlier about your
30 home is your home. There is a lot in it. Not just the
31 money you have spent on buying the place. The hours of

1 work you put. These properties out in the bush or out
2 where we are in the country, they are not on an 800-square
3 metre block where you can get the gardener in and he whips
4 around for two hours every week and it is all nice and
5 pris. We have to work on these places all the time. It
6 is constant. So you are always looking after your
7 property. So therefore you have a lot of emotion involved
8 in it. So that's one of the reasons why I would stay.
9 But if I had young kids, yes, I would expect that my wife
10 would go with those kids, and go early. I wouldn't be
11 waiting to see the smoke coming over the hill. But, like,
12 we do prepare also. We send our photographs down to the
13 city every year. My wife sends her jewellery down to the
14 city every year to her sister. So there is all that going
15 on in the background.

16 COMMISSIONER PASCOE: This is actually a follow-up question in
17 relation to the response of your children, given that they
18 are teenagers. Do you think that they feel the same as
19 you about staying and defending, and do you think that
20 they have had an emotional impact from their experience of
21 the fires?---Definitely had an emotional impact, yes. My
22 son John said to me he wouldn't stay again. Then again,
23 it is pretty raw at the moment. I don't know. I think if
24 it doesn't kill you it makes you stronger. My youngest
25 daughter is 14. I think she was pretty frightened when it
26 was all going on. I had to reassure her a lot. We were
27 in a cupboard at one stage and we were running out of
28 oxygen. At this stage you can't say - and I didn't think
29 at any stage, but she says, "We should have left. We are
30 going to die," you just spend time reassuring her. "We
31 are not going to die. I'm going to make sure you are not

1 going to die. We are going to see this out. It is nearly
2 gone. We are nearly there." That's how it turned out.
3 They didn't turn to jelly, these kids. I'm not a
4 psychologist. I'm not trained. I wouldn't know how to
5 read it. But you know your kids. It has affected them,
6 and we will take them to Ireland next week and they can
7 forget about it. But, yes, correct. It affects
8 everybody, though; not just the children.

9 MS NICHOLS: Thank you, Mr O'Neill.

10 CHAIRMAN: Thank you very much, Mr O'Neill. We appreciate you
11 giving evidence.

12 MS NICHOLS: May Mr O'Neill be excused?

13 CHAIRMAN: Yes, indeed.

14 <(THE WITNESS WITHDREW).

15 MR RUSH: I call Colleen Keating.

16 <COLLEEN MARY KEATING, sworn and examined:

17 CHAIRMAN: Take a seat, Ms Keating. If you bring yourself
18 further forward, the less you need to worry about
19 the microphones. It depends how soft your voice is, but
20 otherwise if we have any problems we will let you know .
21 But listen to Mr Rush and answer his questions.

22 MR RUSH: Ms Keating, is your full name Colleen Mary

23 Keating?---That's correct.

24 You reside in North Warrandyte?---I do.

25 Have you been a volunteer with the CFA for approximately
26 30 years?---I have.

27 Has that included firefighting qualifications and
28 activity?---It has.

29 Are you also from time to time a volunteer at the Kangaroo
30 Ground incident control centre?---I am.

31 Over the last four years have you obtained a qualification as a

1 fire tower operator?---I have.

2 In addition to that, you hold a qualification as a

3 teacher?---I do, yes.

4 Ms Keating, this year on 7 February were you on duty in the

5 Kangaroo Ground fire tower?---Yes, I was.

6 Do you recall what time you started on that day?---Yes,

7 I started at 9 o'clock and technically I would have

8 knocked off when Gavin came up around 2. But we decided

9 we needed two people that day, so I stayed.

10 So when you talk about Gavin, that's Gavin McCormack?---Yes.

11 For that particular day Neil Marshall suggested that,

12 because it was going to be such a hard, long hot day, that

13 we would probably do a swing shift each and one would come

14 up and one would go down. But when Gavin arrived it was

15 just very apparent that we were going to need two people.

16 So I stayed.

17 How long did you stay for?---Until 9.30 that night.

18 Just in relation to the time at which there are fire tower

19 operators at Kangaroo Ground, is that days of total fire

20 ban?---And also now red alert days, which are FDI of 35 or

21 over, then we work.

22 In relation to the siting or the, if you like, view from

23 the Kangaroo Ground tower, what are you looking at? What's

24 it like?---We have a pretty good view in a 360-degree, all

25 the way around. We are sitting up on Pretty Hill, which

26 is reasonably high. We can see out the west to the You

27 Yangs. We can see on a good day the bay. We can see all

28 the way down to the bottom of the Dandenongs. I can see

29 across up to where Marysville would be. To the north of

30 course we have got the Kinglake Ranges, which sit right to

31 the north of us.

1 Can you just explain to us what your duties involve on the
2 spotting of a fire or the sort of information that may
3 come through to a fire tower operator? Who is it
4 communicated to?---First of all, we would look at the
5 bearing and look down the string, work out exactly what
6 the bearing was, call another tower 1 or 2, Pretty Sally
7 and/or Mount St Leonard, try to get the three, triangulate
8 the exact spot, put it onto the map, work out where it
9 was, ring Vic Fire and say, "This is where it is, this
10 intersection and this intersection." They want
11 intersections, so we have to give them that. Basically it
12 gets called in. If the ICC isn't manned during the day,
13 we would ring the duty officer and region 13 to alert them
14 of what's going on. If the ICC was manned, not
15 necessarily activated but if it was manned, we could
16 either call them or they would hear us on the radio for
17 Vic Fire and say, "Okay, what's going on?"

18 You mentioned region 13. I didn't ask you: is this tower a CFA
19 tower?---Yes, this is one of the very few CFA towers
20 that's left in the state now, and region 13 fund it.

21 Just to get an idea of region 13, you mention it in your
22 statement, but it is Kinglake through to Rowville?---Yes,
23 goes all the way down. It goes as far as Christmas Hills
24 width wise and then it goes across towards Research,
25 Wattle Glen. Once you get to Diamond Creek you have got
26 into region 14. So it is very long north to south, but
27 it's not so wide east to west.

28 Do you use a radio in the tower?---Yes, we have a base radio
29 which sits on channel 55, and we have a scanner which
30 scans up to 10 channels, plus the aircraft and stuff is on
31 that. So we just type in which channels we want to scan

1 and set it. Then also we have a portable handheld radio
2 which stays on 54, because that's the Vic Fire channel
3 that we deal with and we need to hear what's going on in
4 Vic Fire. So we have that. Plus we have got a telephone
5 as well. So we can either ring Vic Fire on a special
6 number if we want to keep stuff hush-hush or we can just
7 put it out on the radio so that all the fire brigades
8 know; start getting in their trucks warmed up ready to go.
9 In relation to region 13, does it have its own specific
10 channel?---Yes, it is 55.
11 So 54 is for Vic Fire?---Yes.
12 And what about region 14?---Its Vic Fire channel is 61. The
13 region itself, I can't - it is 58 maybe. I'm not sure.
14 So when you go out on the channel for region 13 who do you
15 communicate with, if you are using that channel?---If
16 I use 55? It depends who is on 55. The fire captains,
17 when they go to a fire, can choose to work off a different
18 channel. Sometimes they will work off 55. Sometimes they
19 will work off 57, 58. They just choose a channel which
20 works for them in the field. So Kinglake and Kinglake
21 West don't have the same radio coverage. They have to
22 choose different channels quite often to be able to
23 communicate on the radio.
24 So is that channel 61 that they - - -?---No. Oh, Kinglake West
25 tend to talk a lot on 61 Vic Fire. They are in a really
26 dodgy spot for communications.
27 Does that mean that the channel that you might use may not
28 necessarily get through to them?---Definitely may not get
29 through to them, no.
30 On this day did you keep a log?---Yes. I attempted to keep a
31 log. Up to a certain point the log was very accurate, and

1 then after that point the times were a little bit
2 skew-whiff.
3 I should ask you this. There is a statement that I think in
4 fact is taken by Victoria Police, and attached to the
5 statement is the log that you kept on the day together
6 with some notes of yours and finally a map of the general
7 area?---That's correct, yes.

8 Is the statement and the contents of the statement - we will
9 come to the log in due course - true and correct?---It is.

10 MR RUSH: I tender the statement, Commissioners.

11 CHAIRMAN: Can I just clarify, that should be exhibit 98, with
12 exhibit 97 being the one of O'Neill.

13 #EXHIBIT 98 - Witness statement of Colleen Mary Keating.

14 MR RUSH: Could you firstly turn to the log, please,
15 Ms Keating. I think that's at 002. At the top of the
16 page, if we could move down the page, there are entries
17 there for 5 February and 6 February?---That's correct.

18 That's your duty from the previous days. If we can go to the
19 bottom of the page to 7 February, it has the first entry
20 at 0800?---That's a 9, sorry. 0900.

21 Thank you. What did you do at 0900?---Before 0900 I went to
22 the ICC to get the key for the tower. There was someone
23 there. I don't remember who. The guys have to come up
24 and help me open up now because it is deemed unsafe,
25 because I'm so short, that I could fall off the balcony
26 standing on the stool. So they usually come because they
27 are taller and put the shutters up for me and put the wind
28 anemometer up now because they were a bit worried about me
29 standing on the stool and balancing up there.

30 COMMISSIONER McLEOD: Fair enough too.

31 WITNESS: So I think I went up, and someone followed and helped

1 me open up for the day. So the shutters get opened and
2 the wind machine gets put out and the radios get turned
3 on. That's when you put out your - you ring the pager
4 people, the 1800 pagers, to put out a page for the weather
5 and say you are on watch. You can see I have put out Vic
6 Fire at 54 and 61 to say that I'm on watch. So that tells
7 people that we are up and running and we are watching.

8 MR RUSH: There is an entry there at 1030. What did you do at
9 1030? That's the Mount Blackwood tower. Where is
10 that?---That's just over to the west near Ballarat.
11 What was the purpose of that entry?---It was getting windy at
12 the tower. The wind started to gust up. So I thought
13 just to check with what the weather was doing in his
14 tower. He said he had wind gusting to 70. There was also
15 a bit of smoke, what I thought was smoke in Daylesford.
16 But he said, no, it was only dust. So I was just checking
17 with him as to what happened, what was happening. I also
18 asked him to track down Mount Franklin's phone number in
19 case I could ring them during the day to access any wind
20 change.

21 At 1135 you put out a warning, did you not?---Yes. At 1135 put
22 out the warning about the large dust storm coming from
23 the west - that would refer back to the dust from
24 Daylesford - to say that it was imminent and put out a
25 weather warning, because often people get a bit scared if
26 they see something like that, they think it is smoke and
27 you start getting calls.

28 Who did that warning go to?---That just went to the lower Yarra
29 group brigade members. So all the people in that group
30 would all get a page saying that there was this dust
31 storm. So if they started getting Vic Fire calls, instead

1 of running 100 miles an hour to the fire, they might go a
2 bit slower.

3 At 1208 you made your first entry I think concerning the fire
4 at Kilmore?---That's correct. Talked to Mount St Leonards
5 and took a bearing of the fire. Mine was 336. Then got
6 on to Pretty Sally. His was 24 to 26. Spoke to Mount St
7 Leonards about it and Pretty Sally I think as well.
8 Apparently it started in Sunday Creek Road, around about
9 there. The information given was that it was going
10 towards the blue gum pine plantation and it was definitely
11 building fast.

12 And that information was relayed to Jason Lawrence at the
13 Kangaroo Ground ICC?---That's correct, because we asked
14 Jason for his mobile number so we could directly
15 communicate with him.

16 He was the person in charge at Kangaroo Ground?---Yes, he was
17 down at Kangaroo Ground on duty that day.

18 Then you have a further entry under 1209 concerning Mount St
19 Leonard and the Bunyip fire?---Yes. Now the time isn't
20 logged, you can see. It is just some time after that,
21 spoke to Mount St Leonards, rang up for a chat. Bunyip
22 fire had taken off and he said he heard it was spotting
23 into Gembrook, which was pretty scary, and also we had the
24 Kilmore fire heading in a south-easterly direction. We
25 both thought it was going towards Pretty Sally, but we
26 later found out it wasn't. But it did look pretty scary.

27 You have put another entry I think at 1 o'clock in relation to
28 the Kilmore fire?---Yes. I put out a warning on the
29 pager, because we can put out information on the pagers
30 whenever we like to do with weather and smoke and stuff.
31 So it was a weather report at 1 o'clock which I normally

1 do, but would have done it anyway because we had the smell
2 of smoke in the area, and it was coming from the Kilmore
3 fires. I did a report too with the wind, temperature and
4 the fact that the visibility in that aspect was poor
5 across that way. The smoke was added because, again,
6 people smell smoke and they ring up 000. So, you know,
7 just to warn people in group, "Just get ready; you might
8 get a few calls."

9 I will come back to a couple of entries, but over the course of
10 the afternoon were you able to observe the smoke plume of
11 the Kilmore fire?---Yes, it was very unusual.

12 In what way?---It built very fast. It was very wide at the
13 bottom. Smoke drifted very quickly right across the Mount
14 Disappointment range from almost as soon as it started.
15 The whole Disappointment mountain had just disappeared.
16 We couldn't see it. It was very thick and very big. Then
17 as it went up into the sky very high it became very thin,
18 almost like a tornado. It was really, really, really thin
19 and it bent over. It was quite high. It was a really,
20 really unusual smoke formation.

21 Were you able to make any observations later in the day of the
22 fire at Mount Disappointment?---The fire that went through
23 Disappointment?

24 Yes?---We couldn't see Mount Disappointment for the smoke; we
25 couldn't at all.

26 Did that smoke go into that area at an early time of the
27 day?---Yes, look, it was basically - by the time Gavin
28 came up, there was no Mount Disappointment to see. Very
29 quickly smoke drifted into there like caught in a bowl or
30 something. It just sat there. So that was quite
31 disturbing. So I have put down here visibility poor at

1 1300 hours because it was poor.

2 If I can take you to your entries at 1325, the two entries
3 below that, between 1325 and 1412. What have you written
4 there?---A call has come from Peter Cumming, who was
5 I think duty officer, asking was there smoke around the
6 Arthurs Creek area. Basically there wasn't. So we
7 replied to Jason Lawrence that there wasn't. That's
8 written in. My trainee, Julie, has written all that in.
9 She was up there at that stage too. So, yes, we had that
10 question and we could see above Arthurs Creek. We can't
11 see down into Arthurs Creek. We can see the ridge above
12 Arthurs Creek and, like, couldn't see any smoke above
13 there.

14 What's the entry at I think it is 1345 in relation to
15 temperature and humidity?---Julie has noted down the
16 temperature was 47 and the humidity, RH, was 7, which is
17 very low. I can't remember. I would say that's reported
18 down to group or something like that, because Julie has
19 written that one in.

20 Then at 1412 were you given information from the Pretty Sally
21 tower?---Yes. I talked to Peter Coleman in Pretty Sally
22 tower. He had lots of information which I thought he had
23 got from the Broadford boys, the DSE at Broadford, because
24 Peter used to work in their office and do their mapping
25 and stuff. So I figured that's where he got the
26 information; I don't know. But he said that the fire had
27 crossed the freeway. He was sitting behind all this and he
28 couldn't see anything for smoke. So Peter has all this
29 smokescreen in front of him. This is what he told me.
30 The Kilmore fire had crossed the Hume Freeway north-east
31 of Wandong and was heading towards Mount Disappointment

1 and Kinglake West.

2 So, with that information received of where the fire was
3 heading, did you report that?---Yes. So Jason had asked
4 early in the day, he said, "As soon as it" - because the
5 idea was they were going to try to stop it before it got
6 to the freeway and, if they didn't, then he wanted to know
7 as soon as it crossed the freeway. So that's when
8 I telephoned. I think in my log I said I passed the
9 information on to someone to give him. I'm not sure if
10 I got on to him or someone passed it on, but it was - that
11 passed on.

12 You put Jason Lawrence ICC at 1412 with the entry underneath
13 the previous one?---Yes.

14 The previous entry at 1412 "heading towards Mount
15 Disappointment", "KL West" is Kinglake West, is it?---Yes.
16 I can't tell you 100 per cent whether the prediction was
17 passed on to Jason because that part was filled in later,
18 those two lines in the lighter pen. That was told to me
19 by Peter. I don't know as I told Jason that; he just
20 wanted to know when it got over the freeway. The reason
21 I wouldn't tell him all the gossip is because I figured he
22 could call them and get better information. This is just
23 something coming from another tower.

24 Can I just understand: after that entry was made at 1412 with
25 the freeway and where the fire was heading, was that
26 communicated to the Kangaroo Ground ICC?---Yes, that it
27 jumped the freeway, yes, that went down there. Definitely
28 that part of crossing the freeway went to the ICC.

29 Then at 1430 Peter Cumming is, you think, the duty officer at
30 the Kangaroo Ground?---I think he was, yes.

31 And he made a request as to whether there was any smoke showing

1 whereabouts?---Above Arthurs Creek.

2 Was there any at that stage?---No.

3 Then at 1436 were you informed of something relating to the

4 Strath tower?---Yes. So it was for Jason, so that would

5 be a message, that Strath tower was being evacuated and

6 also Wandong North. So that information, I think Paul

7 Jones from Mount St Leonards told me that. So I haven't

8 written all the telephone calls in. So that information

9 I think came from Paul Jones. He has rung me up and was

10 going, "Guess what; Tim at Strath tower is being

11 evacuated." That was fairly an important piece of

12 information because Strath tower sits to the north-west of

13 Flowerdale. It sits up high and looks into the Wallaby

14 Creek catchment area.

15 We may be able to show where Strath tower is on a map?---You

16 probably need to come out more again.

17 MR RUSH: If you go to the upper left.

18 CHAIRMAN: Including the turnover bit?

19 WITNESS: So we have Broadford, Mount Disappointment.

20 CHAIRMAN: The map needs to be moved up.

21 WITNESS: So if you find Flowerdale. Here is Flowerdale in the

22 middle. Strath tower sits - - -

23 CHAIRMAN: Can I trouble you, Ms Keating, to go over there and

24 they will give you a pen. We can just point to where it

25 is on that map and then you can give directions from

26 there.

27 MR RUSH: Perhaps if you point to Flowerdale?---We have

28 Flowerdale here.

29 So you were pointing to the Strath tower?---No, here is Strath

30 Creek. It is up in this area here. Here is Strath Road.

31 So it is along here somewhere. It is not in Mount

1 Robertson. It is across here. It is up in this area
2 here. That's all I can tell you because it hasn't got it
3 marked. It is not marked.

4 CHAIRMAN: Mr Rush, can I just pass that over to you.

5 MR RUSH: Thank you, sir.

6 WITNESS: It takes him 30 minutes to drive down into Flowerdale
7 from his tower. I know that.

8 COMMISSIONER McLEOD: Put that one on the screen.

9 CHAIRMAN: If we can focus more closely.

10 WITNESS: There it is. So it is in the Kinglake National Park,
11 but he sits very high up, halfway along that mountain and,
12 like I say, it takes him 30, 40 minutes to drive down. So
13 he had to be evacuated quite early, because he was in a
14 pretty vulnerable position there.

15 MR RUSH: Thank you. So that information was passed on to you
16 by another tower operator?---By Paul at Mount St Leonards,
17 yes. That just gave us an idea of the power of this fire.
18 I mean, it's quite, you know, a fair way away from Wandong
19 and stuff. Considering what happened to us later in the
20 day, it is quite amazing, really.

21 Then if we can just go over the page to 004 of the log, you
22 have made an entry where you update the wind and I think
23 you have indicated it is gusting between 60 and 70
24 kilometres per hour at that time at Kangaroo
25 Ground?---That's correct, and it is 43 degrees Celsius,
26 still smoke in the area.
27 Then there are a couple of entries after that, one including a
28 smoke sighting on the Old Kinglake Road?---Yes. Adrian
29 Birch asked us to check if there was any smoke coming from
30 the Old Kinglake Road around the Mount Everard area, and
31 we all definitely said "no".

1 You had a communication with the police asking you to inform
2 them of spotting; is that the next entry?---Yes. At 3.15
3 in the afternoon we had a police officer come up the tower
4 saying that the fire was spotting into Upper Plenty, had
5 spotted south of Wallan and Whittlesea Road and that we
6 were to look for embers in our area. So we were quite
7 surprised that he had told us that because, although
8 Disappointment was covered in smoke - I think I have drawn
9 you the three spurs that come down between Sugar Loaf and
10 Mount Disappointment that we look out onto. None of those
11 were covered in smoke. So we were starting to feel a
12 little bit toey.

13 Had you seen any spot fires or anything to indicate spotting at
14 the time that Constable Brick came up to the tower?---Yes,
15 we did see in the middle of the afternoon, about 3, we
16 noticed a spot fire from the Wandong fire in I think
17 I have said around Lobb Hill, Upper Plenty, probably more
18 Humevale. It was a very small, lot of smoke just above a
19 ridge west of Arthurs Creek. So we couldn't get an actual
20 bearing on it, and none of the other towers could see it,
21 because we phoned them.

22 I think you might refer to it, but is that a spot fire that was
23 attended by CFA?---Yes.

24 It fluctuated during the course of the next hour or so?---Yes,
25 and it would only puff occasionally. It looked to be
26 quite benign, to be honest. If the main fire originated
27 from that, I would be very surprised.

28 Then you were asked to look, were you, at Mount Everard to see
29 if there was anything showing there?---Yes, that's
30 correct. So what happened was there was someone on
31 channel 55 on the radio, a brigade or someone, looking for

1 this smoke sighting. So we were able to say to them they
2 couldn't find it and we couldn't see it, because they were
3 hunting around for it.

4 Then between approximately 1515 and 1600 was there anything of
5 significance that you saw over that period of time?---No,
6 nothing.

7 But did things change a bit after 1600?---At 1600 they
8 certainly did because our trainee, Julie, got a call from
9 her son, who got a call from his friend who lived in
10 Smiths Gully which, if you go north to south, it goes
11 St Andrews, Smith Gully, Panton Hill, Kangaroo Ground.
12 She was saying she had embers, and not little ones, big
13 ones, in her house. So we could phone that information
14 down - I think I have written "Safina", but "Serafina" I
15 think it should be - phoned that down to her because - - -

16 She is at Kangaroo Ground?---Yes, in the ICC, because there was
17 the connection between what the policeman had asked us to
18 look for. We couldn't see this; we just heard about it.
19 To have embers just suddenly appear in Smiths Gully or,
20 you know, Panton Hill if you want, that's very scary; I
21 mean, out of nowhere.

22 So did you see anything around this time or make any
23 observations? You couldn't see that, but anything else
24 between 1600 and 1630?---No. I don't know whereabouts it
25 is in my log, but we did have burning leaves, burnt
26 leaves.

27 Was that at Kangaroo Ground?---We had on our tower, yeah, I'm
28 trying to find where it was. Gavin noticed burnt leaves
29 falling. I will have to find where that was.

30 1430, we think?---Burnt leaves, 1430. Yes. That was very
31 significant. 1413, Gavin McCormack - actually, I saw what

1 I thought were birds playing in the sky, and I'm going,
2 "Look, at that." He said to me, "My god, they're black.
3 It's leaves." They actually fell black onto the tower.
4 So as early as, say, 2.13 in the afternoon the fire was
5 spitting out - if you go back, in hindsight, the warnings
6 were coming up during the day. The warnings were there,
7 in hindsight. Well, it was a warning anyway.

8 Ms Keating, going back to 1605, did you make an entry
9 concerning Hildebrand Road at St Andrews?---Yes. We heard
10 on the radio, on our Vic Fire - so that's why I have put
11 "in" because we heard it, we didn't call it - the fire
12 call for Hildebrand Road and Hewitts Road, St Andrews.

13 Were you able after hearing that call to make an observation of
14 that area?---Yes. Basically Hildebrand Road and Hewitts
15 Road sits up nice and fairly high, because a lot of that
16 area in St Andrews and Strathewen sits quite low, and we
17 have Panton Hill in the way. But we were able to see what
18 looked like a ball of smoke emanating up out of that area,
19 because we look over hills and gullies into that. So it
20 was basically, as soon as the call went up, it was there.
21 It was very, very quick. It wasn't just a little bit of
22 smoke which you normally would see. It was like a big
23 ball of smoke instantly there.

24 Then were you able to see the fire or was it basically the
25 smoke that you saw?---We saw balls of smoke rolling, like,
26 over the hills. So we saw a ball of smoke there, and then
27 very quickly the wind appeared to take the smoke fairly
28 low to the ground. So it was quite white smoke low to the
29 ground. Then it became grey but it didn't cover the top
30 of the mountain. It kind of rolled east. So the white
31 smoke rolled. Then what would have been Mittons Bridge,

1 by the time that was going up, that was starting to blend
2 in with Hildebrand. So it was kind of like rolling balls.
3 The smoke which we couldn't see in the balls was actually
4 pushed forward, like, if it was a monsoon drain. If you
5 visualise that area in there sits behind the big range,
6 and it has got hills to the south of it. So if you
7 visualise it like a big drain. Up over the drain edge was
8 coming these balls of smoke. In an east direction, from
9 west to east, the smoke was being pushed really fast right
10 across that whole bottom of the Kinglake range, right
11 across St Andrews. So, like, the smoke was going ahead of
12 what was happening. So it was really hard to see.

13 You make the comment in your statement that you couldn't see,
14 as I understand it, the connection between what you were
15 observing and the Kilmore fire?---Yes, I believed it was
16 connected, but you couldn't visually see it coming. So it
17 was as if the fire jumped from Upper Plenty, as if it just
18 up and jumped across the three ridges and landed on the
19 eastern side of Sugar Loaf. All these embers were with
20 great force blown out and just landed like spot, spot,
21 spot in an easterly direction. That's all I can say. We
22 didn't see it coming. There was not a visual connection;
23 definitely a mental one, but not visual.

24 If I can just get an understanding of that. You only saw
25 smoke, but couldn't see fire; is that right?---We didn't
26 see flames for quite a while.

27 The areas that are associated or potentially associated with
28 smoke, such as Strathewen or those areas, are you able to
29 get a view of those areas from your tower?---We couldn't
30 see smoke emulating from Strathewen. We can't see down
31 into the town of Strathewen. It's quite low. It sits at

1 the bottom of the mountain behind other hills, like
2 Hildebrand and that. We had absolutely no idea. There
3 was no smoke puffing up, and there were three sets of
4 eyes. It was as if the fire was very low, pushed low,
5 like the smoke, because normally smoke will puff up.

6 Is the view into that area affected by Panton Hill, is
7 it?---Yes, Panton Hill and other hills, yes. Definitely
8 not a flat view. Lots of valleys and hills and stuff.
9 Like I say, we know where Strathewen is, I know where it
10 is, but the visuals on Strathewen, the only time we could
11 see what was happening in Strathewen was when the flames
12 turned and went up when the wind changed, and then it was
13 very, very visual. But up until then, Strathewen, nothing
14 was showing from that area, which we were surprised, but,
15 look, obviously the wind was so forceful it just pushed it
16 down.

17 If we can just briefly look, there are a number of entries you
18 have made here at 1746. They relate to spot fires, do
19 they?---The ones at 1746, they relate to the main - what
20 happened was the main fire landed in St Andrews and it
21 just raced around the base of the mountain, if you like.
22 The head of it raced around and went through Steels Creek
23 and back of Christmas Hills quite quickly. Because you
24 can see 1730, smoke from Skyline, Christmas Hills
25 vicinity, Glenview Road, that's as far as it had reached.
26 So I radioed that into Vic Fire, that it had reached
27 there. So it raced around the bottom of the mountain, the
28 head of it, raced around through St Andrews, around
29 through Steels Creek; some of it dropped down into parts
30 of Yarra Glen. At the same time the flank of the fire was
31 coming south towards us. At 1746 or just before that it

1 started to spot really quickly and incredibly fast and it
2 would just go spot, spot, spot.

3 And the entries there, 1, 2 and following down to 9, are
4 entries in relation to spotting of the fire?---Yes. So it
5 started spotting at bearing 12, which is Mittons and
6 Jacksons, and it went spot. Then it jump to around Bowden
7 Spur, and it went spot. We got good visuals on this
8 because it was obviously spotting closer towards us and it
9 was higher up on the ridges, so we could see it.

10 There's spotting there. Bowden Spur?---Bald Spur, Kinglake,
11 the back of Mount Jerusalem, the Mount Everard Road, Rifle
12 Range Road, behind One Tree Hill and Skyline area, which
13 is Buttermans Track Skyline area, not Skyline going -
14 Skyline is really long. That part of it, behind
15 Buttermans. Where it says 60 to 65, that's a whole area
16 that was just full-on smoke, something is happening in
17 there and it is not just a little spot; it is like, you
18 know, a couple of ks. It was wide. So there was
19 something, and that was probably the head of the fire.
20 I don't know. So all these spots were happening. So
21 spotting, probably - I think I describe how far it spots.

22 COMMISSIONER McLEOD: Mr Rush, can I just ask a point of
23 clarification. You mentioned around about 2 o'clock when
24 you were observing the smoke coming out of Kilmore East
25 that the fire was about 3,000 feet in the air?---The
26 smoke.

27 The smoke, yes?---Yes.

28 That was a kind of smoke column, was it?---That's the one I was
29 telling before where the base was very wide. Then by the
30 time you got up to the smoke column it went up to about
31 3,000 feet, but then it bent over our tower and went kind

1 of flattened the sky up and over and was very thin.
2 By this time, by 4 o'clock, it had sort of disappeared?---No.
3 It was still - - -?---It was still there.
4 It was still there?---Yes. Because Gavin kept saying, "Go out
5 and have a look," and we would be putting our heads upside
6 down. I think I said it was headed in a - - -
7 I suppose it is fairly hard to see how high it was if it was
8 immediately above your head?---It was above our heads, so
9 we could be wrong. But it went way up, up, up, and then
10 over the top. So whether it was still in the inversion
11 layer or not, I don't know.
12 You mentioned it was leaning?---It was leaning up and over
13 backwards, yes. It went up and over us.
14 In what direction of the compass? If it was leaning, it was
15 leaning in what - - -?---It was going from north-west to
16 south-east direction above us. So the smoke was going
17 that way.
18 It was sort of tending towards the east, was it?---Yes, which
19 would be confusing to people looking for the fire to come.
20 It was weird. Definitely the weirdest thing I have ever
21 seen.
22 COMMISSIONER McLEOD: Which I think, Mr Rush, is similar to
23 some of the evidence from Dr Tolhurst.
24 MR RUSH: Yes, sir.
25 So you made entries concerning that spotting, Ms Keating, and
26 they continued on over the page where you have the entry
27 Sugar Loaf and is it Jacksons Road?---Jack Creek Road due
28 west of Kinglake West. Yes. Obviously that went up.
29 Then haven't put the time at the bottom of Mount
30 Jerusalem, bearing 36, heading south-west.
31 The times on this page, the next time is 1824. Are those times

1 correct?---No. No, what happened was we quickly mapped
2 the spotting of - we called the spotting of the fire, all
3 those ones I read before on 3, we called them through to
4 group so they could map them because they were going to
5 join up to a second front, which they did very quickly.
6 Then we just kept ringing out everything as it kept
7 exploding. So we did the whole page - everything that
8 happened on that page happened within five or 10 minutes
9 of the spotting on the other page - just from guesswork.
10 After the wind changed, because it was very rushed in
11 between there, that was like five or 10 minutes that whole
12 page, we realised we didn't write down anything on the
13 page in the way of time. So we thought, "What time was
14 the wind change? Maybe it was 1842," which is at the
15 bottom there. We weren't sure. We wrote that. We
16 thought, "It doesn't matter because ICC will have it
17 because we have been phoning them." Then we went
18 backwards and thought what other times the others were,
19 but they are not right.

20 If we start from the bottom of the page where you have 1842 for
21 the wind change, which is quarter to 7 or
22 thereabouts?---That's not right.

23 What is right?---The wind change would have come after 5.45 in
24 the afternoon. It would have come between 5.45 and, say,
25 5.55.

26 What did you do when the wind changed at the Kangaroo Ground
27 tower?---Just before the wind changed we could hear people
28 in the fire ground on 55 still in there. We could hear
29 them. We could hear Vic Fire sending people to persons
30 trapped in houses and it was really frantic on that
31 channel, and we could hear it. Then the wind hit the

1 tower. So that's when I screamed out, "Warning, red
2 flag." So Julie threw me the mouthpiece. Seeing it
3 wasn't my shift, I said to Gavin, "Do you want to do it?"
4 He said, "No, I will do it." So he sent out. So we all
5 did it together, sent out a warning to the fire ground to
6 alert only so that they would listen, because that is
7 something that the firemen will listen to. We didn't
8 think they had more than five minutes.

9 So the wind hit. What was the speed of the wind that hit the
10 Kangaroo Ground tower?---I think I wrote in my
11 notes - have I written it in - that the wind hit the
12 tower; it was above 90. But it was so strong that
13 everything blew around in the tower and the whole thing
14 shook. So it was over 90, and the whole tower just shook
15 like crazy.

16 So what was your concern when the wind changed at the tower?
17 Were you expecting it then and what was your concern to
18 get on the channel or to organise at the tower to get on
19 the channel for a red flag warning?---We hadn't heard any
20 indication of a wind change and we didn't think anyone
21 else had either, because quite often you can get the wind
22 just come through and you can be caught unexpected. It
23 has happened before where we have had lightning around the
24 tower that's come through under the radar and group have
25 rung up and said, "Sorry, we didn't know." So it was just
26 instant, "Oh, my God, get it out," because we could hear
27 them and you just had to do it.

28 The intention behind the red flag warning, from your
29 perspective?---The intention is that they would hear it
30 and that they would be able to get themselves out of
31 trouble.

1 Had you heard on the channel or on Vic Fire or by any other
2 means up to that stage any red flag warning to your
3 region?---No, we hadn't heard anything on the 55 or the
4 54. So, if anything was on the other channels - our
5 scanner had kicked the bucket by that time in the
6 afternoon; it just died - we wouldn't pick up if there was
7 or there wasn't on any other channels. But we didn't hear
8 anything on 55 or 54. But, like I say, we had the little
9 scanner, the little portable one, and we had been having a
10 lot of trouble with it. It kicked the bucket in the
11 afternoon. Some time in the afternoon it just died.

12 You say in your statement that you were upset, extremely upset,
13 about the red flag or you having to put out the red flag
14 warning?---Yes, I felt like, "Well, what are these people
15 doing in the fire ground when the wind is coming? How come
16 they are here? What's going on?" All afternoon we hadn't
17 been given any information . We didn't get a page to say
18 there was a weather warning - weather coming early. We
19 didn't get a phone call. Quite often we get a phone call
20 from group or somewhere like, you know, "This is what's
21 going to happen." Nothing had happened. It normally
22 happens. Next thing, bang, here is this wind. It was
23 obviously early, and there's all these people going into
24 the fire from Vic Fire, or appeared to be. I could hear
25 people I know in the fire ground and I'm thinking, "Oh my
26 God."

27 Was your husband on the North Warrandyte tanker?---He was. He
28 rang me in the afternoon, probably between 5 and 6.
29 I think he rang and said they were going to persons
30 trapped. I remember looking at the flames and I said to
31 Gavin, "They're not going into there." He was going, "No,

1 they won't let them go in there. Don't worry about that."
2 So I knew he was on a tanker. I could hear people who
3 I knew in the fire ground on 55 as well. It was something
4 that you don't have time to think about to ring to check
5 because there is no time; you just do it.

6 Ms Keating, just to go to a couple of the entries above the
7 entry that you have put in in relation to the red flag
8 warning, you have put in an entry in relation to 1824 on
9 this page and it refers to Jim - I'm not sure of the name
10 - and 200-foot flames?---Jim Dusting.

11 One thing at a time. What time would that be, working
12 backwards?---That would have been before the wind change.
13 So that would have been after 5.45. So some time before
14 the wind change, which would have been either 5.50 or
15 5.55. The flames were coming from the Buttermans
16 Track-Ridge Road area were 200 feet high and they looked
17 like three or four office blocks. It was absolutely
18 frightening. That was where I was saying to Gavin, "Oh,
19 my God, I hope they're not going in there."

20 Could you see that?---Oh my God we could see that. While we
21 couldn't see much happening in St Andrews, once it got
22 passed Knobs Junction, which is two big knobs that sit
23 just in St Andrews, once it got out into our vision, we
24 saw these flames and it was frightening.

25 You mention the height of the flames there, but also the smoke
26 being your estimate, I think you have written, of
27 3,000 feet?---Yes, that wasn't just my estimate. Gavin is
28 in his 60s; he won't mind me saying. He is a very
29 experienced firefighter. We were having guesses at how
30 big it was, and we were all agreed that that was about the
31 size of it. So that's two people there. Like I say, he's

1 a very experienced firefighter.

2 And then the entry below that again is 1824. So what

3 approximate time should that be?---That would be very

4 similar to the time that Jim Dusting - what has happened

5 is Jim has rung us from we didn't know where. It has a

6 tick then for "in". He has rung on the telephone. We

7 have told him about what it was he has asked. We didn't

8 know where he was, whether he was at the Kilmore fire or

9 in Wallan. We didn't know who was running the fire.

10 That's all right?---So then we phoned Jason just to

11 reinforce - - -

12 What time was this entry?---It would have been a similar time

13 to when Jim rang. So it would have been between 5.46 and

14 just before the wind change, which was some time, what,

15 5.50, 5.55, when the wind hit us, because it had to go 18

16 kilometres by the crow flies to get to St Andrews, we

17 estimated.

18 There is one other matter I want to ask you. There is an entry

19 in exhibit 44 which is the statement of Ms Munns, and an

20 entry in her log - you won't have it in front of you, but

21 I want to read it to you - at 1538 which has "Colleen",

22 and it is reporting as follows. "3,000 feet, heading

23 towards Narbethong. It's huge." Were you able to make an

24 observation of what we now know to be the Murrindindi

25 fire?---That's correct, yes.

26 Can you just tell us what you saw of that fire to cause you to

27 ring the Kangaroo Ground ICC and make that report?---What

28 happened was it appeared from just behind Mount St

29 Leonards, because he looks down into that area, and Mount

30 St Leonards is very high. It appeared and puffed up so

31 quickly and it was so large. It was obviously something

1 huge and, you know, you wouldn't be stopping this. It
2 was, what, 3.20, after 3 o'clock. I haven't written it
3 down - - -

4 The entry here is 1538?---Well, there you go. It wasn't our
5 area, but it was significant in that it looked like the
6 whole mountainside was about ready to go up, and it was
7 starting now. Between 3 and 4 is what we describe as the
8 witching hour. So that's when fires tend to get lit. But
9 it was massive. The other thing, the concern was there
10 was a fire. So in these conditions it had built extremely
11 fast. So that's indicative anything we could get.
12 Secondly, it was going to take our resources. So people
13 from places like Glenburn, who I think some of them were
14 at the Kilmore fire, were then drawn back to that
15 Murrindindi fire. Then I know that people from Marysville
16 went down to the Murrindindi fire as well.
17 But, just in relation to your observation, it is a 3,000-foot
18 smoke column that you saw?---Huge, yes. It was a very
19 wide based cloud . It wasn't a little thin thing. It was
20 quite big. It wasn't like what we got.

21 MR RUSH: Thank you, Commissioners.

22 MR LIVERMORE: I have just a couple of matters, sir.

23 COMMISSIONER McLEOD: Could I ask a question. It might help
24 you if I ask the question before you start.

25 MR LIVERMORE: Certainly, sir.

26 COMMISSIONER McLEOD: From the description you have given us,
27 it would appear that the capacity to have people on the
28 fire ground observing in a relatively safe position, like
29 on the top of a tower or a number of towers, can provide
30 very valuable intelligence to the people who are
31 responsible for fighting the fires?---Yes.

1 Particularly in circumstances where aircraft may find it
2 difficult to be able to fly in these sorts of conditions.
3 Would you agree with that?---Definitely. If we had better
4 technology in the tower we could have - instead of having
5 to phone up all those spottings, which it took two people;
6 the first man got halfway through and said, "This is too
7 much for me. I will get someone better." So then I had
8 to do it all again. So this was, like, really urgent
9 stuff. By the time we relayed it to them and they had
10 mapped it, it had joined up. If we could have just put it
11 onto a computer and emailed it to them it would have been
12 good. As to what we could see, these flames, when Jim
13 rang and said, "Oh, you know, tell me about this," I said
14 to him - I am pretty sure it was him; I said to one of
15 them - "Someone has to come up here and have a look. You
16 have to come and have a look," because we were seeing
17 stuff that we couldn't get through to people just how
18 awful it was. It was devastating. If there was cameras
19 or something - and I don't believe cameras should replace
20 fire tower people; I think we can work together - they
21 could have this vision that we had. If they could have
22 had this vision, things might have been a little
23 different.

24 I think you have also partially anticipated my next question,
25 which was from your statement it would appear to me that
26 the facilities that you have in the towers would appear to
27 be somewhat primitive?---Especially my one, yes. They are
28 very. Mount St Leonards is like, you know, the state of
29 the art one. He has got lots of radios and he could
30 almost put a lounge chair in his.

31 You mentioned that your tower is supported by your

1 region?---Yes.

2 And is the only CFA tower?---I think it is the only one, yes.

3 What is really the significance of that? Wouldn't it exist if

4 it wasn't supported by your region; is that the

5 point?---I fear not. I fear not. They pay us. The

6 actual tower - there is a committee that looks after it

7 and stuff. But the CFA people, they are the ones that get

8 the funding to fix it up and keep it running. So I fear

9 it wouldn't be there.

10 Does the funding come from a volunteer-collected donation or

11 does it come from the budget that's provided to the

12 CFA?---It would come from some of their budget, but they

13 actually go out and access people like Bluescope Steel

14 and - they have been trying for years to raise the money

15 to make it bigger and fix it because they think it is a

16 valuable resource, and it is because, if you read in my

17 statement, like, we are the only tower that can see into

18 parts of that Kinglake range, Bowden Spur and all that .

19 If you light something at the bottom of that and it is up

20 there in three minutes, it is gone. You need to have

21 someone - the other towers can't see in there. So a lot

22 of towers have gone bye-byes. There are lots of towers

23 that have been discontinued. They do; they are

24 desperately trying to hang on to it.

25 <CROSS-EXAMINED BY MR LIVERMORE:

26 Ms Keating, my name is Livermore and I represent the State of

27 Victoria. I just wanted to clarify your entry at 1412, if

28 you could have a look at that in your log. That's when

29 you got the information about the Kilmore fire crossing

30 the Hume Freeway?---Yes.

31 I just want to clarify what you actually told Jason.

1 I understand from your evidence that you gave Jason the
2 information about crossing the freeway?---Yes, that may be
3 all.

4 But not the rest of it?---I don't think so.

5 Just in relation to the fire behaviour that you observed on
6 this particular day, I gather from your evidence that you
7 witnessed some extraordinary fire behaviour that you
8 hadn't anticipated or seen before?---That's correct.

9 I used to work up Mount Despair tower with the DSE. The
10 year I worked there we had a competition, Paul and I.
11 Whoever got to 100 first was the winner. We both got way
12 passed 100. Around the tower there were many fires.
13 There was one called the Bald Creek fire which was right
14 next to my tower. There was one which was 800 metres
15 behind the tower, and we had Elvis and a whole pile of
16 other people coming in. That year I saw a lot of very
17 dangerous fires. Also I worked in the Heyfield ICC, the
18 day that the fires all joined up in the campaign fires.
19 We drove from Sale across there with the ICC in the car,
20 manager in the car, and I kept saying to them, "Have you
21 ever seen anything like this?" They were all experienced
22 and they were saying, "Never, never, never. This is
23 Armageddon." When the wind change hit our tower and I just
24 thought of all those souls out there, and I just said to
25 Gavin, "Oh, my God, this is Armageddon." It just was
26 overwhelming.

27 So you have got a lot of experience upon which to compare your
28 observations on the day?---Well, enough I think, yes.

29 Now, the Kilmore fire, if we can go to that, you have described
30 the sort of tornado-like smoke funnel that was very
31 unusual?---Very.

1 And you hadn't seen anything like that before?---No.

2 And then you have described what you call in your statement the
3 St Andrews fire?---Yes.

4 What were the unique aspects of that fire?---The fact that it
5 just appeared out of nowhere. It appeared to have, like,
6 jumped 10, 15 ks, just the spotting.

7 Then it took off like basically a main fire?---It took off like
8 a rocket. If you envisage just, say, like a monsoon drain
9 and you light something at one end and you put an amazing
10 wind to it, how it will puff through. I described it to
11 someone like, if you lit a wick, that's what it did.

12 So from the time you first saw it until it had the behaviour of
13 a main fire rather than a spot fire, what sort of time are
14 we talking about?---Can you just say that again, please?

15 From the time you first saw the St Andrews fire, are you able
16 to tell us how long it was before it turned in your mind
17 from what you describe as a spot fire to a main fire?---It
18 would have been several spot fires all joining up. It
19 definitely was moving, spotting, but it was masked by
20 smoke. You could see the thicker white billowing smoke at
21 the bottom. It was very low to the ground, from our view.
22 It raced through. We had no idea what was going on until
23 we saw the flames come out the other side, and that would
24 have been - we really didn't know, and I don't think
25 anyone else did. So it's after - like, we knew it was
26 spreading out. By 5.30 in the afternoon it was, like, not
27 good, because we saw where it went through down to - you
28 have got wildfire at 1745 or quarter to 6, which I put
29 through on the radio, Buttermans Track-Skyline. You have
30 got smoke from Skyline, Christmas Hill, Glenview Road.
31 That was 5.30 in the afternoon. We thought that was Yarra

1 Glen. In fact we were speculating as to whether that was
2 the timber yard, but then it started to move and go in
3 strips like it was houses, like grey, grey, grey. So that
4 was a bit of an alarm bell, that it obviously was woofing
5 through Steels Creek. Yarra Glen we thought had gone.
6 You didn't actually see anything. You just saw the smoke
7 as it progressed. But the biggest, scariest bit was the
8 flames. Those flames are in photographs taken, say, at
9 midnight. They were still there. I think I said they
10 were there until an hour and a half. But if you look at
11 the pictures done by CFA, those flames on the right-hand
12 side, on the eastern side, they are there in the
13 photographs in the CFA of the range. So that just stayed
14 there. That area stayed hot. For up to three days that
15 was still burning. The scary thing is I got a phone call
16 after the wind changes again and I describe it was like -
17 they were asking us was it still coming, and it was still
18 coming like lava. It was still coming. Basically all you
19 could do is see the smoke, and the smoke told you where it
20 was going and how fast it was spreading.

21 Thank you. Just one final matter. We have a log record that
22 there was a red flag warning at 5.43 pm. We have a record
23 of a number of tankers acknowledging that. That's what is
24 supposed to happen, isn't it, with a red flag
25 warning?---They should acknowledge, yes.

26 Did you hear that on the channel you were listening to?---We
27 couldn't because the scanner had died.

28 MR LIVERMORE: Thank you.

29 CHAIRMAN: Can I just clarify the position in relation to your
30 log that it appears became notes rather than a log; is
31 that what you are saying?---Page 4?

1 That's right?---Yes, that's where we lost it. That's where
2 there was extreme pressure and it was just like - so much
3 happened within a short space of time.

4 For example, you have an entry at 1605 - this is on page 3,
5 even - and then there is nothing apparently until 1735. So
6 it looks almost as if at least half of page 3 and all of
7 page 4 are notes rather than a log?---We didn't do
8 anything with regard to phoning anyone or talking to
9 anyone. So we only record what we phone or speak on the
10 radio. That's basically what this log is. It is not my
11 husband's phone call saying goodbye to me and look after
12 myself and, "There is no-one left to look after you," and
13 basically telling me to go, and I'm going, "No, I'm
14 working. Goodbye." None of that stuff is in there. When
15 Paul evacuated his tower, I didn't note that down either.
16 So it is only stuff that we basically report or if we get
17 a phone call in that we write it down. So basically what
18 we have been doing for that hour and a half is listening
19 to the radio and watching where the smoke is going and
20 just trying to work out, you know - that's all we did.

21 When you have come to make your police statement, you have used
22 the log but you have used your memory to try to fill in
23 different things at different times?---I would imagine
24 that, yes. That was the way that the police person and
25 I did it; took the log and tried to fill around the log.
26 So the only thing that would be 100 per cent accurate, and
27 of course page 4 is not, but the others, the times would
28 be fairly accurate, yes.

29 That statement was made, as I understand it, early in April.
30 So it was two months after - - -?---It was a long time
31 after.

1 Because if there were little or no reference in your police
2 statement or in the notes in relation to a fire at
3 Murrindindi, that wouldn't surprise you?---No. I didn't
4 put Murrindindi in because - it doesn't surprise me, no -
5 because it really isn't, well, it wasn't relevant to our
6 area. It was just something, "Okay, this is happening."
7 Even though it is a long way away to Murrindindi, you are used
8 to knowing where locations - - -?---Oh, right. No, I tell
9 you why it was going to Narbethong, is because I rang Paul
10 in Mount Saint Leonards and I said, "Paul, what is this
11 smoke? Where is it?" He said, "That's the Murrindindi
12 fire. It started down near the mill. It's going here,
13 here, here." I wouldn't have been able to map that.
14 So a number of pieces of information are coming from telephone
15 calls you are getting from other people?---Towers.
16 That are helping you to build a picture?---Yes.
17 That you are able to confirm by the sightings you then make of
18 what's happening in other places?---Yes.
19 And a great number of those sightings are not recorded by you
20 because you don't have to?---No, because I don't report
21 the fire. So, say, if I had rung up and reported Andy's
22 fire, he would get on the phone and say, "That's my fire.
23 Why are you reporting my fire?"
24 But it was no surprise to you when Mr Rush reminded you that
25 there had been a conversation at a particular time. Once
26 he reminded you of that, that was how it happened?---Yes.
27 So we basically - that's what we do. We do a lot of
28 ringing around. We ring and we chat with the towers all
29 day. So they tell us what's happening. That's how we get
30 our information. If we have early warning for a wind
31 change, we ring like crazy, "Has it hit you? Is it there?"

1 Is it coming? Where is it? Where is it?" Because we want
2 the earliest warning. If we know, then we would ring,
3 say, the ICC or someone like that and say, "Mount
4 Blackwood has got it and there is lightning."

5 But, if we were to be given evidence by Gavin McCormack or
6 Julie Sharp, it wouldn't surprise you at all that their
7 recollection of a number of aspects of what they saw - -
8 -?---May be different.

9 Would be quite different in a number of ways?---The only thing
10 that would be accurate is what's logged. So what I saw
11 and what they saw - like, someone in my tower thought they
12 saw a helicopter. I know for a fact there weren't any
13 helicopters. So, yes.

14 MR RUSH: I have no questions, sir. May Ms Keating be excused?

15 CHAIRMAN: Yes. Thank you very much, Ms Keating. You are
16 excused.

17 <(THE WITNESS WITHDREW).

18 CHAIRMAN: We will adjourn now until 9.30 tomorrow.

19 ADJOURNED UNTIL WEDNESDAY, 17 JUNE 2009

20

21

22

23

24

25

26

27

28

29

30

31