

TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 70

Monday, 9 August 2004

[10.08am]

MR PETTY: My name is Petty - for the record
P-E-T-T-Y - and I seek your Worship's leave to
5 appear for three witnesses who are already
represented pursuant to your Worship's leave.
They are Ms Arman, Mr McRae and Mr Collins.
Should your Worship grant leave, then I will lead
their respective current counsel. The purpose of
10 my appearance is to make a series of applications
concerning the evidence of Mr Roche and the time
at which his evidence and cross-examination is to
commence.

15 I have just spoken to my learned friend Mr Lasry.
There may be some way of accommodating everyone's
position. I am not speaking for everyone in the
room - certainly so far as Mr Lasry is concerned
and my clients - but I need to seek instructions
20 and to consult with people. It might take 10 or
15 minutes. I wonder if your Worship would give
us a very short adjournment - I know this is a
long running inquiry - to facilitate more candid
discussions than we can do here at the Bar table
25 in the course of the inquiry proceeding. We will
probably need 15 minutes for Mr Lasry and I to
discuss this aspect.

THE CORONER: I understand that the application
30 today would be to seek an adjournment of some
period of time. Is that what you are instructed
to do, Mr Petty?

MR PETTY: Yes. But the affidavit which has been
35 filed --

THE CORONER: Which one do you refer to?

MR PETTY: The affidavit of Ms Bird sworn
40 6 August.

THE CORONER: That is Friday?

MR PETTY: Yes. It in terms foreshadows an
45 application that the inquiry in all respects be
adjourned. That overstates the position. What we
are essentially seeking is a rescheduling or a

re-timing of Mr Roche's evidence. So we don't seek to stop the inquiry today for two months. In any event, if I could speak to Mr Lasry we could perhaps define where we are at issue, if at all now.

THE CORONER: I will give you that time.

MR PETTY: I am obliged to your Worship.

THE CORONER: Is everyone agreed if I give you some more time?

MR LASRY: Yes, your Worship. It appears that the true nature of the application wasn't obvious from the material. What my learned friend I think is suggesting is by some arrangement there may be some other work we can do between now and the date they have in mind for Mr Roche.

THE CORONER: That would certainly be useful.

MR LASRY: If we can do that, it may mean there is less distance between us.

THE CORONER: I will take an adjournment then.

MR PHILIP WALKER: Just before you do that, there is a letter that I proposed to circulate. We might do that now.

THE CORONER: Has everyone received a copy of Ms Bird's affidavit? Do all counsel have a copy of that affidavit?

I will adjourn. Just let me know when you are ready to proceed.

SHORT ADJOURNMENT [10.13am]

RESUMED [11.47am]

MR PETTY: I apologise to your Worship for the delay. There are many and disparate interests that I had to consult.

There seems to be a general accord that we would

be asking your Worship, subject of course to your Worship's overriding view, to adopt the following proposal. I understand it has everyone's concurrence, perhaps in varying degrees of enthusiasm. Mr Stitt has a condition he would like imposed. For my part I have no objection to that.

The proposal is this: firstly, the further hearing of the inquest be adjourned to 23 August 2004. Second, on 23 August 2004 the evidence be taken from the following witnesses in the following order: first, Mr Roche, his evidence-in-chief only; second, subject to checking the availability, Mr Leonard; third, Mr Cheney to be available for cross-examination on 30 August 2004 and, if necessary, 31 August 2004.

Third, the inquest be adjourned to Tuesday 5 October 2004 for the purpose of Mr Roche to be cross-examined, any further experts to be called, and the witnesses Mr Castle and Mr Lucas-Smith to be recalled.

Fourth, any expert report to be relied upon be forwarded to counsel assisting on or before 1 October 2004 with liberty to apply.

Fifth, within seven days counsel assisting will provide a list of documents falling within the terms of the letter of 22 July 2004, which is annexed to Ms Bird's affidavit. Such documents as to which no objection is to be taken will be produced as copies by 23 August 2004 with liberty to apply.

That is the proposal. As I say, Mr Stitt has a condition which for my part I have no trouble with.

THE CORONER: Yes. Just so I understand, Mr Petty, the third point in your proposal is to adjourn after the evidence of Mr Roche, which is evidence-in-chief only; Mr Leonard, that is chief and cross-examination?

MR PETTY: Yes, to finality.

THE CORONER: What about Mr Cheney's evidence?

MR PETTY: That is in the same position.

5 THE CORONER: Same position to what? To start hearing Mr Cheney's evidence after Mr Roche and Mr Leonard's evidence?

MR PETTY: Yes.

10

THE CORONER: And make him available for cross-examination in any event on 30 and 31 August?

15 MR PETTY: Yes, it is anticipated that will not interrupt the flow, as that would probably be the result in any event.

20 THE CORONER: That is to hear Mr Cheney's evidence to finality by 31 August?

MR PETTY: Yes.

25 THE CORONER: The third point, after that date to adjourn until 5 October for cross-examination of Mr Roche and calling of other experts as counsel to indicate to counsel assisting.

MR PETTY: Yes.

30

THE CORONER: And the recall of Mr Castle and Mr Lucas-Smith, if that is to be.

MR PETTY: Yes, that is so.

35

THE CORONER: Yes, I understand that. Thank you Mr Petty. Yes, Mr Stitt.

40 MR STITT: Your Worship, the position of my client is this: we did believe that the timetable should be adhered to. That is an argument which is now gone.

45 If there is to be any adjournment it should be on condition that any further expert report is confined solely to answering and/or rebutting the existing experts' reports and evidence. That is

to say, it should be a condition that it is now
not open to any expert to come forward to raise
and open up other topics or subjects which to date
have not been raised in the existing evidence or
5 reports.

To do so would simply invite further rebuttals on
rebuttals. It will just open a pandora's box
where this timetable which has now been suggested
10 plainly would not be able to be adhered to. What
as I understand it lies behind the application
which has been made today by my learned friend
Mr Petty is that he wishes to rebut matters that
have been raised by the experts, but the liberty
15 which has been granted should not be a
wide-ranging liberty but should be confined in the
way in which we submit.

THE CORONER: Yes, thank you, Mr Stitt.
20

MR ARCHER: Could I be heard to similar effect as
Mr Stitt?

THE CORONER: Yes.
25

MR ARCHER: The expert evidence that is to be
called from the parties that Mr Petty represents
will be raising matters that potentially affect my
client. There is a danger that my client and
30 perhaps those that Mr Stitt represents will be in
the same position that Mr Petty's clients are
today on about the 1st of October when the report
is served. That leaves potentially affected
parties a limited number of days to digest the
35 contents of the report and to respond to it, if
that is called for.

The report call for Mr Roche went through a
process. The process there was quite detailed
40 terms of reference was outlined; so far as the
report was concerned obviously adhered to. That
accorded the parties some degree of procedural
protection. We knew what was coming. Certainly
so far as the matters that were put to various
45 witnesses, we got notice through those questions
as to what the content of that report was likely
to be. We don't have those procedural protections

at the moment. There are some interests apart
from those that Mr Petty represents that could be
affected by the expert report that he produces,
whether it is tendered or relied upon in another
5 way.

Although that timetable has been set down, my
submission would be similar to that put by
Mr Stitt, is that there has to be some bounds put
10 on the material produced by the experts so that we
don't get into an endless cycle of rebuttal upon
rebuttal as expert reports are produced. If
your Worship pleases.

15 THE CORONER: Thank you, Mr Archer. Yes,
Mr Walker.

MR BRET WALKER: I just wanted to raise the
possibility that, instead of the adjournment being
20 the 23rd, to accommodate positions that affect my
client as well as Mr Stitt's client whether it
could be the 24th starting with Mr Leonard and
then moving to Mr Roche and from there to
Mr Cheney. As I understand it, that is considered
25 by most of us here to be workable. If it could be
done we would be much obliged. We would certainly
understand if it can't be.

THE CORONER: Thank you, Mr Walker.
30

MR LASRY: That your Worship was what I in the end
thought the arrangement was. Certainly that which
Mr Walker raised with you is acceptable to us.

35 As far as a level of enthusiasm is concerned, we
are at the bottom of the scale, but this proposal
has our agreement. As Mr Stitt said, we would
prefer the original timetable be adhered to. No
doubt your Worship would also have preferred that
40 as well. But we have accepted that there are
reasons to vary it and we have agreed.

Your Worship, can I add our support for the
submission made by Mr Stitt and echoed by
45 Mr Archer and add this to that issue: at the
outset of the inquest, it was noted that the only
parties who would call evidence would be counsel

assisting, as is customary in these kind of proceedings.

5 We would need to make a judgment as to whether it would be of assistance to the inquest for another expert - and in this particular case Mr Nicholson has been referred to in the material and also Mr Mullins has been referred to in the material, whether it would be of assistance to you to have
10 assistance from those witnesses and therefore make a decision as to whether we would or would not call them. If they prepare reports, then of course we have to have enough notice of what is in that material so that we can make a judgment as to
15 whether it is appropriate that they give evidence in their own right as experts in addition to Mr Roche and Mr Cheney.

I say that because we have agreed to the
20 timetable. But we would urge the parties who are dealing with these experts to expedite that process to the extent that they are able to so we have as much notice as possible as to what these witnesses will say and whether it is material we
25 should put before you.

Save for that, I agree with respect with the submission that any further expert material ought to deal simply with the issues raised by the
30 experts as it stands and not raise new issues. I think that is sensible and I agree. The idea of rebuttal upon rebuttal at this late stage of the proceedings is extremely undesirable. That is our position.

35 I should just note, since this material has come into existence since the Court last convened that Mr Roche's report has been produced and circulated. It is on the database as
40 [DPP.DPP.0009.0001]; Mr Leonard's report is also on the database as [DPP.DPP.0009.0210]. Additional material from Mr Cheney, which is in effect further diagrammatical depictions of fire spread and some additional photographs is now on
45 the database as [DPP.DPP.0008.0109].

THE CORONER: Counsel has access to those and they

have copies of those?

MR LASRY: Yes, your Worship.

5 THE CORONER: Mr Petty, how many witnesses or
further expert witnesses do you anticipate reports
being provided, apart from the two? Is it
expected that each counsel have their own expert?
As far as are you able to say --

10

MR PETTY: No. There are two who have been
consulted in a preliminary way, and it is hoped
that some of the parties can use an expert on a
joint basis. It requires some preliminary
15 investigation so that there is no conflict. It is
hoped that two experts will be shared, in effect,
around all of the witnesses affected by Mr Roche's
report. It is certainly not envisaged that each
of them be armed with separate and independent
20 expert.

THE CORONER: Are you able to indicate at this
stage whether or not reports are going to be
prepared by these witnesses; whether it is
25 anticipated that you are going to urge counsel
assisting to call these witnesses to present oral
evidence?

MR PETTY: No. We are not. At the forefront of
30 the application which I propose to make is the
inability of counsel to be armed with expert
assistance and information to enable
cross-examination to take place. It may be that
once that need is satisfied the experts would be
35 required no further. It may be that they will
need to address identified issues. It is not
anticipated that either of the experts will
undertake some plenary review of Mr Roche's report
but focus on particular issues, opinions or
40 comments that affect one or more of the witnesses.

So it is not, as I say, a complete review of
Mr Roche's report but an examination in rebuttal
of particular aspects. I will urge those whom I
45 represent that, if reports are to be obtained,
reports on discrete issues be produced and made
available as and when it is possible without

waiting to compile complete reports so counsel assisting and others can see where the opinion is going.

5 THE CORONER: Do you wish to be heard on the submission made by Mr Stitt and supported by Mr Archer and counsel assisting about confining the --

10 MR PETTY: No. We have nothing to say. I understood that if your Worship imposed the condition that Mr Stitt sought that it would apply universally and not simply for the protection of Mr Stitt's client but for all persons involved.

15 THE CORONER: Yes, thank you. Does any other counsel wish to be heard on this matter before I make my decision on the submissions made by Mr Petty?

20 I have had an opportunity to consider all of the documentation that has been put before me in relation to the request for an adjournment. As reluctant as I am as well to delay the progress of
25 this inquiry, I certainly do see that there is merit in an adjournment for counsel to be in a position to cross-examine Mr Roche.

30 Having said that though, I would say that since December of last year, at the directions hearing in December, it was always made known to counsel, those counsel who were then representing parties in the inquiry, it was always made clear to them who Mr Roche was and that Mr Roche was going to
35 provide a report and to give evidence in this inquiry. And further to inquiries by Mr Pike in May, information was provided, an outline of the terms of reference of Mr Roche's report was provided to parties. So parties have been on
40 notice about Mr Roche and the type of information and the type of evidence that he would be called to present to this inquiry.

45 I do note that the distribution of Mr Roche's report was delayed by a couple of weeks but counsel now in any event have had some three weeks to consider that report. But I do also accept

that that perhaps has not been sufficient time for perhaps the consideration that needs to be given to Mr Roche's report.

5 There is one matter that I wish to be heard on. It is the issue that is addressed in the affidavit of Ms Bird, particularly paragraphs 21 and 22. It is an issue of the Australian Government Solicitor and the role of the Australian Government
10 Solicitor in its role. I have been critical about the lack of appreciation from the start of this inquiry for the need for separate representation for certain persons and the delay that has resulted to this inquiry that I thought was a lack
15 of appreciation by the Government Solicitor.

As I understand it from Mr Bayliss's letter to the counsel, withholding funds until this late date for counsel to have access to experts and to be
20 able to obtain second opinions from experts falls into that category of criticism. And again shows, in my view, a lack of foresight on the part of the Government Solicitor and again has resulted in a delay of this inquiry.

25 But having said that, I accept that there is a need for an adjournment. Unless counsel wish to be heard any further, I do propose to adopt and accept the proposals that have been made by
30 Mr Petty. That is to further adjourn the hearing of this inquiry until 24 August 2004.

On that date, being the 24th of August, evidence will be called from Mr Roche, Mr Leonard and
35 Mr Cheney. Mr Roche's evidence will be evidence-in-chief only. Mr Cheney will give evidence-in-chief and be available for cross-examination on the 30th and the 31st of August. After that date, the 31st of August, I
40 propose to further adjourn this inquiry until 5 October when Mr Roche will be recalled for cross-examination. After the cross-examination of Mr Roche, recall Mr Castle and Mr Peter Lucas-Smith to present further evidence.

45 Any information and any reports of experts, that information is to be provided to all parties by

1 October. If any reports are made available by other experts, those reports are to be served on parties by the 1st of October 2004.

5 Counsel assisting is to provide to all parties within seven days the documentation - you mentioned, Mr Petty, it is the information sought in the letter of the 22nd of July?

10 MR PETTY: Yes. It is annexure C to Ms Bird's affidavit, your Worship.

MR LASRY: Out of abundance of caution, I would make it clear that what we have agreed to provide is the list of documents which is referred to in the letter of 22 July. We haven't agreed to provide all of the documents in each category. We have made it clear that, as to at least one category, there would be one objection. What we have agreed to do is to provide a list of what documents there are that fall into those categories.

THE CORONER: So counsel assisting is to provide documents within seven days, pending any objection to documents, that based on the letter of 22 July 2004. Any reports by witnesses or further experts is to be limited and confined solely to rebutting or confirming the evidence that has already been presented by other experts to this inquiry.

Have I left anything out, Mr Petty, Mr Lasry?

35 MR PETTY: The production of documents provision, with respect, as Mr Lasry says, it is a list of documents initially to be provided and such documents as to which there is no objection taken will be provided in copy form by 23 August 2004 with liberty to apply. There is a two-stage process, the list first followed by the unobjectionable documents following.

THE CORONER: That can follow what you have just enunciated, Mr Petty.

It would be undesirable to resume on 24 August and

for counsel again to come back before this inquiry
and then seek a further adjournment. So as
reluctant as I am, I have indicated that I do see
merit in adjourning to that date. I would
5 indicate on that date we do proceed with the
evidence as has been forecast.

If there is, however, any further development or
any other difficulty, then counsel does have the
10 option to contact my office and seek a further
directions hearing in the matter. I would really
appreciate that being done sooner rather than
later before the 24th of August, if there is a
further difficulty or a need for any other
15 direction to be made prior to us resuming on the
24th of August.

MR STITT: Could I clarify one thing? I was a
little unclear how it was left. Was my learned
20 friend Mr Walker's application acceded to; that is
on the 24th we start with Mr Leonard? Is that the
position?

THE CORONER: I think that is the position.
25

MR STITT: That suits me. I wasn't clear.

THE CORONER: I am glad you clarified that,
Mr Stitt. I wasn't sure it was to start with
30 Mr Leonard; I think that was the application made
by Mr Walker.

MR STITT: My learned friend Mr Lasry seemed to
accept that there was a little unclarity about
35 it.

THE CORONER: So we start with Mr Leonard on the
24th of August.

MR LASRY: Yes. Can I just add to a comment
your Worship made in relation to the 24th of
August and perhaps submit that it ought to be
absolutely clear that by no means is the 5th of
October a not before date, as it were. It is
45 intended by this arrangement, this timetable will
be adhered to and unlike the position that we have
taken in relation to this application, at least

today, we would vigorously oppose any further application for adjournment on the 5th of October.

5 I say that because we would be anxious to expedite the process to the extent that we are able and at least complete final submissions in this calendar year. Realistically that would be unable to be done much before December on this timetable. Any further adjournment would be obviously extremely
10 prejudicial to that process.

THE CORONER: That is certainly my view too, Mr Lasry. That is, after we adjourn from the August sitting, the 5th of October is the date we
15 will resume and complete the evidence.

MR LASRY: If your Worship pleases.

THE CORONER: If there is nothing further, then we
20 will adjourn until 24th of August.

**MATTER ADJOURNED AT 12.16PM UNTIL TUESDAY,
24 AUGUST 2004.**

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INQUEST AND INQUIRY INTO
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AND THE FIRES OF JANUARY 2003

DAY 71

Wednesday, 25 August 2004

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[10.05am]

THE CORONER: I know that you are all aware that
Mr Roche suffered a heart attack on Sunday the
5 15th of August and is therefore not well enough to
give evidence in these proceedings this week as
was planned. However, I am told that he is
recovering and all being well it is expected that
he will be fit enough to give evidence in these
10 proceedings on 5 October. I will keep you
informed if that changes or if there is any change
to Mr Roche's medical condition.

I understand that there is some discussion or
15 application today in relation to documents. I
have had the benefit of seeing the email traffic
that has been proceeding between counsel assisting
and counsel.

20 MR WOODWARD: That is so, your Worship. I
understand Mr Petty will be leading off in
relation to that.

Perhaps before he does, if I could mention one
25 other matter apart from the position of Mr Roche,
which your Worship has dealt with. I am able to
indicate that I spoke yesterday to his wife and I
understand the relatively minor surgery, as it
turned out that he had, went very well. Subject
30 to a doctor's appointment in a couple of weeks'
time, it is expected that he will be fighting fit
by 5 October. That is good news.

I also wanted to pass on the apologies of my
35 learned leader Mr Lasry, who is unavoidably
detained in Guantanamo Bay.

Those were the only matters, unless there are any
other matters that other parties have. I
40 understand Mr Petty has some submissions to make
on the documents, if your Worship please.

THE CORONER: I am not sure on the last occasion,
Mr Petty, as to whether I did or did not grant you
45 leave to appear. If I did not, then I do grant
you leave.

47

MR PETTY: If your Worship didn't, then I said an awful lot without your Worship's leave. Today I seek your Worship's leave to appear for Ms Arman and Mr McRae, which is a more limited retainer than previously. Mr Craddock, as your Worship knows, currently appears for those parties.

On the last occasion your Worship directed that counsel assisting provide a list of documents concerning Mr Roche's report and its preparation. That was done. The list comprises 135 items, either individual documents or groups of documents, which may be identified by reference. Of the 135, production has been offered in respect of 13 and, in respect of the remaining 90 per cent, production and inspection has been objected to on various grounds.

The application which I make is that your Worship direct production and availability for inspection of the remaining documents in the list of 135. Also, that a similar procedure be undertaken in respect of Mr Cheney's report, amended report or further report - however one describes the way in which his report has evolved. We can formulate in due course the precise orders that we seek, but it will in effect mirror what has already taken place in respect of Mr Roche.

May I say in relation to Mr Cheney that I understand that his being called to give evidence is imminent. I have forgotten the exact details.

THE CORONER: Tomorrow, I think that was the plan, after Mr Leonard.

MR PETTY: Mr Craddock, my junior who habitually appears for Ms Arman and Mr McRae, is prepared to dislocate his social, personal and professional life if the documents are immediately produced so that he can be in a position to cross-examine Mr Cheney in all probability at the anticipated time.

So what we seek in relation to Mr Cheney would not involve any dislocation of the current timetable.

47

Could I tender on this application an exchange of
correspondence between counsel assisting and
Mr Craddock and others. It comprises a letter of
16 August 2004 from counsel assisting; there was
5 attached to that a list of documents. Mr Craddock
has kindly gone through and numbered each document
described in the list for identification. There
are some annotations, I see, which have been
reproduced in the photocopy. We would invite
10 your Worship to ignore those.

Then there is a further request from Mr Craddock
of 23 August 2004 and a response from counsel
assisting. I tender two copies. It may be
15 desirable for your Worship to have a working copy
which can be marked. I can circulate to anyone
who is not familiar with this material a copy of
the bundle.

20 Could I ask, if no-one has any objection to the
tender, that your Worship read that material and
then I will take your Worship to certain parts of
it.

25 THE CORONER: Yes, I have seen those, Mr Petty, so
I am familiar with these documents. Thank you.

MR PETTY: The covering letter to the list, that
is the letter of 16 August 2004, seems to draw the
30 battle lines. If I could invite your Worship's
attention to paragraph 3. There is an assertion
there that the documents are relevant only in the
broadest sense. Ultimately we will be developing
a submission that the relevant authorities in this
35 area demonstrate that relevance in this area is a
broad term and is not confined to its meaning at
an evidentiary level; that is, whether it is
relevant to a fact in issue.

40 There is then foreshadowed in paragraph 3 a claim
for legal professional privilege in respect of
most, if not all, of the remaining 90 per cent of
the documents. Then on page 2 there is a
reference to documents only going to credit. We
45 do not agree with that. But in the final
paragraph there appears the concession that, at
least at an arguable level, some of the documents

could be utilised to mount an attack on Mr Roche's credit.

5 May we foreshadow that we see the relevance in the widest sense of these documents as not only going to credit but going to other matters such as the reliability of his opinion evidence and questions of partiality.

10 So far as the exchange between Mr Craddock and counsel assisting is concerned, the first paragraph of the response from counsel assisting acknowledges that primary material such as letters of instruction and briefing documents would not be
15 an unreasonable request but asserts that there is none. Source materials it is said are already identified.

20 THE CORONER: This is in relation to Mr Cheney's information?

MR PETTY: Yes. But otherwise the request for production of a list of documents is declined. We simply at this preliminary stage highlight that
25 appears to involve a different approach in that such a list was provided in respect of Mr Roche --

THE CORONER: In May, actually.

30 MR PETTY: The list was provided to Mr Roche. There is no reason why a similar list could not be provided in respect of Mr Cheney.

35 THE CORONER: But it has been. A list of Mr Cheney's documents, as I understand it, was provided in May. It is just extraordinary that we are here now on 25 August when that list of Mr Cheney's documents was provided in May. On the
40 25th of August you are here now seeking access to those documents.

MR PETTY: This is a list of sources - source documents.

45 THE CORONER: Yes, that was provided.

MR PETTY: But --

THE CORONER: No request has been made from any counsel in this room to access to any of those documents, apart from what you are saying today, Mr Petty.

5

MR PETTY: A list of sources is only part of what was provided in respect of Mr Roche. The list which is attached and provided pursuant to your Worship's direction concerning Mr Roche's report is far wider in its ambit than what has been produced in respect of Mr Cheney.

What has been produced in respect of Mr Cheney, as I understand it, is a list of sources. What has been identified in the list produced by counsel assisting on the 16th of August in respect of Mr Roche goes much, much wider. And that's what we seek in respect of Mr Cheney. In other words, that the same type of process be gone through in respect of Mr Cheney as has been gone through in respect of Mr Roche. As I say, efforts will be made, if that course was adopted, to ensure that the timetable is not interfered with.

There is foreshadowed in the correspondence a claim for legal professional privilege. It would seem to us, with respect, that if that is going to be advanced that it be advanced now, as it can only be advanced on the basis of some material before your Worship and the course of the submissions would be different depending upon whether that claim is or is not made in advance.

Although I haven't undertaken a straw poll, I understand that this application is supported by all of the other witness parties in respect of whom your Worship has granted leave. It is perhaps best if Mr Johnson was to tell your Worship what his position is rather than have me usurp that function. And then we return to the question of whether and upon what basis any claim for legal professional privilege is to be advanced by Mr Woodward.

THE CORONER: Let me understand what you are asking counsel to produce, Mr Petty. You want access to all the documents that are contained in

that document list of some 134 items dated
16 August in relation to Mr Roche?

5 MR PETTY: Yes. We have been offered access to 13
documents.

THE CORONER: Yes, the ones marked with an
asterisk.

10 MR PETTY: Yes. I understand - at least they were
yesterday - on their way from Melbourne. I
haven't spoken to Mr Woodward about that but I
anticipate they will be made available pursuant to
the offer which is being accepted. So we seek
15 access to the remaining 126 documents.

THE CORONER: And in relation to Mr Cheney?

MR PETTY: What we seek is that the same process;
20 that is, that a list be produced to the same
extent as was undertaken in respect of Mr Roche.
If that is not practicable because of time
constraints, then plainly we would accept the
undifferentiated cardboard box of documents and
25 Mr Craddock would enjoy reading through them
although they weren't separately identified.

Consistent with our approach that we don't wish to
see Mr Cheney's evidence delayed or deferred on
30 account of this process, if counsel assisting were
to produce a box of documents then we would accept
the assurance that they satisfy whatever order
your Worship was to make.

35 THE CORONER: Yes, thank you, Mr Petty. Thank
you, Mr Johnson.

MR JOHNSON: Thank you, your Worship. We took the
step last night of giving an outline of what we
40 intended to submit as to principles to
Mr Woodward. We do have in fact a set of the
submission and the cases we could hand up to
your Worship. I won't seek to take your Worship
to them now in detail. We wanted to make sure
45 that there was some advance notice to Mr Woodward,
albeit a nocturnal form of notice.

47

The position of the territory is broadly this: in relation to the request for the documents concerning Mr Roche as contained in the list of documents, we would support the position of
5 Mr Petty and submit that all the documents in that list over and above the 13 that have been indicated ought to be produced, and broadly for the reasons indicated in the written submissions. Perhaps this can be developed at some later stage.

10
As to the documents concerning Mr Cheney, we are conscious, as your Worship is, that that request has come more recently. We are also conscious that Mr Cheney has two reports, one being the
15 origin and development of the bushfire and the other being a fuel management report. We hear what your Worship says about there being a list of sources provided some time ago in relation to the origin and development of the bushfire report; we
20 do note there has been an updated version of that report provided more recently which includes some significant amendments, and in particular the last few pages which pick up some issues concerning
25 Vesta and such. That being a significant addition which had not previously featured in Mr Cheney's earlier report.

I mention that because we would not seek to assert
30 that there should be whole-scale production of Mr Cheney's documents. That is for others to put that argument and it's a matter for your Worship to decide. But we would support a position that, insofar as Mr Cheney has added to the opinions and
35 matters previously advanced in the origin and development of the bushfire report and that there has been a schedule that was provided some months ago. Firstly, that schedule is clearly out of date because this current report has additional
40 material. And, secondly, what would appear to us to be the critical additional material, at least from the interest I represent, is the additional four pages at the end.

45 We would therefore support the application for documents as identified in the letter from Mr Craddock, Mr Whybrow, Mr Walker and Mr Watts -

the classes of documents - but with particular
reference to such documents that bear upon the
last four pages of Mr Cheney's updated origin
report. Now, that is a mid course. It is a
5 matter for your Worship.

It seems to us it is almost inevitable when
Mr Cheney enters the witness box at some time
tomorrow, and when this new material which has
10 only appeared in the report and which has emerged
more recently, that there will be applications
made then for documents which go to that issue
which has emerged late in the day in his reports
and that it is preferable to grapple with that
15 issue now and have those documents provided now.
And we would advance that submission, which is a
separate one to that which is put by Mr Petty in
relation to Mr Cheney. So that, broadly speaking,
is the submission which is put on behalf of the
20 territory.

In the written submission that was provided and
which I hope your Worship now has a copy, there is
at page 6 some principles concerning legal
25 professional privilege. They were put. The issue
was effectively flagged by counsel assisting in
their letter of 16 August. Of course there has
been no amplification of the nature of that claim
and what is put at page 6 of the territory's
30 outline - a question of how it may apply depends
very much on what is put by counsel assisting.

We do note though that it is a clear law that the
onus of establishing a claim for legal
35 professional privilege falls on the party
asserting or claiming the privilege and is met by
establishing the facts giving rise to it - Grant v
Downes 1976, 135 CLR 674 at 679 - and that the
mere assertion of the claim is not enough. What
40 is required is exposure of the facts from which an
informed decision can be made as to whether the
claim for privilege is supportable.

I am reading a passage from a case called
45 Australian Competition and Consumer Commission v
Lux 2003 FC 89 and hand up an extract from that
case to you. It is paragraph 42. In a sense,

they are propositions which are self-evident as a matter of law. But it would seem as a starting point that, if there is an issue of legal professional privilege, then it would be a matter
5 for Mr Woodward - I am just being told that what I am saying may be moot so perhaps I will stop talking on that issue.

10 That in substance is the position of the territory on this application.

THE CORONER: Thank you, Mr Johnson.

15 MR ARCHER: Your Worship, could I just indicate on behalf of the Australian Federal Police that we neither support nor oppose the application. We note our interest in the sense that Mr Roche's report ultimately will affect the interests of my client.

20 Could I also note in the terms that Mr Stitt did on the last occasion that the AFP - I only speak on behalf of the AFP - have an interest in these proceedings being resolved as expeditiously as
25 possible so that the next fire season can be planned for appropriately.

THE CORONER: Thank you, Mr Archer. Yes, Mr Bradfield.

30 MR BRADFIELD: I appear for Mr Collins. I support the application by Mr Petty on behalf of Mr Collins.

35 MR ERSKINE: Your Worship, you may recall there has been some matter of mutual uncertainty as to whether I am appearing for the State of New South Wales as well as for the individuals from New South Wales who have been mentioned in this
40 inquest. At least to the latter extent it seems your Worship has given me leave to appear in that respect.

45 Our position is somewhat different, and not because of any difference in principle but because we made a different request for documents in respect of Mr Roche. It was quite a specific

request. It asked for two particular sets of documents and it also asked for in fact sources for other statements made by Mr Roche in his report.

5

My understanding from a brief chat with Mr Woodward this morning is that specific documents that were sought, one of them certainly is already on the list. We have no difficulty with that because it has an asterisk on it, so it is going to be produced. The intention of the DPP had been that what one might call the source requests would be dealt with by Mr Roche giving evidence-in-chief this week. That then would have given us ample time to understand the sources of particular statements before we cross-examined him in October. Circumstances now conspire against that course. We have not yet had a chance to talk with counsel assisting to see how we might find an alternative way about being given access to what the sources are well in advance of the cross-examination of Mr Roche in October.

At this stage all I can say to your Worship is that we have an outstanding issue, but we would anticipate that it is going to be dealt with through some mutually agreeable process with counsel assisting to resolve it well before. So assuming that process takes place, our particular request for documents would appear to have been for the moment satisfied.

Now that is a very elaborate way of putting it, because I don't want any misunderstanding in our submissions that we support or don't support or disagree with or don't disagree with or anything else the propositions that are going to be put to your Worship this morning --

40 THE CORONER: I understand.

MR ERSKINE: It is just that our situation is quite different. Hence we would make no submissions at this stage on the issue that is being raised this morning, but nothing should be read into that one way or the other.

47

THE CORONER: I understand the way that it is put,
Mr Erskine.

MR ERSKINE: Thank you, your Worship.

5

MR WATTS: My position is this: in relation to
three of my clients - being Peter Newham, Hilton
Taylor and Felicity Grant - I make an application
similar to that outlined by Mr Petty in relation
10 to Mr Roche and similar to that outlined by
Mr Johnson in relation to Mr Cheney.

THE CORONER: Just in relation to the amendments
to the last report, Mr Watts?

15

MR WATTS: Yes, certainly as far as Mr Cheney is
concerned.

I am asked by Mr Pike, who is absent, to indicate
20 that, on behalf of his clients Mr Graham,
Mr Bennett and Mr Ingram, he wishes to make a
similar application.

THE CORONER: To yourself?

25

MR WATTS: To myself. And by Mr Mildren on behalf
of Mr Lhuede that he wishes to make a similar
application. I am content to rely upon the
submissions made by Mr Petty and Mr Johnson in
30 relation to the reasons why the application should
be granted.

THE CORONER: Thank you, Mr Watts. Yes,
Mr Walker, do you wish to be heard?

35

MR PHILIP WALKER: Only to say I make an
application in identical terms to that made by
Mr Petty and adopt what he has said. I note in
the written submissions of the Australian Capital
40 Territory, it would appear to me that in
paragraphs 11-13 the extract of cases there appear
to be particularly apposite to the determination
of the question of access to the documents. I
don't think it is necessary for me to say anything
45 further at this time, your Worship. That is my
position in the matter.

47

THE CORONER: Thank you, Mr Walker. Yes,
Mr Whybrow, do you wish to be heard?

MR WHYBROW: Correspondence indicates that I am
5 supporting these applications on behalf of
Mr Castle. I adopt the submissions that have
fallen so far and don't wish to make any further
submissions.

10 MR WOODWARD: I am a little unclear as to what I
am being asked to do. When Mr Petty sat down, I
understood the indication from him to be a request
for me to provide a response on the question of
15 legal professional privilege, which I am content
to do, but that the substantive submissions that
are foreshadowed in the two outlines that
your Worship has been provided with are still to
be made.

20 On that assumption, I will indicate, as I did viva
voce to Mr Johnson a minute ago, that in the
letter we sent to the parties it was merely an
observation that in civil proceedings draft
documents prepared by an expert on behalf of the
25 party would ultimately raise issues of legal
professional privilege.

We accept for the purposes of this proceeding that
the relevant requirements in order to make out a
30 case for legal professional privilege don't exist
because the position of adviser and so on just
isn't - one can't draw those parallels in this
case and we do not seek to do that.

35 I would foreshadow, however, that there may be
issues of public interest immunity privilege that
arise in relation to some of these documents. I
indicate that I don't seek to oppose the
applications now made on that basis. However, can
40 I just foreshadow that, if your Worship were to
order that some or all of the additional documents
referred to in the Roche list should be provided,
I would seek an opportunity to again review them
document by document, which would be the only way
45 to do it, to ensure that there are no issues of
public interest immunity privilege that arise in
respect of any particular documents.

In that regard, your Worship, the concern about that arises because Mr Roche is your expert. He is an expert that has been appointed by the Court, and in those circumstances one has to at least be
5 concerned to ensure that the integrity of the process by which Mr Roche has been retained and the way in which his brief has been prepared and so on is not affected, and indeed the Court process is not in any way prejudiced by this
10 application.

I can say I don't anticipate there to be a problem but I would ask for that opportunity if your Worship were minded to make an order along
15 the lines of the one that is sought. But, as I say, that is based on public interest immunity privilege not legal professional privilege.

So if that cuts down the time taken for these
20 submissions, all well and good. So far as the more substantive issues are concerned, I have something to say but perhaps the more appropriate time to do that is once the substantive issues have been made by Mr Petty and Mr Johnson.

25 THE CORONER: Are you prepared to do that now, Mr Petty?

MR PETTY: Yes. I am grateful to Mr Woodward for
30 letting us know about legal professional privilege.

However, the correspondence that was exchanged made it clear that counsel assisting wished the
35 applicants to be ready to advance their submissions, and we are.

As I understand what Mr Woodward is saying, he cannot now tell your Worship which documents in
40 the list of 135 he wishes to make a claim for an alternate ground of privilege.

THE CORONER: No. What I think Mr Woodward is saying - certainly what I would like you to do is
45 to justify to me why you require production of all of these documents, apart from simply saying you want to have a look to see what is in them.

That of itself is not a good enough reason.

MR PETTY: No. What I am saying, if your Worship
5 makes the order, we don't want to be confronted by
there being a third part to this. We have been
invited to come here today and advance our
submissions, and we are in a position to do that.
That invitation was extended by counsel assisting
and in relatively forceful terms.

10

As I understand it, what is now being said is if
an order is made - and that is a different step -
then counsel assisting will not rely on legal
professional privilege but now may claim public
15 interest immunity. With respect, this issue ought
to be dealt with to totality and finality today.
If there are some documents that fall within that
category, then that aspect ought to be debated.
That is the basis on which we have come here
20 today.

THE CORONER: You have to justify to me, Mr Petty,
and indeed all counsel who are claiming or seeking
access to these documents why these documents
25 should be provided to you. I mean, discovery is
not a procedure that is applicable to a coronial
inquest. To me, to ask for everything that
Mr Roach has had access to, every piece of
correspondence that Mr Roche has ever seen, any
30 piece of correspondence that has gone between
Mr Roche and counsel assisting and indeed Mr Roche
and everybody else, and every document and piece
of paper that Mr Cheney has had access to and
seen - if that is not a fishing expedition,
35 Mr Petty, then explain to me what it is and why
you need this.

Mr Cheney prepared his original report and gave
evidence in these proceedings in October. All
40 counsel have been well aware since October, since
Mr Cheney gave his evidence, and certainly since
counsel have been involved in this case as to the
contents of Mr Cheney's report. We are now here
on the 25th of August, some many, many months
45 after Mr Cheney's original report, and counsel are
now seeking access to all this information which
has well and truly been documented and footnoted

in Mr Cheney's report.

I want to know what are counsel hoping to have
access to and why counsel want access to this
5 information, providing that this information is
available and it hasn't been satisfied in the
documents that have been provided and the
footnotes that have been provided by Mr Cheney's
report and by Mr Roche in his report.

10

MR PETTY: We intend to grapple with those very
matters shortly.

15 However, what I am submitting to your Worship is
that the fundamental problem that is always faced
in these cases is that one does not know the
contents of the documents. There is a circularity
to what I anticipate Mr Woodward will say. You
don't know what is in the documents, therefore we
20 characterise it as a fishing expedition. That is
a habitual problem. But, there are some
descriptions of the documents in the Roche list of
135 which give some indication of the contents of
those documents. It is conceded in the
25 correspondence that some of the documents could be
arguably utilised to challenge his credit.

At this level we wish to advance this position.
The position is if there is some arguable or
30 perceived legitimate forensic purpose, then it
cannot be characterised as a fishing expedition
bearing in mind that we don't know, apart from
some inferences that can be drawn, what is the
contents of those documents.

35

If one was to say that, unless one can point to an
individual document and identify its direct
relevance, then one shouldn't have access to them,
then this process would fail in every case as à
40 fortiori one does not know what is there.

But my primary complaint, what I was advancing
before, is that we have been asked to put our
submissions to finality today. What was
45 ventilated in the correspondence was a potential
claim to legal professional privilege. That is
now abandoned, and we find ourselves facing a

second hurdle which on one view is not going to be dealt with today.

5 Now surely Mr Woodward is able to identify those documents which it appears may attract a claim for public interest immunity. He can lead such evidence as he wishes, and we can deal with them today in the course of our submissions rather than having to have, as I describe it, a third phase to
10 this process.

THE CORONER: You still haven't addressed the issue, Mr Petty, as to why, if you leave the privilege issue aside you need access to all of
15 these documents if it doesn't go to credit and if you are not satisfied with the --

MR PETTY: I am ready to do that immediately. All I was seeking to clarify was the procedure by
20 which we were to proceed today. I was simply putting the submission to your Worship that it ought to be possible for all of these things to be dealt with comprehensively today. I am not overlooking the fact that we have to persuade
25 your Worship that we should be entitled to those documents. I am inviting your Worship to deal with all issues in one phase rather than --

THE CORONER: That is what I want to do as well,
30 Mr Petty.

MR PETTY: We are ad idem then, your Worship.

THE CORONER: I am concerned about the potential
35 delay this will cause. There is certainly an expectation by the community that this proceeding be completed. There is an obligation to me to complete this hearing and to present a report and to present my findings. That is why I am
40 concerned that at this 11th hour, that at this late hour, these requests are now being made by counsel.

MR PETTY: With respect --
45

THE CORONER: And not supported at this stage, Mr Petty. This is what I want you to do. I want

you to support the request that you are making, and other counsel as well if they are willing to do so.

5 MR PETTY: What has just fallen from your Worship only applies to Mr Cheney. It does not apply at all in respect of Mr Roche.

10 THE CORONER: Counsel have had Mr Roche's report since the middle of July, some six weeks.

MR PETTY: 13, 14 and 15th it became available, various parts.

15 THE CORONER: That is right.

MR PETTY: The orders which your Worship made were made on 9 August. The list of documents was produced on the 16th of August. Mr Lasry made it clear on the last occasion that, in producing the list of documents, it was not conceded by counsel assisting that the documents would be produced.

20 It was accepted at that time that there could and probably would be a second phase. That is acknowledged in the letter from counsel assisting on 16 August. The battle lines were drawn then. Counsel assisting said, "We have marked with an asterisk what we will show you, the remainder we will not."

25 We were then invited to agitate the dispute on the 24th of August, which has become the 25th of August. So in respect of Mr Roche's report, there has been absolutely no delay whatsoever. The list became available; the battle lines were drawn; it was always anticipated that there would be documents about which there would be debate. All parties anticipated that that be dealt with in effect today, following on from yesterday. So far as the question of Mr Roche's documents are concerned, there has been no delay whatsoever.

30 The position may be different with respect to Mr Cheney. I simply draw your Worship's attention to that sequence of events which on no view of it involves any delay.

Could I hand to your Worship an outline of the submissions we want to develop. Mr Woodward has a copy; Mr Johnson has a copy; and I will circulate copies amongst my friends at the Bar table.

5

Could I hand to your Worship an aide-memoire, an index which Mr Craddock has produced which categorises some of the documents in the list of 135 so that they can be seen in groups.

10 Mr Craddock has described them - different views may be taken as to how they have been described, but it at least puts them in some categories. I will hand it to Mr Woodward and to my friends at the Bar table. So at least one has some groupings
15 of the documents, which is not done in the list itself.

Could I now speak to the outline which I have handed to your Worship. It may be trite, but it
20 is important to recall that the parties making these applications have been granted leave to appear, and what underpins the granting of that leave is the recognition that they have an
25 interest in the outcome of this inquiry and the evidence that is called at it.

In the correspondence, counsel assisting have described the inquiry as inquisitorial. That is used as a springboard for a submission that in
30 some way the applicants have an abbreviated entitlement to test the evidence that affects their interests. We respectfully submit to your Worship that once your Worship has granted
35 leave then they are entitled, within the usual limits, to test evidence which affects their legitimate interests.

We simply drawn your Worship's attention to the decision of the Court of Appeal in Musumeci where
40 Mr Justice Ipp described this type of inquiry as a "hybrid process having both adversarial and inquisitorial elements". But what is fundamental is that your Worship is involved in the
45 administration of justice and it follows that the applicants are entitled to procedural fairness.

In our submission, it is important to recognise

that neither Mr Cheney nor Mr Roche have any elevated status as a witness in these proceedings. The fact that they may be expert witnesses, the fact that they may have been retained by
5 your Worship to assist, clothes them in no immunity from proper cross-examination in the ordinary course as other witnesses are subjected to. It means that they may be challenged as to their reliability; they may be challenged as to
10 partiality; they may be challenged as to credit in just the same way as every other witness who is called.

It follows, we submit, ineluctably that the leave
15 which was given would be abrogated unless the applicants are armed with material to enable them to test the evidence of these witnesses. Since their evidence is expert opinion evidence, it is important that their evidence be tested in a way
20 that allows your Worship, as the tribunal of fact, to assess whether and to what extent it ought to be accepted.

We draw your Worship's attention to the fact that
25 there has been a rapidly increasing recognition by courts of the caution that needs to be exercised with expert evidence and the very great dangers of uncritical acceptance of expert evidence without engaging in the process of determining whether the
30 reasoning which underlies the bottom line of an expert's opinion is acceptable.

Indeed, in the course of some research over the last couple of days there is some psychological
35 evidence now that unconsciously experts can align themselves with the party who retains them. Anyone who has practised in courts for some significant time would see that fact - how often it is an expert retained on one side
40 coincidentally supports that side's forensic position and the expert retained on the other side coincidentally supports that side's position.

So it emphasises the need to approach with
45 caution. And in that regard there has been the almost universal adoption in Australian jurisdictions of codes of conduct and rules to

ensure the impartiality, as far as one can, of
experts and to disclose the material which has
been made available to them. In many
jurisdictions now, the material has either been
5 identified or been made available on request.

Now, it is inevitable when an expert is retained
that there is going to be some degree of
consultation between the expert and the legal
10 advisers involved. But we would simply draw
your Worship's attention to what has been said
about the extent of that. If I could hand to
your Worship an extract from the decision of House
of Lords in Whitehouse v Jordan. I won't trouble
15 your Worship with the citation as it is on the
document. I can give a copy to anyone who doesn't
have one.

It is a medical negligence case. On the second
20 page of the extract, at the foot of the page,
Lord Wilberforce expressed some concern about how
the plaintiff's medical evidence had been
developed. In the final paragraph his Lordship
said:

25 "One final word. I have to say I feel some
concern as to the manner in which ...
uninfluenced as to form or content by the
exigencies of litigation."

30 We simply invite your Worship's attention to what
Lord Wilberforce said, not only that it should be
but that it should appear to be his own work.

35 No doubt your Worship has already been addressed
on the decision of the Court of Appeal in Makita v
Sprowles. I won't trouble to take your Worship to
the relevant passages of that at this stage. It
is well known. There continues to be a debate as
40 to whether that goes to admissibility or weight.
But insofar as it goes to weight it provides some
guidance to your Worship in that one should follow
the check list of Mr Justice Heydon simply as a
matter of prudence in determining whether an
45 expert's process is satisfactory and ought to be
accepted. To do otherwise, with respect, is to
simply transfer the fact-finding process from the

constitutional tribunal to the expert.

Against those preliminary observations, we want to put these submissions: it appears from the brief
5 descriptions of the documents in the list that Mr Roche has had some involvement in the investigative process. He has been involved in formulation of questions to be put to witnesses to be interviewed. There is prima facie nothing
10 untoward about that. It, nevertheless, raises the possibility that at some stage in the process he has predetermined opinions. We submit it is legitimate to explore that possibility.

15 There is a likelihood, we submit, that Mr Cheney has, to some extent, been in the same position, although one could not determine that without a list similar in form to that which has been provided pursuant to your Worship's order of
20 9 August.

The documents which have been generated by Mr Roche and Mr Cheney unilaterally, that is without any assistance, input or contact from
25 counsel assisting or otherwise cannot be privileged. The point there, your Worship, is the dispute that normally arises with drafts and the like is not whether they ought to be produced but whether they are privileged. I want to take
30 your Worship to the authorities on that shortly.

If there is no claim for privilege the authorities establish that ordinarily drafts should be produced, and one can well understand why. No
35 doubt it is appropriate for an expert to have a change of opinion in the course of the process of writing or developing a report. Indeed, the hallmark of an independent expert is that they should change their opinion if it is appropriate
40 to do so.

However, one can see, by reference to drafts, where an opinion has changed or developed and one can see the reason for the change. And by
45 focusing on the reason, one can then determine whether the opinion ought to have changed or not. It sometimes happens that an expert changes his or

her opinion because a certain assumption has been
put to them, a certain assumed fact has been put
to them. If that assumption falls away, then it
follows their original opinion is correct rather
5 than their amended opinion.

By reference to the authorities to which I will
take your Worship shortly, this procedure is
always to be undertaken with a recognition that at
10 the early stage it is simply not possible to say
with confidence or at all what influence a
particular document or fact may have had on the
content of the expert's report. It is a
legitimate forensic pursuit to determine whether
15 there has been a change or whether there has been
an influence, and in this regard the authorities
establish that what is relevant at this stage of
the process is relevance in a wide sense.

20 Then we return to the fact that letters of
retainer or instruction lose their privilege once
the report is relied upon. That is clear now from
the authorities and no doubt is what informs
Mr Woodward's decision not to raise legal
25 professional privilege. But, once that is taken
out of the picture, then the documents which the
expert has relied upon or has utilised or has been
produced by him in the course of producing his
report become available so that his or her opinion
30 can be tested and so the Tribunal of fact can
assess his or her evidence.

Mr Johnson has kindly produced a volume of
authorities. If I could take your Worship to some
35 of those authorities utilising his volume.

The first that I would like to take your Worship
to is the decision of the Federal Court in ASIC v
Southcorp Limited, a decision of Mr Justice
40 Lindgren. By way of background, these were civil
proceedings for a pecuniary penalty against
Southcorp for failure to notify the Stock
Exchange. His Honour's reasons relate to access
to documents produced on subpoena by an expert
45 witness retained by ASIC.

If your Worship goes to paragraph 4 of his

Honour's reasons under the heading "introduction", your Worship will see that was the issue which engaged his Honour.

5 At page 5 of his Honour's reasons, at the foot of the page under the heading "consideration" in paragraph 19 his Honour refers to the documents which were produced for inspection without objection. They consisted of: (a), the expert's
10 working papers; (b) his first report, notwithstanding that that wasn't relied upon; (c) correspondence between ASIC, the party retaining the expert and the expert himself; and (d) some general material which had been provided.

15 At paragraph 21 his Honour sets out in his characteristic thorough way a series of principles which we submit are not in dispute. It may be said immediately that much of these relate to legal
20 professional privilege. But what underpins all of this is that, if one takes away the claim for legal professional privilege, then ordinarily the documents which otherwise would attract legal professional privilege should be produced.

25 Under the first category "principles", his Honour says:

"Ordinarily ... legal privilege."

30 Then (2):

"Copies of documents attract privilege."

35 So far, that is fairly well known. Then (3):

"Documents produced unilaterally ... expose communications."

40 Then (4):

"Ordinarily disclosure ... brief, instructions or documents."

45 Then his Honour refers to the many authorities on that subject. (5) probably doesn't assist your Worship at this stage. (6) is the

observation by his Honour:

"It may be difficult to establish ...
reference to them in the report."

5

Then his Honour went on in the following page to order production of a number of documents. Just looking at the headings, your Worship can see that they consist of a series of draft reports that had
10 been produced by the witness. Then on the following page his Honour goes through and deals with the category of miscellaneous documents.

The next authority which we wish to take
15 your Worship to is again a decision of the Federal Court of Australia, Clarrie Smith v Western Australia. That was a land titles claim. The issue before the Court was a subpoena addressed to a number of expert witnesses whose reports were to
20 be relied upon in the proceedings.

The judge, Mr Justice Madgwick, at page 3 of the reasons for judgment, under the heading of "relevance" said in the second paragraph,
25 commencing in paragraph 4:

"The report was prepared pursuant to an order made by Mr Justice Lee ... something is relevant to a fact in issue."

30

And then his Honour goes on to deal with questions of legal professional privilege that are not here relevant.

The final decision to which I wish to take
35 your Worship is a decision of the Victorian Supreme Court in Director of Public Prosecutions v ESSO Pty Limited. That was an occupational health and safety prosecution arising out of the Longford
40 gas plant fire. The principal issue before the trial judge, Mr Justice Cummins, was the question of privilege. But what is of assistance in this case, we submit to your Worship, is his Honour having resolved that against the party claiming
45 what follows is his Honour's observations about the extent of the disclosure which should then be made. If your Worship goes to paragraph 5, his

Honour refers to letters of instruction which had been produced. His Honour says:

5 "In my view it was clear that each letter, although once privileged is ... would be impeded, if not defeated."

10 We rely in particular upon that statement of the principle by his Honour; that is, the extent of the ability of the opposing party to test the evidence and the ability of the tribunal of fact to assess it.

15 Then on the following page his Honour returns to the same theme in paragraph 7:

"In these very proceedings once ESSO called the witness ... or defeated."

20 Finally his Honour says:

25 "Although the cases cited in the footnote ... is lost once the client calls the witness in evidence."

30 What we seek to draw from that, your Worship, is the importance of party to test the foundation of the evidence of an expert witness and the corresponding importance of the Tribunal of fact to be able to assess that evidence.

35 Here, going back to Mr Craddock's summary of the contents of the list of Roche documents, it appears that there have been various drafts of portions of the report. We submit that it is legitimate to see whether there has been a change of opinion between the draft at some stage and the final version of the report and, if so, whether the reason is revealed. If it is not, of course it can be dealt with in cross-examination. The drafts would also show what influences, whether factual or otherwise, may have affected any change in the position that is revealed between the draft and the report itself.

45 The second category, the document reviews, may indicate what at particular times Mr Roche saw as

important factual matters. It would be legitimate to compare that with the opinions that he has expressed in his final report.

5 The involvement of Mr Roche in the investigatory activities of the AFP at least raises the potential for pre-judgment of opinions or issues which it is legitimate to explore both through the documents and through cross-examination on the
10 documents.

The next category of documents, draft issue lists, would be, we submit, in the same category as the draft portions of his report.

15 The next category of persons of interest would fall within the earlier category as to whether there may have been pre-judgment upon some issue.

20 The next category of documents, list of questions, falls within the same category. The final documents, relating to the possibility of team approach, would fall into that same category. As Mr Justice Lindgren observed in the Southcorp
25 case, it is impossible at this stage to say with certainty what is in the documents because one doesn't know their contents at this stage. But there is sufficient there to say that their inspection is for a legitimate forensic purpose.

30 We submit that it is not correct, as counsel assisting have said in the exchange of correspondence, that ordinarily one would not have discovery of documents that go only to credit. To
35 some extent we rely on the proposition that this is an inquisitorial proceeding rather than in that respect an adversarial proceeding. It is appropriate for your Worship to ensure the transparency of these proceedings to require, as
40 if on subpoena, the production of documents where it is conceded there may be arguable grounds for challenging Mr Roche's credit. So much is conceded in the exchange of correspondence.

45 But there is more than simply credit here. As the cases concerning expert evidence demonstrate, there is the question of seeing how his opinion

has developed and what has influenced it. All of those matters are of legitimate forensic concern.

5 That deals with the list of documents concerning Mr Cheney. May I just come back and remind your Worship of the sequence of events, which does not connote any delay whatsoever. It was apparent to all concerned on 9 August that there was going to be a potential dispute as to at least some of
10 the documents in the list - perhaps the number of documents is greater than was anticipated. That just shows that the process has to be undertaken. It was always anticipated that there would be a second phase, and this has been the first
15 opportunity that that second phase could take place.

We make the same substantive submissions in relation to Mr Cheney. It is open to your Worship
20 to say there has been delay and it should have been dealt with before. So much is obvious. However, if it is possible to negate the effects of that, and we have a proposal which we submit does, then that ought not to deny access to the
25 documents, if the parties are otherwise entitled to inspect them.

It was always foreshadowed, as I read the correspondence, that we be ready to debate this
30 issue today. The documents, if your Worship directs that they be made available, can be viewed by Mr Craddock forthwith so that any questions of delay would not arise.

35 Mr Craddock reminds me - this is history of which I was personally unaware - that once Mr Roche's report became available, the sequence of events is detailed in the affidavit of Ms Bird that was put before your Worship earlier. But it seems with
40 the best will in the world that the Court could not be convened until the 9th of August and then the timetable was agreed upon.

We submit on the authorities, there being no
45 question of privilege, that there is a legitimate forensic purpose in seeing the various documents that are associated with the development of the

expert's report, and we have identified the legitimate forensic purposes to the best that one can at this stage.

5 As Mr Justice Lindgren's judgment suggests, the threshold at this stage has to be fairly low one because one does not know what is in the documents, but there is sufficient to indicate that there are matters which could legitimately be
10 pursued. As experience demonstrates, one does not always know what will arise but sometimes matters that look faint develop into matters of concern. But that is not to say that they are not legitimate when they are initially pursued.

15 Those are our submissions.

THE CORONER: Yes, thank you, Mr Petty. I will take the morning adjournment and hear from you, Mr Woodward, Mr Watts or any other counsel when we
20 resume.

MR JOHNSON: I think I was next.

25 THE CORONER: I will hear from you after the morning adjournment.

SHORT ADJOURNMENT [11.26am]

30 **RESUMED** [11.54am]

MR JOHNSON: As your Worship would have seen, much of the argument in writing at least put by Mr Petty developed orally has picked up similar
35 themes to the written outline on behalf of the territory. I wouldn't seek to put again in totality all the matters put by Mr Petty.

In our submission, the important starting point is
40 that it is a matter of procedural fairness in this case. This is an inquiry, it is quite clear that principles of procedural fairness apply. The question, as often arises in inquiries is: how do you accord procedural fairness in the
45 circumstances of the case. What is the content of the rule. It is a matter of practical justice. Paragraph 6 of the outline we refer to a passage

out of the decision of *Musumeci v Attorney-General* which in turn referred to the decision of the High Court.

5 This is a practical question. It is not some
esoteric or abstract one. We have in
paragraphs 11 and following set out some of the
passages from cases which you have already been
taken to. These apply in civil proceedings. The
10 question is, of course, these are not civil
proceedings; they are not curial proceedings. We
would submit, however, that it is important to see
that the principles applicable in civil or
criminal proceedings, for that matter when it
15 comes to access to documents which have been
available to an expert or used by an expert or
surround the role of an expert in a case, that
that issue, as it has been tested in civil
proceedings essentially is founded on the
20 proposition that the material which will be made
available to the opposing party, putting aside
questions of legal professional privilege or
public interest immunity, is material which is
relevant, it is material which gives rise to a
25 term that is used in *Clarrie Smith* and is well
know, a legitimate forensic purpose, about 10
lines into the *Clarrie Smith* quote that term is
used and would be one that is well know to your
Worship.

30 The purpose of the cross-examiner obtaining this
material is so that, as a matter of fairness to
the interest that that cross-examiner represents,
the opinions and the evidence of the expert of the
35 opposing party may be tested. The foundational
concept, whether one is talking about this
proceeding or ordinary civil or criminal
proceedings in this area, I would submit, is the
concept of fairness.

40 The cases make clear in the civil area, and we
would submit these principles are clearly
applicable here by way of analogy, that one is
entitled to material which bears upon the
45 reliability, the consistency of the expert, the
weight to be given to the expert's opinion. That
involves a wide range of material. We have

identified in paragraph 16 a number of classes.
There are five classes identified in the cases,
both civil and criminal cases, and we would submit
that those classes pick up a very large number of
5 the documents in Mr Roche's list of documents.

In taking you to the Clarrie Smith case, Mr Petty
I think read out a portion of paragraph 4 of the
judgment of Justice Madgwick. We would ask
10 your Worship to look at the paragraph as extracted
more fully in paragraph 11 of our written
submission and in particular at the top of page 3
Justice Madgwick also notes in the fourth last
line of the quote:

15 "The materials which ... appear to be
relevant."

Now it might be said, "Well, Mr Roche has written
20 this long report, he has footnotes identifying
what he took into account." What the cases made
clear, including the Clarrie Smith case, is that
if there is material which he had available to
him, and undoubtedly amongst much of the material
25 which he either created or gathered in his role
with this inquiry, there is material which he may
have passed over, one is not able to point to that
by reference to his report because it may not be
in his report.

30 It is an example of how it is not always easy to
identify clearly what one is looking for in a
situation like this, but one can identify that
there is a pool of material which the expert
35 clearly has available to him, documents generated
by him or documents provided to him, from which he
has chosen to select, it would seem, for the
purpose of expressing opinions. Therefore, that
is a further important proposition, we would
40 submit.

In paragraph 12 there is reference to the decision
of Fagenblat v Feingold Partners. We should
indicate to your Worship for completeness that
45 that decision went on appeal to the Victorian
Court of Appeal. It was overturned but not on an
aspect that in any way undermined the statement of

principle in paragraph 13. The citation for the decision on appeal is FGT Custodians v Fagenblat 2003 VSCA 32. We don't submit there is anything in that decision that would affect this issue one way or the other, but we do provide that information to your Worship.

We would point, as Mr Petty has, to the statement of principles in Sampi, from then acting Chief Justice Beaumont of the Federal Court. We would then come to paragraph 16 of our outline, which identified various classes of documents that we would say clearly are identified in the list of Mr Roche's documents.

What these cases make clear is that this is material which, once issues of legal professional privilege are resolved, is regularly provided to an opposing party in civil or criminal proceedings. It may be put, I would submit, that a starting point for your Worship in this case is that documents falling within those general descriptions in Mr Roche's list should be considered to have the relevant forensic purpose for the purpose of the present ruling. That is because they clearly have the forensic purpose in other proceedings, curial proceedings and they are made available.

There is no heavier onus or test as a matter of law to be applied in this proceeding. We would submit then that the starting point should be that such material should be provided without the need to develop a more detailed and specific possible forensic purposes, because the forensic purposes have clearly been identified in the cases to which the Court has already been taken.

We would submit, though, that in this case the position is even clearer because, as identified in paragraph 17 and 18 of the territory's submissions, Mr Roche has performed a somewhat broader role than that of an expert witness. In some cases it may be that the expert witness may merely be provided with certain material, asked to assume certain facts, may have been nowhere near the Court room and asked to provide a report. In

that case there may be a fairly clear class of documents which would be relevant to the identification of forensic purposes with such an expert.

5

A further class of expert is the expert who sits in the hearing and listens during the course of it. The third is where the expert does that, as Mr Roche has done, but where also he has acted as a type of adviser, a hands-on participant in the investigation in both providing advice to the police investigators and it would seem there being some communications with counsel assisting for the purpose of the investigation itself.

15

Now, does that make any difference? Does that mean that he is in a separate category so that these principles emerging from civil and criminal cases have no application or in some way should be distinguished. We would submit, clearly not. In fact, what it does is broaden the catchment of the material to which those principles are apply.

Mr Roche effectively commenced a process which involved his advisory function. He was both, it would seem, according to a list of documents, a provider of documents and information and a recipient of them during the investigation, and he continued to perform that task. He was then asked to prepare a report which seems to have gone through several drafts, and it culminated in a 200-page report which was served last month.

In those circumstances we would submit that the documents in the list, all those that fall within the classes identified in paragraph 16, catch these broader classes of documents. Because to properly assess and ultimately evaluate his evidence - bearing in mind he has not really remained as an adviser to your Worship or an adviser to counsel assisting or the police - he has worn that hat and he is now putting on another hat. And by putting on that second hat, it means that the documents generated by him or received by him in performing his broader investigatory role, which has ended up in this report, are caught by the same principles. We would submit as a matter

of practical fairness, as a matter of procedural fairness, those documents ought be provided.

5 We did advance some submissions in anticipation of a legal professional privilege argument, it having been flagged in the letter from counsel assisting. That is not advanced so we do not go into those issues. But we do submit that the proposition put at paragraph 24 of counsel assisting's submission
10 remains pertinent in the circumstances of an exercise perhaps where your Worship examines documents or in some way evaluates what is being put by way of submissions for the purpose of determining whether access will be granted.

15 In determining that issue, we would submit that there are strong public interest reasons supporting the disclosure of the documents. It is in the public interest that the process
20 surrounding Mr Roche's report and its preparation be transparent and capable of testing as a matter of practical fairness and that that tends to emphasise that where a person who has fulfilled the different roles of Mr Roche, where he is
25 brought forward as a witness, that the documents of the type listed on the list of documents ought be provided and that the legal rationale for that is analogous to that set out in the authorities to which reference has already been made.

30 Could I make a couple of final submissions. Insofar as there is a quite reasonable concern that this inquiry end at some time and there not be undue delay, we would submit that the
35 resolution of this issue and the provision of Mr Roche's documents at the earliest possible time will in fact facilitate the process of his oral evidence when it comes to commence, as it apparently now will, on 5 October. So we urge
40 your Worship to grant the application and make the documents available to reduce the prospect of further interlocutory events, if I could put it that way.

45 With respect to Mr Cheney, I referred earlier to his more recent report. I just wanted to more specifically direct your Worship to the page

numbers. It is page 56-60, which is the new content. It is clear enough because it is in the red print. One can see what the new content is. That gives rise to a significant issue raised by
5 Mr Cheney, it not having been in his original origin and development of the fire statement.

It is also interesting and relevant to the present issue that Mr Roche, at page 131 of his report,
10 raises the same issue. In footnote 314 provides, as the apparent source for that, a personal comment by Mr Cheney. Now, I raise that because it seems that there has clearly been a process of consultation between the two witnesses. I am not
15 suggesting anything sinister in that. I am just saying it is a fact which is apparent from the documents. The fact that Mr Roche has raised that issue in his report with a reference to Mr Cheney and with Mr Cheney raising it for the first time
20 in his report, at least in his recent report, in my submission demonstrates a strong forensic purpose in the documents relevant to that issue which fall within the class of documents referred to in Mr Craddock's letter that those documents,
25 both in the custody of Mr Cheney and in the custody of Mr Roche, be made available. As I indicated earlier in submissions, it seems inevitable that this issue will be raised when Mr Cheney enters the witness box. The sooner the
30 documents are made available the better, I would submit, with the greatest of respect, because it is clearly an issue that is going to loom.

Could I just add in relation to Mr Cheney's
35 amended report, there is one further red paragraph which I should refer to. At the top of page 32 there is a red paragraph, clearly a new one, which raises some issues about the Service Management Team. I would add to the submission that I put
40 earlier, your Worship, that an alternative to the broad application in relation to Mr Cheney that has been put by Mr Petty is a narrow one that deals with the rate of spread issue, pages 56-60 of Mr Cheney, that this is in the same category.
45 This seems to be new material. It doesn't seem to have a source after the first line.

47

THE CORONER: Which page, Mr Johnson?

MR JOHNSON: Page 32. That is the actual page not
the computer generated page number, if I could use
5 that term. I don't actually have that,
unfortunately.

THE CORONER: I have the actual document page. I
thought you said at the top of that page there was
10 red.

MR JOHNSON: There is red at the top of our page,
your Worship. It may be that the pagination is
different in different versions of it.

15 MR WOODWARD: I think the passage on the version
your Worship may have is on page 0051, which is
page 30 on the copy I have. I am sorry that has
occurred. It is a passage that begins "in my
20 opinion".

MR JOHNSON: Yes, that is the passage. It would
seem that probably pagination hasn't mattered much
because we have all been able to see what is red
25 and what is black. That raises an issue not
raised before.

We would add to our earlier submission that, if
there was a narrower approach with respect to
30 Mr Cheney, that the material in relation to rate
of spread at pages 56-60 and the material in that
paragraph would be clearly such as to attract an
order from your Worship on the basis that the
principles I have outlined ought to be applied.

35 We broadly agree with the submissions put by
Mr Petty. There is obviously some points of
difference in relation to Mr Cheney. But as to
the legal rationale, as to the approach to the
40 resolution of the issue, we would adopt what has
been put to him. That is all I would seek to put
on the application.

THE CORONER: Thank you, Mr Johnson. Any other
45 counsel wish to be heard on this matter?

MR PHILIP WALKER: Yes, your Worship. Firstly, I

formally adopt what was said by Mr Petty and Mr Johnson. On the natural justice point about which Mr Johnson has mentioned and made a number of remarks, your Worship, it appears to me that
5 the course that is being urged upon you is in fact one likely to lead you into error.

I couldn't rise and say the requirements of natural justice whether at common law or whether
10 pursuant to the right accorded to people granted leave to appear in accordance with section 42 allowed an absolutely untrammelled right to do anything such a person wished to do without limitation or rhyme or reason.

15 Clearly there can be some control but what is being urged upon you, your Worship, in my submission is likely to lead you into error for this reason: you are being asked to rule out
20 access to documents before any party is able to find out whether they raise legitimate issues and before you are able to see in any degree of detail what those issues are and how a party proposes to advance them to you.

25 It may be, your Worship, that if documents are obtained as we seek in this process that somebody goes chasing a rabbit down some very long burrow and you say, "There is a point where I have got to
30 draw this up". But that judgment can be made at the time when the use that is proposed to be made of the documents appears before you and you can make a judgment on what the evidence has been and on what, if you so choose to question a party,
35 that party says it proposes to make of the course of cross-examination that is being undertaken. That, your Worship, permits you to make an informed decision which is consistent with the rules of natural justice.

40 You are instead being invited to make that decision effectively in the dark because neither you - I trust you have not seen the documents - we have not seen the documents, and no proper
45 evaluation can be made of what issue, if any, those documents actually raise. You are being asked at a premature stage to make a decision

which could have a substantial effect on the capacity for a party to properly present or respond to the issues raised in this inquiry effectively in the dark. That's my first
5 submission, your Worship.

THE CORONER: You are pre-empting what Mr Woodward may or may not say, Mr Walker.

10 MR PHILIP WALKER: I have read Mr Woodward's letters, and Mr Woodward seems to have taken the view that many of these documents couldn't possibly be of any use and he would tell us what documents might be of use.

15 Your Worship, that brings me to the next part of my submissions. One of the fundamental things which differentiates proceedings such as this one from ordinary civil litigation is that there are
20 no pleadings and particulars and, frankly, whilst we all have some conception of the issues which are presented before you, it is not like a court where one can simply go to the claim or the defence or whatever or a statement of particulars
25 and say, "Tell me how this is relevant to anything which is joined as between the parties in this case?"

The issues to some extent are at large. I don't
30 know what counsel assisting is going to submit against my client. And it is, again, not a proper point in time to make decisions in a very open process without pleadings and without particulars that counsel assisting alone will identify what
35 documents he considers relevant. For the purpose of counsel assisting's submissions in this process, he probably does think they are the only relevant documents, but he doesn't know how I might respond to the issues which he raises. He
40 doesn't know what particular tack I might take. It is not for counsel assisting, in my submission, to decide from the particular perspective he takes on these proceedings that he will identify what the relevant documents are.

45 The next point, your Worship, is: one has to put Mr Roche's and Mr Cheney's report in perspective.

These are two of the most important witnesses in these proceedings. They are not people who come in and give their evidence in an hour and have perhaps one or two questions asked by other
5 counsel. Mr Roche has been here for an extended period of time. Mr Cheney has done an enormous amount of work on this. Mr Roche makes comments about the structure of the Emergency Services
10 Bureau; he makes comments about virtually every principal participant in the fighting of these fires, including comments made by New South Wales; and our jurisdictions.

His report runs to some 200 pages and he will
15 undoubtedly be advanced to you as a man, because of his position at the head of the Country Fire Authority in Victoria, whose opinion you must accord a great deal of weight. If this application were made in some lowly public servant
20 or some neighbour or something of that nature whose evidence was of short compass, then, your Worship, there might be something more to be said of it. But it is hard to think of two more important witnesses to this inquiry than these two
25 gentlemen. Certainly from the point of view of my client, because in respect of both of them, they both make adverse comments about the performance of my client and virtually, as I have said, most of the other principal players who are represented
30 before you.

In the previous proceedings there have been a number of times where I think you, your Worship, and for that matter that counsel assisting have
35 made reference to this being an inquest and that it is not an adversarial proceeding; it is an inquisitorial proceedings; and the object of it is to find out what really happened.

Your Worship, against those comments as a
40 background, it is surprising when virtually all people who have been asked to produce documents have done so, up to and including - quite remarkably - the territory actually producing
45 cabinet documents, most unusual in any form of litigation. Everybody has been quite open in terms of the production of documents. Yet,

your Worship, it is counsel assisting, counsel
under your control, who is in fact urging upon you
that a series of - I think Mr Petty said something
like 126 documents - documents of Mr Roche, one of
5 the principal witnesses, not even be available for
inspection.

One other matter which has been advanced in
opposition to this application is the suggestion
10 that the documents would be ones which would only
go to the credit of Mr Roche. The first point
which might be made in relation to that is that it
is an extraordinarily difficult line to draw in
relation to an expert witness whose very opinion
15 is evidence in the case itself as to what
constitutes a matter of credit and what is in fact
an issue itself within the case. The slight
change in a person's opinion, and is one person's
notion of bias but it is ultimately an opinion
20 which becomes evidence in the case and therefore
goes and forms an issue.

It, again, would be in my submission a most
dangerous course for you to reject access to these
25 documents on the basis that they, so it is said,
merely go to issues of credit.

A further point which might be said on the issues
as to credit and the particular words that people
30 used to convey the meanings they intended. It is
interesting to contrast the amount of
cross-examination that occurred of people on some
minor notes of meetings at times - I would like a
dollar for every time I have heard
35 cross-examination on "positive spin" in this
inquest. One wonders why when that could feature
so prominently to try and work out what was said
and what was done, why when there is a request for
access to documents such as the ones here it is in
40 fact resisted by counsel assisting.

The final two points: it is put that this may take
up time of the inquest. Certainly in relation to
Mr Roche, it is very difficult to see how that
45 could possibly be so. The opportunity for
inspection can take place over the six weeks or so
before Mr Roche will give evidence. How ever

therefore it could in any way delay the inquest, I do not know. If it be suggested that access to the documents might result in greater examination or cross-examination, that's a most novel argument
5 put in opposition to inspection of documents - in my experience at least. But in any event, your Worship, it is to be controlled as I urged upon you in the first part of my submissions; it is to be controlled at the point in time when the
10 parties are to make use of the particular documents concerned.

Access to Mr Cheney's documents - as others have said, the critical aspect is the new part of
15 Mr Cheney's report. It could well be, your Worship, that access to Mr Cheney's documents in relation to the new part of that report could save time. I can tell you, your Worship, that within Mr Cheney's fire prediction model there are
20 a number of aspects which I actually believe to be wrong or ill-conceived. It is my intention, I think Mr Whybrow shares the same view, to go through that matter in some detail with Mr Cheney. If I get Mr Cheney's notes and can see why he did
25 what he did, that may reduce a very great deal of that time.

Finally, there is absolutely no evidence of any sort of oppression. A list of Mr Roche's
30 documents is being prepared. Mr Cheney presumably has reasonably ready access to his own documents. In my submission your Worship, for those reasons access ought to be granted in accordance with the applications before you.

35 THE CORONER: Yes, thank you, Mr Walker.

MR WATTS: Can I just say one brief thing; it is probably unnecessarily because Mr Johnson has
40 already dealt with it. As I indicated earlier, I simply adopt the submissions of Mr Johnson and Mr Petty on the legal principles.

The matter I wanted to mention is concerning a
45 matter that fell from your Worship concerning the Cheney report which indicated that it had been available and his evidence had been given in

October last year. Of course, the matter I am concerned about is the new matter concerning the rate of spread of fire. It is a recent matter. It was not dealt with in the first report and it
5 was not dealt with in oral evidence. For those reasons, there has been a delay certainly since the amended report was served, but not a significant delay. In my respectful submission, the documents concerning those new matters could
10 be produced and dealt with without any further delay in his evidence. Thank you, your Worship.

THE CORONER: Thank you, Mr Watts.

15 MR WHYBROW: I should just formally indicate --

THE CORONER: You don't have to say anything, Mr Whybrow, if you don't feel that way inclined.

20 MR WHYBROW: I failed to indicate before. I indicated that I supported the submissions on the basis of my representation of Mr Castle. I should formally put on the record that of the list of documents --

25

THE CORONER: Mr Roche's documents?

MR WHYBROW: Yes. Some are of particular direct interest to other persons whom your Worship has
30 granted me leave to appear, including the various documents as suggested questions. There are suggested questions for the interviews of Vivien Raffaele, Brian Murphy and Rick Hayes. So in that sense I only indicate that those interests are
35 also included in my adopting the other submissions.

THE CORONER: Yes, thank you. Mr Woodward?

40 MR WOODWARD: Your Worship, before dealing with specific submissions that have been made on behalf of the parties, in my submission, it is appropriate to go back to some basic principles. There have been a number of references in the
45 course of submissions to the fact that this is an inquisitorial proceeding, it is not civil litigation, and then submissions made that despite

that it is appropriate to draw analogy between certain aspects of civil proceeding and this process.

5 I think it is instructive, in my submission, to just refer briefly to some of the key sections of the Coroner's Act 1997 that do govern this process and that, in my submission, to a large extent
10 inform the approach that your Worship should take to the application before you.

Perhaps starting with section 42, which has already been referred to. This is the section dealing with rights of representation. It does to
15 a certain extent set out the ambit of those rights. They grant leave to:

"a person who has been ... to which the hearing relates."

20 It goes without saying that that is not a right that extends to obtaining what would amount to the sort of discovery that one is entitled to in a civil proceeding or, for that matter, the sort of
25 disclosures that might be said to be appropriate in a criminal prosecution.

Section 43 is the process by which your Worship is empowered to compel the production of documents.

30 Section 47, and in my submission this is a particular provision, for reasons I will come to, to which your Worship should have regard in the context of this application, firstly subsection
35 (1):

"A coroner is not bound to observe the rules of procedure and evidence ... for taking of that step."

40 Your Worship has in effect an unfettered discretion, subject of course to rules of procedural fairness, to determine the appropriate procedures to be adopted for this process.

45 Section 51 is another important section in the context of this application for reasons which I

will come to. Access to documents:

"A coroner may make available to any person
... intends to have regard."

5

Section 55, which as your Worship is aware
codifies the right of a person to be accorded
procedural fairness. And finally section 59:

10 "A coroner may by instrument appoint a person
... instrument of appointment."

And so on.

15 Your Worship, as has been in effect accepted by
all parties making application, the inquiry is not
a civil proceeding. Counsel assisting are not the
plaintiffs or the prosecutor. It is, I think,
useful, although it is a principle that is very
20 well known, to just refer briefly to what was said
in Annetts v McCann about the nature of the
process at page 616. I don't have a copy but I
think the principles are well known.

25 His Honour Mr Justice Toohey at page 616 refers to
an explanation for the practice of Chief Justice
Lord Lane in the case of the Queen v South London
Coroner where he says:

30 "Once again it should not be forgotten ...
whichever metaphor one chooses to use."

At the bottom of the same page Mr Justice Toohey
says:

35

"What was said by Lord Lane ... coronial
inquiries in Western Australia."

And in my submission continues to apply.

40

In my submission, the correct approach for
your Worship to take in response to this
application is as follows: the request does raise
issues of public interest immunity, in my
45 submission. And if it becomes necessary, I can
suggest to your Worship a way to deal with that.

47

In my submission, there are also issues about whether or not indeed your Worship has power to compel the production of these documents, given that they are not part of the evidence before
5 your Worship. However, in my submission the appropriate way to deal with this application is in exercising your Worship's discretion on matters of procedure under section 47.

10 In approaching the application pursuant to your Worship's discretion, in my submission your Worship needs to find a balance between the public interest in the integrity of the coronial process which is, as I have submitted,
15 fundamentally an investigative process, and the timely and efficient examination and reporting on matters the subject of the inquiry against the rights of individuals to be accorded procedural fairness. Keeping in mind that sections 42 and 55
20 are specific provisions that are designed to accord and ensure that persons interested have that very right.

In the submissions on behalf of the territory,
25 your Worship, there is an extensive reference to the decision of the Court of Appeal in New South Wales in Musumeci and also to a decision of the Court of Appeal of New South Wales in Maksimovich v Walsh. I will hand to your Worship a copy of
30 that latter decision. The Court of Appeal comprised of President Kirby and Justices of Appeal Samuels and McHugh. At page 328 the Court of Appeal and in particular President Kirby makes, in my submission, that very point. It is below
35 the letter "C":

"What is at stake is not ... of his inquiry."

40 Like many things in this area, it is a matter of balancing those principles. There are other matters in that decision which I will come back to a little later.

45 Turning to the specific submissions on behalf of the territory, so far as the written submissions are concerned, there is really, in one sense, very little between us. We agree that the question

today is to be determined based that the need to ensure that represented parties are accorded procedural fairness. We of course agree that the principles of procedural fairness apply in
5 coronial proceedings and we also agree, as is submitted by the territory, that procedural fairness is not an abstract concept and the rules are flexible.

10 But, your Worship, we agree with that particular principle in the context or in the sense referred to by Justice of Appeal Samuels in the Maksimovich case at page 337, where referring to the decision in Russell v Duke of Norfolk. His Honour says the
15 middle of the page:

"However, it may now be taken ... the rules under which the tribunal is acting" --

20 If I may interpolate - in this case those rules being those set out in the Act -

"and the subject matter that is being dealt with and so forth."

25 Similarly in Musumeci at pages 381-2, paragraph 32 of that decision where Justice of Appeal Ipp says:

30 "The requirements of natural justice are flexible and vary ... in the present circumstances."

I perhaps interrupt briefly to just jump to the next paragraph. Mr Johnson emphasised the
35 investigatory nature of an inquest. I note from the report that that is the very Mr Johnson before your Worship today who is now arguing an alternative position to the one he argued in that case.

40 MR JOHNSON: Life at the Bar.

MR WOODWARD: Indeed. I am not suggesting your
45 Worship take anything from that, other than perhaps a mild amusement. It is an investigatory process and that is emphasised by that decision.

47

The difference between ourselves and in particular the territory, but also indeed the other parties, turn on the character of these particular documents and not the general principles that have
5 been articulated.

What has been sought, your Worship, are not as the decision in Clarrie Smith describes. That is referred to in paragraph 11 of the territory's
10 submissions, I think it is the third complete sentence:

"Given the manifest relevance of the report itself, it is difficult to understand... to
15 the issues to be determined."

For this purpose we are conceding that source materials and preparatory materials are relevant. Indeed, that is precisely the position we took in
20 our letter in drawing a distinction between those documents which bear an asterisk and those that don't.

Our letter, in the first paragraph, encloses the
25 list of documents. We say:

"Only those documents marked with an asterisk in our view might arguably assist the
30 parties."

We pick up the words from their letter:

"To fully understand the report and appreciate ... other information relied on by
35 Mr Roche in preparing his report."

We don't take issue for this purpose, your Worship, with their entitlement to see those documents and indeed those are the documents that
40 are asterisked, in addition to the extensive cross-referencing that appears in Mr Roche's report. I will come to Mr Cheney's report in a moment.

The provision of the list in relation to Mr Roche, I should indicate, was provided with some
45 reluctance because of a concern that did exist at

that stage on 9 August that there should be no further basis for any delay in this process. And we would do all we reasonably could to assist the parties to have access to whatever documents that were genuinely relevant to the matters about which Mr Roche has expressed an opinion and on that basis we are prepared to provide a list.

Perhaps with hindsight it may have been more appropriate to constrain the categories of documents, because a quick perusal of that list shows that it has required us to refer to numerous emails that were sent to Mr Roche along with every other party in the proceeding saying which witnesses were going to be called next week and so on. There has been no attempt to distinguish between what are clearly documents they have already got and the ones that they are now seeking.

The documents now being sought are not in the brief. They are not evidence before your Worship or before any other party in this proceeding. In my submission they are not relevant to any of the issues referred to in the list of issues provided to the parties.

In that regard I take issue with the submission made by Mr Walker a moment ago that there have been no pleadings in this process. That is certainly true in a strict sense. But, in order to assist the parties as much as we could to understand what matters were going to be raised and what matters would be put to witnesses and what we as counsel assisting saw as relevant to your Worship's inquiry, on a date in November we provided to all parties what was described then as the phase 2 issues list, which was a comprehensive statement of all the matters that we considered appropriate for your Worship's consideration in this inquiry.

In that sense the parties have known at least since then what matters were to be agitated. I submit our approach to each witness has been entirely consistent and constrained by that list or that lengthy document.

Your Worship, I make the point about the character of the documents that are now being sought and in particular that character being not documents that are evidence, not documents that are in the brief
5 in order to highlight the distinction between what is now being urged upon your Worship as an appropriate basis for production and what was considered by the Court of Appeal in Musumeci, which was decided only last year. It is perhaps
10 of some assistance to just point to a couple of aspects of that case which, in my submission, are directly relevant to drawing a clear distinction between the circumstances before the Court of Appeal and what is currently before your Worship.

15 Perhaps beginning at paragraph 12 of that decision, which again is part of the decision of Justice of Appeal Ipp. The dispute in Musumeci was about evidence - that is evidence before the
20 inquest which was available to the coroner and to, in this case, the police sergeant leading the evidence but was declined - at least the coroner made a decision to decline to provide that evidence to a particular witness apparently, as
25 things developed, until a later point in the proceeding. At which point, as I understand the way the argument went, if he got to the stage where he thought it was necessary that he might form an opinion under section 19 about an
30 indictable offence, it indicated he would reconsider and perhaps provide the relevant evidence. But he withheld it for the time being for what he described as tactical reasons, amongst others.

35 In paragraph 12, your Worship will see in describing the background of the case Justice of Appeal Ipp said:

40 "On the opening day of the inquest ... to the claimant and so on."

The comments by the coroner in declining to provide that material are extracted at the bottom
45 of paragraph 15 where his Worship apparently said:

"There are tactical reasons ... prepared to

say at this stage."

5 The way the argument ultimately went was that it was open to the coroner to withhold that material until such time as it got to the stage where he may form an opinion that there was an indictable offence under section 19.

10 The submission on behalf of the Attorney General is referred to over the page at paragraph 21:

"Mr Johnson SC for the first opponent ... so early in the inquest."

15 I referred your Worship to some other passages discussing the nature of an inquest. At paragraphs 35 and 36, Justice of Appeal Ipp talks about the alternative argument where he says:

20 "The basis complaint of the complainant ... involvement in the death."

I refer to that passage to emphasise the nature of the material that the Court there was considering
25 being evidence. That was both available to counsel assisting and to the coroner.

But perhaps most relevantly, at about paragraph 39 his Honour says this:

30 "In my view there is a clear inference that the inquest ... by the disclosure."

35 For reasons I will come to, in my submission that is exactly the problem that your Worship is faced with. Disclosure in this case will give rise to all of those vices.

40 The submissions on behalf of the territory then go on to deal with a number of decisions which are said to contain principles which may be applied in this case. It has been indicated, but I would emphasise it, that these are all cases involving adversarial proceedings.

45 Your Worship, in my submission there is a distinction to be drawn between a witness for a

party in an adversarial proceeding and
your Worship's witness in an inquisitorial
proceeding, and in this case in particular in a
coronial inquest. There is always, and it is
5 notorious, that a witness that is engaged by a
particular party is often considered to be
something of a hired gun on behalf of that party.
And in those circumstances courts have generally
agreed, subject to developing principles about the
10 importance of independence, to enable opposing
parties to have access to as much material as
seems to be reasonably necessary to test every
element of that witness's report.

15 Your Worship, Mr Roche and Mr Cheney are both your
experts and in that sense I would adopt the
submission on behalf of the territory at
paragraph 23 where they are to be likened to a
court appointed expert, and different principles
20 in my submission should and do apply.

Indeed as I understand it, and I will no doubt be
corrected if I am wrong, under the New South Wales
court rules as they relate to court appointed
25 experts there is a discretion on the part of the
judge to determine whether a court appointed
expert will be cross-examined at all. In this
case, there is no suggestion that Mr Roche won't
be made available for cross-examination on all
30 issues.

I don't suggest that they are to be elevated and
given some special status as far as their evidence
is concerned. Clearly they are entitled within
35 reasonable limits to be cross-examined on all
matters, including matters of credit. In my
submission that stops a long way short of opening
up this type of process - namely, a coronial
process - to what is in effect a full-scale
40 discovery. I will say a little bit more about
that in a moment.

I don't want to go in any detail to the decisions
that are referred to in paragraphs 10 and
45 following, but I will draw your Worship's
attention to one particular passage in the
decision of Fagenblat. But perhaps first just

reminding your Worship that, for the most part,
all of these cases are concerned with the need to
provide to parties instructions given to experts
and source materials. We don't take any issue
5 with that. They are to be provided. To the
extent they haven't been already, and indeed we
would say they have largely been provided, those
are the documents that are asterisked.

10 In Fagenblat v Feingold, which is referred to in
paragraph 12 - I perhaps briefly mention, my
understanding and I say this based on an indirect
involvement in this case, the decision of Justice
Pagone on that particular issue wasn't the subject
15 of appeal. It was his subsequent decision on the
substantive hearing that was appealed
successfully, but I would certainly endorse what
my learned friend said in respect of his findings
in respect of the role of an expert. They weren't
20 the subject of any review in any detail by the
Court of Appeal.

What I draw your attention to is paragraph 12,
beginning with the words:

25 "The critical question is however ... to the
resolution of the issues in contention."

30 Whilst I wouldn't go so far as to suggest that all
of those issues can be said about the application
that is now made, in my submission there is
certainly a flavour, for reasons which I will come
to, and at least, your Worship, what in my
submission is being done is an attempt to find a
35 basis for arguments which at present have no
foundation. And in that sense this application is
a fishing expedition.

40 Turning to the categories of documents that are
referred to in paragraph 16 of the territory's
submissions, "letters and memoranda to and other
forms of communication with Mr Roche concerning
the matters which Mr Roche was asked to consider
when writing his report", those have been
45 provided, your Worship.

"Documents relied on for the purpose of preparing

the report regardless of how Mr Roche came by the documents" - again those have been provided.

"Material that Mr Roche chose to pass over when writing his report", that is a difficult category
5 because Mr Roche is a person of 40-years experience and has over the years of course gathered around him an enormous amount of fire related and fire behaviour related material. It is impossible to say whether he has anything in
10 particular that he may have read but didn't. What I would submit, however, your Worship, is that in his report he has identified the various categories of material that were available to him for the purposes of preparing his report. They
15 appear at pages 13 and 14 of his report.

He has also made it clear by the various cross-references that he has relied for the bulk of his opinions on the evidence; and he has
20 referred to the particular evidence that he has relied on by reference to transcript pages or statements. In those circumstances, your Worship, it is quite open to any party who themselves have access to all of the evidence that Mr Roche has
25 said he had access to, to go to a particular reference, read it and say, "Well, he has overlooked this piece of evidence on this earlier page" or "He has misconstrued it," and indeed to make submission or cross-examination of Mr Roche
30 about that and to make submission to your Worship that your Worship should disregard the opinion or particular opinion because he has failed to refer to a particular piece of evidence.

35 So in those circumstances, so far as reasonably practicable, every piece of information that Mr Roche may have had available and passed over has also been identified and to a complete extent provided.

40

Drafts of the report, your Worship, they fall into a different category, in my submission. The authority relied on for that purpose is an authority, as Mr Petty himself conceded, that is
45 concerned only with questions of privilege, not relevance. And only questions of privilege in the context of a subpoena served in a civil proceeding

where, in my submission, the approach a court takes to the issue of relevance is far broader than one that would be taken, for example, as part of discovery. And in my submission it should be
5 taken here.

In a civil proceeding it is open to a party in the lead-up to a trial to serve a subpoena. The test the Court would normally apply is whether the
10 document is relevant because it leads to a train of inquiry that might ultimately result in some basis for cross-examination. In my submission, those sorts of processes can't be applied and should not be applied by your Worship in this
15 proceeding.

The only basis that your Worship should have regard to in determining whether or not documents should be provided is whether they are relevant to
20 the issues as defined by the document that we provided to the parties last November. It is said, particularly by Mr Walker, that your Worship would be making a decision in the dark about that issue of relevance and that your Worship has to in
25 effect - and the parties - rely on what we say about what is relevant and what is not.

Two things to say about that: the first is that every day in civil litigation parties give
30 discovery and provide a list of documents, sometimes sworn and sometimes not, in which the party or the solicitors on their behalf set out what they say are the relevant documents, what is privilege and what isn't. There are often
35 arguments about whether a particular document is rightly the subject of discovery or not. In all of those cases, the Court will accept those lists on face value unless there is evidence to the contrary and everyday will deal with submissions
40 about whether a document is privileged or whether it is relevant in circumstances where the documents have not been given because, of course, once they have been given it defeats the whole purpose of the process.
45

There are two ways that your Worship can deal with that. Your Worship can either accept, and the

parties can accept that we have in a bona fide way gone through all the documents that we have been provided by Mr Roche in order to identify those that comprise source material or point to source material, and we have provided and will provide those documents to the parties. And the only documents that we have excluded are ones that we consider to be irrelevant to any of the issues that were disclosed in that document provided in November.

If your Worship and/or the parties are not content, the course often adopted in cases like this in order for your Worship not to be in the dark is for your Worship to take the documents yourself and review them. And if your Worship considers that there are documents there that are relevant to an issue in this inquest, then your Worship can make that document available.

There is a difficulty with that, only in this limited sense, and that is, under section 51, the section dealing with access to documents, at the moment the documents that are being sought do not fall within that section because they are not documents that your Worship has seen and they are not documents that are part of the evidence. If your Worship were to review the documents, then it might be argued by a party that they have now been elevated into a category that brings them within the operation of section 51, because your Worship has read them, and in those circumstances provide an extra basis upon which an application for release may be made. There is no easy solution to that other than perhaps involving one of your Worship's colleagues to deal with that issue.

But in my submission the appropriate course, unless the parties are prepared to, in a sense, accede to that course without your Worship being then confronted with an argument based on section 51, is to accept what we say, as counsel assisting, that we have genuinely endeavoured to provide every document that is a source document or falls within the categories referred to in paragraphs A and B and indeed E of the territory's submissions.

Your Worship, I have probably another 15 minutes of submission to make. I notice the time.

5 THE CORONER: We will adjourn for lunch then and resume at 2.

LUNCHEON ADJOURNMENT [1.00pm]

RESUMED [2.06pm]

10

MR WOODWARD: Your Worship, I do need to correct, it seems, what I said to your Worship about the New South Wales Supreme Court. I was reading from a definition of "court expert" in Butterworths, which must be out of date because it appears that recently the relevant rules were amended and there is now a right to cross-examine court-appointed experts under Rule 32 of the Supreme Court Rules. So I apologise for that.

20

Your Worship, as I did submit earlier, in my submission a court-appointed expert, particularly one appointed in an inquisitorial proceeding, isn't different to an expert retained by a party in adversarial proceedings.

25

Principally I should say in the context of these documents and this particular issue that I have not been able to, despite reasonably extensive searches, find any authorities on that issue. But in my submission it follows from the fact that the expert operates at the direction of your Worship, the coroner, not on behalf of a party who clearly has an incentive to press for a particular result. In this proceeding, in this inquisitorial process, there is no process of discovery or subpoena that gives a party as of right access to the broad category of documents that are now being sought.

30

35

Cases such as Southcorp, in my submission in those circumstances, have very limited application, particularly that case which, as I have submitted, relates only to questions of privilege. It is not authority, other than perhaps by inference, to support an assertion that a draft document - for instance, a draft report - is relevant. That's a question of fact but that is to be determined

40

45

based on the particular document.

In this process, even the production of the brief, although commonly done, to the interested parties is a matter of your Worship's discretion. It has been recognised, including in among other cases the decision of Musumeci, that your Worship has very wide discretion in the way you determine procedures under section 41. That is at paragraph 73 of that decision.

It is against that background that the applicants have sought to establish that the documents that they are now seeking are relevant to what has been described as a "legitimate forensic process", being the words used by his Honour Justice Madgwick in the Clarrie Smith case. In my submission, the process of determining a starting point for any legitimate forensic process is not the list of documents that we agreed to provide, despite the fact that there is no such process for one, but rather the report, and in particular the report of Mr Roche itself.

By that I mean, your Worship, that it is conceivable - I wouldn't put it any higher than that - that a report by an investigator appointed by the coroner may include or contain an opinion that is expressed and is so at odds with the evidence or otherwise unsupportable on any basis that a party who is affected by that opinion could come to your Worship and say, "Your Worship should infer because there is no other proper explanation for this opinion that in some way the opinion is improperly based" either because of bias or because he has been overborne or for some other reason. That, if it were able to be established, might provide the basis for some limited production of documents going to that particular expression of opinion.

But that should be the starting point - it should be the report and not some list of documents that has been prepared as a result of a consensual agreement between the represented parties and counsel assisting. And even conceding that may be overstating the position. But in my submission

that is where your Worship starts to look at this question of whether or not there is a legitimate forensic process.

5 What the parties in this application are doing is effectively turning that on its head and saying: we are not going to go to the report and say, "He has expressed an opinion that is not footnoted to evidence or is otherwise unsupportable and ask
10 your Worship to come to that conclusion. We are going to try to establish that forensic purpose by what is in essence a fishing expedition. We have got no other basis for making the suggestion so we want a wide-ranging discovery in the hope that we
15 might be able to find something that would provide a basis." In my submission, that is coming to the issue entirely the wrong way in this inquisitorial process.

20 I say that against the background of the provisions of the Coroner's Act to which I have referred your Worship, and in particular in the context of section 42, that it is not suggested that the parties aren't entitled to put those
25 sorts of matters to Mr Roche and Mr Cheney in cross-examination within reason. They can suggest to him that he has got preconceived views or he has been overborne and he will deal with that in his cross-examination. That is a right that
30 exists under section 42, and we don't resile from that. But it doesn't give a right - the fact that they might do that in cross-examination - to a wide-ranging discovery if there is no other basis upon which that right is asserted.

35 Your Worship, when I commenced my submissions, I made the point that the way in which your Worship should approach this process is by weighing the public interest in an efficient disposal of the
40 matters in issue in this process and procedural fairness being accorded to the relevant parties.

On the question of efficient disposal, it has been put that there is no likelihood of delay if the
45 documents relating to Mr Roche are provided.

Well, your Worship, in my submission, if I could put it this way, the floodgates are much wider

than is being suggested by that submission. And indeed is evidenced by precisely the vice that we identified in our letter when we said to the parties, "One of the reasons we were concerned
5 about an open-ended fishing expedition was that it would just encourage requests for further categories of documents." And precisely our prediction came to occur in relation to Mr Cheney. I will return to his documents in a moment.

10

But it has implications, in my submission, beyond this inquest to suggest that the coronial process permits, particularly in circumstances when there has been no careful analysis of relevant documents
15 in order to justify what is occurring here, would enable or entitle represented parties to some kind of discovery of the investigatory - I am trying to think of a word to describe the categories of documents - the documents other than the actual
20 evidence but rather the process by which the investigators, the Federal Police and so on, and indeed your Worship, and the coroner in other matters, him or herself, have approached the inquest would set an extraordinary precedent in
25 these processes. I have not been able to find any authority where that type of request has ever been made before. The only time it comes up is in cases like Musumeci where what the parties are saying, "Well, we want access to the evidence" but
30 that is not what is being sought here. These are documents that are peripheral, at best, to the process and are not the evidence.

In my submission, both in the context of this
35 particular inquest but also more broadly to allow this application would be setting a significant and very troubling precedent for all investigative processes that arise during the course of the coronial hearing. One only has to consider in a
40 case where, for instance, there is a suggestion of indictable offence what the implications of that might be. Those implications are perhaps not quite so extreme here but, in my submission, it would be a matter of great concern to those
45 involved in coronial inquests where the possibility of indictable offence arises.

47

But dealing with this particular inquest, as
your Worship has already observed, it is a process
that has already been prolonged in circumstances
where there has been a concern that represented
5 parties have expressed that they need more time in
order to examine what is a lengthy and detailed
report and indeed a report that is extensively
cross-referenced and therefore requires analysis
of the underlying evidence that is relied on. We
10 have acceded to that, despite our concern about
the delay.

What this particular process that we are now
dealing with has precipitated is, in my
15 submission, another completely ill-defined request
for documents relating to Mr Cheney. There has
been no attempt in relation to the Cheney
documents to again go to his report and say -
well, with respect to those who have perhaps
20 adjusted that position today, but certainly the
broader position that was articulated in the
letter that we received, I think it was last
week - what appears to have occurred is that there
has been a slight refinement of all of the
25 categories that were identified in the letter of
17 August and someone has substituted "Cheney" for
"Roche" and then hit the print button.

We have basically got the same letter that was
30 sent in respect of Mr Roche requesting, among
other things, emails passing between counsel
assisting and Mr Cheney and various other
documents in circumstances where, on the 9th of
June, a list of the sources, which in my
35 submission is the only legitimate request that can
be made, was provided to all the parties. Not one
party has come forward and said, "Can we see that
particular linescan image or that particular map
that Mr Cheney has referred to." Indeed, the
40 letter that was sent does not even refer to the
list. In my submission, that points again to what
is in essence a fishing expedition in the hope
that something might be turned up that would
provide the basis for an allegation that
45 Mr Cheney's views have been somehow overborne or
his views have been preconceived when there is
simply no basis, certainly not on his report, to

make such a submission.

If that request is acceded to, your Worship I haven't had time - this request only came in recently - and I have no idea how long it would take to prepare a list of the documents that are defined here. Certainly it could not be done before Mr Cheney is called tomorrow.

10 There has been a reference to a box of documents. Your Worship, Mr Cheney's documents fill a room. They comprise, as the list which was provided on 9 June discloses, "multisectoral linescan data, thermal imagery, satellite multisectoral imagery, 15 colour topography, photographs, field observations, videos, Bureau of Meteorology reports" and so on. The process of endeavouring to produce all of that material, your Worship, would inevitably delay the inquest once again, and 20 in my submission it is too late.

Mr Cheney's report was provided in October. He has made some amendments to it, which I will come to in a moment, but there has been all that time 25 to follow up on this issue. Indeed, it was followed up. That was why the list was provided on the 9th of June, and we have heard nothing more. Mr Cheney is due to give his evidence tomorrow and, in my submission, he should do so. 30 There should be no order for a list or anything like it or for the production of documents.

So it is correct, your Worship, that does evince a different approach in relation to Mr Cheney from 35 the one we took with Mr Roche. The simple explanation for that is when we dealt with the other parties on the question of other documents relevant to Mr Roche, we were concerned that there be no further basis in relation to delay in 40 relation to his evidence. So we acceded to the request.

There is, as I have said before, no procedure under the Coroner's Act or otherwise for providing 45 that, but we agreed to do it in the hope that it would progress matters. It seems - and perhaps we should have foreseen this - to in fact have had

the reverse effect and it is now potentially going to cause further delay.

5 Mr Cheney's report is extensively cross-referenced to all of the evidence on which he relies. In those circumstances, if the parties wanted particular documents that aren't already available to them - I should say that I am not sure there are any that are not already in the evidence -
10 then they had the opportunity to ask for that.

So far as the specific amendments to Mr Cheney's report are concerned, your Worship's attention has been drawn to the papers at the end of his updated
15 report where he deals with prediction of fire spread. Your Worship, a reading of those pages indicates that what Mr Cheney has done in those paragraphs is very simply apply very well-known and well-understood principles of fire spread
20 based on the McArthur forest fire danger meter, which is the green slide that he produced during his initial evidence and has been referred to extensively by other parties, including Mr McRae, and grassland fire spread meters and he has done a
25 mathematical calculation. It may be that he has made some errors, as Mr Walker suggests. I have not myself checked his calculations. But that is the basis for those paragraphs.

30 It is open to the parties to look at the slide ruler and undertake their own assessment based on the McArthur meter and to cross-examine Mr Cheney on those matters. But in my submission, apart from the matters that are specifically footnoted
35 in his report, there is no basis for any order for further production of any document in respect of the amendments.

Indeed, the list that was provided on 9 June
40 actually refers to some additional sources that were used to compile amended maps that Mr Cheney will give evidence about - I hope tomorrow - in an updated slide show. So in fact to a large extent the matters that are dealt with even in
45 Mr Cheney's updated report are also the subject of that list that was provided on 9 June.

47

In conclusion, your Worship, in my submission the balance strongly favours no further orders in respect of production of documents to ensure that the interests of the inquest and each of the represented parties are served. They are not being denied evidence; they are not being denied anything that your Worship hasn't had an opportunity to look at and will have an opportunity to look at.

10

It is open to them to cross-examine Mr Roche and Mr Cheney on issues of credit if they choose to do so, within reason, and to put to them suggestions about the way in which they may have approached their report. But beyond that, in my submission, what is being requested goes beyond anything that any party could reasonably say they were entitled to in the context of the process over which your Worship has authority and discretion. If your Worship please.

20

THE CORONER: Thank you, Mr Woodward. Do you wish to be heard in reply, Mr Petty?

25 MR PETTY: Yes, I do, your Worship.

Could I deal, hopefully in order, with various submissions put by my learned friend Mr Woodward. He first referred to the inquisitorial nature of the inquiry. It is apposite to pause to record that it is not wholly inquisitorial. Mr Woodward then referred to the right to cross-examine which is conferred upon any party to whom your Worship has granted leave.

35

Having made those preliminary submissions, he submitted the Act provided a code in relation to procedural fairness. The expression "procedural fairness" is not to be found, according to my reading of the Act, at any point. The true position is that the duty to accord procedural fairness arises from the right to cross-examine which follows the grant of leave. The duty arises as a necessary incident of these proceedings, and the content of that duty is itself to be determined as a practical matter.

47

Mr Woodward referred to the fact that your Worship is not bound by the rules of evidence. It does not follow that your Worship is bound to disregard the rules of evidence. The manner in which the Act is phrased makes that clear. So in many instances your Worship would find comfort and guidance in what happens in other types of proceedings. The fact that your Worship doesn't have to follow the rules of evidence doesn't mean that your Worship cannot look elsewhere to see what is appropriate in the discharge of the duty to accord procedural fairness.

At that point, and later, Mr Woodward referred to draft reports. There has been no case cited before your Worship in other jurisdictions where absent any claim for privilege in this context production of draft reports has not occurred. Indeed, in the cases to which your Worship has been referred, if privilege was not found or it was abandoned then production of the draft reports followed as a matter of course. There is good reason why that should be so, because a draft report would represent the author's opinion at that time. If there has been a change between the draft and the final report, one is entitled to explore why and for what reason the change has taken place.

Mr Woodward then raised the question of whether your Worship has power. I must say, I would have thought it was a submission that one would not expect to hear from counsel assisting. Today's proceedings are the second phase of a process which was proposed to your Worship and endorsed by your Worship on the 9th of August that a list of documents would be produced. If your Worship resorts to the transcript, your Worship will see that Mr Lasry made it abundantly clear that objection would be taken to the production, I think he said, of some documents. It has turned out that it is most.

But the fact that there was going to be a second phase was known to everyone. In fact, in the correspondence that has been exchanged, my clients were invited to make this application today. If

some question of power is going to arise then my response is this: firstly, having regard to the nature of these proceedings, your Worship has the power to give directions for their conduct and for their fair conduct. So on that basis alone we submit that your Worship has the power to make the orders.

If that is not correct, then your Worship has the power to issue a summons requiring production of documents. Your Worship can even issue a summons on a Sunday if your Worship wishes. So this is a submission by Mr Woodward that really puts form over substance. If your Worship is convinced that there is an appropriate foundation for the production of the documents then it matters not how it occurs. Your Worship can make a direction. If that is not available, your Worship can issue a summons.

And to put the matter beyond rest, I formally make the application that your Worship do issue a summons so that this issue of how it is to be achieved is put aside and we get down to the central issue of whether there is a legitimate forensic purpose.

Mr Woodward then complained that this was akin to discovery. We have gone past that stage because the list of documents has already been provided. Once the existence of those documents and their identity is known, then they can be the subject of a summons - once again if your Worship is satisfied that there is a legitimate forensic purpose. That we submit is the ultimate question before your Worship.

Mr Woodward submitted that the court-appointed expert was in some way different to an expert who was otherwise involved. No authority for this was cited and it fails to recognise common experience of what does happen with experts - that they can consciously or unconsciously align themselves with whomever has retained them; that they may be fallible in terms of their expertise; or like matters.

Reference was made by Mr Woodward to the decision in Southcorp. The fact is in that case once it was found that there was no privilege, then the order was made as of course. Indeed, one can see
5 that Mr Justice Lindgren did not hesitate once he had found that there was no privilege, it followed automatically that the draft reports had to be produced.

10 He suggests that the report is the starting point. One finds no hint of that in any of the decisions to which your Worship has been taken. It would seem to elevate the report to something akin to
15 biblical status such that a person seeking to challenge it through documents has to first displace it before they can attempt to otherwise challenge it.

The ultimate submission that he put was that
20 your Worship had to weigh up the efficient disposal of these proceedings with the requirements of procedural fairness. There is no authority which suggests that procedural fairness comes in some attenuated form diminished by
25 expediency or otherwise. If your Worship comes to the view that procedural fairness requires that these documents be produced, then that cannot be displaced by one's desire that the proceedings be concluded expeditiously.

30 There is another side to that coin and that is this: Mr Woodward rightly concedes the experts can be cross-examined as to credit, partiality and like matters within of course the usual limits.
35 For example, Mr Roche can be cross-examined on what one can glean by way of sequence from the dates that are given for the documents in the list. That type of cross-examination, experience suggests, is likely to be slow because the
40 cross-examiner has limited material to go on.

It is more likely that that type of
cross-examination will be more efficiently
concluded if the cross-examiner has access to the
45 contents of the document, particularly as the cross-examiner can see what rabbit should be chased down what burrows. In that way the

cross-examiner will not be cross-examining blind
and may find what appears to be a productive area
of cross-examination turns out to be of no use.
We submit that predictions like that are likely to
5 be speculative and, if anything, the production of
the documents is going to refine the
cross-examination of the experts.

10 It is suggested that to accede to the application
will set a precedent. Well, we all know every
case is different and what is required to be
determined in any particular case is governed by
the circumstances of the case. Mr Woodward said
15 somewhat apologetically that they should have
foreseen that today would arise. It is somewhat
too self-effacing because his leader Mr Lasry made
it clear on the 9th of August that that objection
would be taken and that today was going to arise
in any event.

20 The last matter that I wanted to draw
your Worship's attention is this: 13 documents are
available for production. Lest it be thought
there is something cosmetic about this,
25 Mr Craddock asked yesterday for those documents
and was informed that they were on their way from
Melbourne. There is an interest in having these
documents. 13 from 135 is not the figure that I
told your Worship earlier on. It is 122. I
30 apologise for that error. It just demonstrates
once again that the practice of the law is 60 per
cent knowledge, 40 per cent experience and 10 per
cent mathematics.

35 We submit that there is a legitimate forensic
purpose; that the authorities by way of analogy
indicate what that is; and that your Worship
should grant the leave that we seek.

40 THE CORONER: Thank you, Mr Petty. Do you wish to
be heard, Mr Johnson?

MR JOHNSON: Yes, thank you, your Worship, just
45 shortly.

Reference was made to the Court of Appeal decision
in Musumeci. To the extent that Mr Woodward in

referring to the judgment referred to the fact that it was evidence that had been referred to, if by putting that submission he has read the judgment as meaning that the coroner admitted as
5 part of exhibit 1 or such the material that was not disclosed, that is not the true position. As Mr Woodward has pointed out, he has clearly read the case, I did appear in it. I can tell your Worship that the position was that the
10 material had not been tendered. Indeed, if it had been tendered, one would expect a somewhat different judgment; namely the question of whether the coroner had the power to suppress evidence received as part of the evidence in the coronial
15 inquiry.

THE CORONER: The coroner had seen it and was aware of it.

20 MR JOHNSON: The coroner had. It was in the possession of the police assisting. The order ultimately made was against the coroner and the police assisting. The view taken that the documents were in the hands of those assisting the
25 coroner, as indeed these documents are. Because Mr Roche, it has even been suggested he can be considered as some type of statutory investigator appointed by your Worship. I don't know if that is in fact how he comes to be performing the
30 functions that he is. He is under the umbrella; he is assisting the investigation. I mention this in case it is thought that the Musumeci case was about the withholding of evidence from Mr Musumeci. It was not. It was about the
35 withholding of documents or material for a period. I don't think much turns on it, but just to make sure that accidentally and erroneously something does turn on it, I mention that.

40 The second point I seek to make is that it would be erroneous to conclude that section 55 of the ACT Coroner's Act codifies procedural fairness requirements. Section 55 is dealing with one aspect, which is the Annetts v McCann type issue.
45 The Act of course does not purport to codify. One would find it as a startling proposition that a fundamental common law proposition or right such

as to be accorded procedural fairness would be cut down and confined into a provision such as section 55.

5 Section 55 is a statutory recital, no doubt, to allow some orderly manner of dealing with that issue in this territory. It of course does not touch, nor does the Act generally touch, the type of procedural fairness considered by the Court of
10 Appeal in New South Wales in Maksimovich v Walsh, and also in Musumeci, which related to a person who had been granted leave to appear because he had sufficient interest.

15 I invite your Worship to look at the Musumeci case. I think it is paragraph 9 of the judgment in the Australian Criminal Report - it is a bit hard to read - of the Court judgment of
20 Justice Ipp. It recites there is a grant of leave which had as part of it an opportunity to examine, cross-examine, and this was because sufficient interest in the subject matter of the inquest had been demonstrated. They are the words of section
25 42 of this Act.

Secondly, what the Musumeci case is about is not some abstract concept of procedural fairness. But, as Justice Ipp pointed out in paragraph 35, the coroner's decision had the practical effect of
30 requiring the claimant to cross-examine on inadequate material. And it was said in paragraph 36, indeed I advanced the submission, that perhaps this could be met by the recalling of witnesses and such. The Court said, "That's no
35 solution. A cross-examiner is entitled to fairly and effectively cross-examine a witness."

Now, that is important because that is what this case is really about. This case is the fair
40 ability to cross-examine a witness who has been adduced and who is saying things critical of a number of persons. And the appropriate analogy is that of the principles applicable in civil proceedings. There is no authority to suggest or
45 to support the proposition that a cross-examiner before this court should have one hand tied behind his or her back when dealing with an expert.

Mr Petty points to the practical fairness issue. I have already made some submissions on that and I echo that submission.

5 In relation to Southcorp, counsel assisting has submitted that Southcorp can in some way be read down because it is really a legal professional privilege case. I invite your Worship to read the case. At page 4 of the outline of the submissions
10 of the territory there is a quote. Justice Lindgren started off by referring to ordinarily a confidential briefing or instruction would be caught by legal professional privilege. His Honour later says that if the witness is called,
15 well, that privilege is waived.

Paragraph 3 is very pertinent:

20 "Documents generated unilaterally by the expert witness ... not in the nature of and would not expose communications."

It only takes a couple of seconds to realise that that must be right. Draft reports are a very real
25 and live issue here. Mr Roche, it seems, has prepared a number of them. Cross-examiners on the submission of counsel assisting will be deprived of them. Why? There is no question of privilege. The Southcorp principles are clearly applicable.

30 One would have to submit: what is the problem in producing the draft reports? It cannot be said they are irrelevant because they must be, one assumes, relevant to the issues identified by
35 counsel assisting as relevant to this inquiry. So they must bear upon the very subject matter of your Worship's inquiry.

40 They reflect Mr Roche's developing thoughts. He may have changed his mind. He may have included factors that he later on removed. He may have had some factors which he added. In ordinary civil and criminal proceedings a cross-examiner is
45 entitled to that as a matter of fairness to deal with that issue in the proceedings. There is no other standard. There is no second-rate test of procedural fairness in this jurisdiction, in my

submission.

5 So Southcorp is effectively strong authority for
the proposition that the class of documents
referred to by Justice Lindgren in paragraph 3 as
to which no question of privilege could ever arise
ought to be provided and drafts are at the
forefront for present purposes.

10 Insofar as it was suggested that there was a
balancing exercise, the question is whether a
legitimate forensic purpose is identified. In
civil proceedings that would go effectively,
without saying, given the class of documents:
15 Does the nature of this jurisdiction make a
difference; those witnesses to be called, Mr Roche
in particular, and there are critical comments
that he makes.

20 The balance is said to be, as I understood it when
it was articulated after lunch by Mr Woodward,
weighing the public interest and the efficient
disposal of the inquiry against the fairness to
the party. One would have to say if one is
25 talking about the scales, there is simply nothing
in the suggested efficient disposal of the inquiry
side of the scales. There is a good deal on the
fairness side.

30 But the legal propositions advanced by Mr Woodward
in support of the efficient disposal proposition
need to be examined a little more closely. I
don't know if your Worship has Maksimovich v Walsh
which has been referred to by Mr Woodward. It is
35 not in our material, but I can provide a copy to
your Worship.

THE CORONER: I have a copy.

40 MR JOHNSON: At page 328 of the NSWLR decision,
there is at point C in the judgment of Justice
Kirby:

45 "Nevertheless it would seem to me that the
obligation to afford a person ... efficiency
and utility of his inquiry."
47

What does that mean? The submission that I would put is that it means what Mr Petty submits. It means that the idea of having a witness who is called with documents either not provided or
5 provided very late so that it fractures the inquiry can affect the efficiency and the utility of the inquiry. It doesn't mean that in some broad and theoretical way your Worship can say, "Well, if these documents are provided, that may
10 bear upon the efficient disposal of the inquiry." Fundamental to the efficient disposal of this inquiry is a fair and transparent process.

I would submit that there is no reason that has
15 been advanced as to why draft reports certainly should not be provided. It is, with respect, surprising that there is nothing that is advanced in the sense of any factual submission, if that is to be suggested.

20 Ordinarily if there is, for example, a public interest immunity claim, there will be an affidavit. If it is said there will be some interference with the investigation, some
25 obstruction with the coronial process, some general concept of interfering with the process in the future, then there would be some evidence. They are not matters to be asserted from the Bar table or inferred.

30 Your Worship has been asked to make a ruling in the circumstances of the present case on the evidence and the principles in the present case.

35 I certainly invite your Worship to examine matters with the view to the legitimate forensic purpose issue but knowing that that hurdle is passed very quickly with respect to most of the categories of documents in the Mr Roche list. And I would
40 submit that the proposition that my friend is advancing is not supported by authority. If it is in a sense a type of backdoor public interest immunity claim, but it is my understanding from what he said earlier, that the public interest
45 immunity issue was to be deferred and not advanced now. If it is being advanced now, we need to know it. There is no evidence. Of course, as the

authorities make clear, public interest immunity claims require an evidentiary basis.

5 If your Worship is being asked to take those factors into account now, there is no evidence in support of the bald assertion that there would be some problem with the efficient disposal of the inquest. Mr Roche is not being called until 5 October but the documents could be made
10 available. Let them be examined and let his evidence commence.

The difficulties will arise in fact by approaching the matter in the way that my friend suggests, I
15 submit: firstly because your Worship would fall into legal error; and, secondly, because what is being proposed is the alteration of what should be a relatively straightforward exercise into a complicated one by application of principles and
20 tests being advanced without authority.

So I would invite your Worship not to follow what I would submit is the erroneous path identified by counsel assisting but to approach the matter upon
25 the basis of authorities. Clearly one notes that you are not hearing civil proceedings, as Mr Woodward fairly pointed out. You are not here to determine guilt. You are not here to apportion blame. That has nothing to do with your function.
30 Indeed, that will be an important issue in this case generally. But you are here dealing with a report which does in some respects make comments adverse to people, which clearly activate
35 procedural fairness considerations. Persons are entitled to protect their reputation and to challenge material which is put forward when it is in a special category in this inquiry; namely, expert opinion evidence.

40 So I would urge your Worship to make the orders sought in relation to the Roche documents, and I maintain the position in relation to the Cheney documents. But I have nothing to put by way of
45 reply to it. I note the issues joined on that, but I would maintain the position essentially for the same reasons in principle but with perhaps the solution to the Cheney document issue as we would

propose it being a somewhat simpler exercise than that advanced by others. That's all I wanted to put in reply. Thank you, your Worship.

5 MR PETTY: There was one matter I omitted to clarify, if I could have a moment.

THE CORONER: Yes.

10 MR PETTY: Mr Woodward said - perhaps "complained" was a better expression - that the Roche list of 135 documents included documents such as emails circulated to everyone which we already had. That is in fact correct. There appeared to be in the
15 list some housekeeping emails concerning witnesses and the like.

It was never intended, as I understood your Worship's order made on 9 August that matters
20 such as that, housekeeping type documents, had to be included in the list. We do not seek at any stage to have documents produced that we already have. That includes not only those circular emails but I see document or category of document
25 132 was extracts from transcripts and statements and the like. In fact it does seem somewhat overzealous that those documents were even included in the index in the first place.

30 THE CORONER: I suppose in the interests of completeness and openness it was the appropriate course to take given the nature of the request. Yes, Mr Walker?

35 MR PHILIP WALKER: Your Worship, might the record show that I would join in Mr Petty's application for that summons should the issue be one which arises.

40 While listening to my learned friend's submission I happened to stumble across an extract in the transcript where an approach of this inquest was set out by your Worship at 2771, beginning at line 34 where your Worship said:

45

"Unless there is a very compelling reason why evidence should be excluded ... to come from

that witness.

In my submission, that is entirely in accordance with the spirit of the application put.

5

THE CORONER: Thank you, Mr Walker.

MR WHYBROW: Your Worship, perhaps I can go next, only on one matter that hasn't been addressed by learned senior counsel in the front row. Again, I indicate my adoption of their submissions.

10

Mr Woodward, in relation to submissions to refusing the application as it relates to any documents that relate to Mr Cheney, asserted in relation to the updated aspect of his report that in effect - page 6721 of today's transcript - that so far as the specific amendments to Mr Cheney's report are concerned, a reading of those pages indicates what Mr Cheney has done in those paragraphs is very simply apply very well-known and well-understood principles of fire spread based on the McArthur fire danger meter.

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Your Worship, that, with respect to learned counsel assisting, is just not correct. That report makes it plain that those things are used and then something which has been referred to at length called Project Vesta is included, which involves changing the figures that would otherwise be utilised. I understand it is common knowledge amongst this inquest that Project Vesta is unpublished - to this day - research.

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If these figures in this updated report include performing calculations based on unpublished data, that makes it very difficult for people to test the accuracy of those predictions. They are very important matters. And lest it go unsaid, I submit that, on that aspect of the submission, that is not what Mr Cheney does. He has significantly changed his earlier report by adding a subject which was not previously covered in October to June, which was making predictions that he asserts that people could and should have made as of January 2003.

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THE CORONER: Thank you, Mr Whybrow.

MR WOODWARD: Your Worship, could I deal with two
housekeeping matters, if I may. The documents I
5 have been referring to are documents which we are
willing to provide on the basis that they
constitute source documents. I will provide those
to the Court operator for the purposes of having
those put on the system. I did want to mention,
10 however, there has been one redaction made in
respect of one of Mr Roche's notebooks. It
relates to a remark that Mr Roche recorded someone
made within his hearing which is irrelevant to the
inquest and it may embarrass the persons
15 concerned. It has been redacted for that reason.
Subject to that, these documents are produced and
will go onto the system.

In my submission, that is the best way to deal
20 with it. They will become documents in the way
every other document has and been part of the
brief. I will provide them to the Court operator
for that purpose.

25 THE CORONER: They are the documents marked with
the asterisk?

MR WOODWARD: That is correct, your Worship, in
that order. Would your Worship permit me to
30 briefly respond to Mr Whybrow's remark about
Project Vesta?

THE CORONER: Yes.

35 MR WOODWARD: It is important in this sense: if it
is being suggested that the Project Vesta material
should become part of the documents produced by
Mr Cheney, then, your Worship, that is a matter of
considerable concern. Project Vesta is, as many
40 people know, as all the fire behaviour experts
know, a project that has been running for many,
many years in Western Australia. The volumes - I
can't begin to imagine the volumes of material
that have been generated out of Project Vesta.

45
What is well-known and indeed is the subject of
evidence, particularly by Mr McRae, and documents

were produced that show that there were public releases, media comments and so on - these are in evidence - where a preliminary result of Project Vesta was published to all fire agencies around
5 Australia in the limited sense referred to in Mr Cheney's report here; namely, that under certain conditions there is a need to effectively multiply the fire danger meter by three. That has been the subject of evidence. It is a well-known
10 outcome of Project Vesta that is recorded in documents that are before the inquest. I wanted to draw those matters to your Worship's attention, if your Worship pleases.

15 THE CORONER: Mr Watts, do you wish to be heard in reply?

MR WATTS: Nothing more, your Worship.

20 THE CORONER: I will give my decision on this matter tomorrow morning but I do intend that, as originally planned, we start with Mr Leonard and that Mr Leonard be called to give evidence and also as planned that Mr Cheney be available. I
25 understand that that was the plan also, that Mr Cheney be here to give evidence tomorrow.

MR WOODWARD: He will be. I informed parties in correspondence that has been produced this
30 morning, in my submission, particularly because Mr Cheney has indicated like many others will be at the AFAC conference at the beginning of October, indeed he is using that opportunity to go over to Western Australia and other places for
35 some weeks it is imperative that he gives his evidence now.

If as a result of any order that your Worship makes documents are produced or a list is produced
40 and subsequently documents are produced that then necessitate his recall, then we will in my submission cross that bridge when we come to it. Given the difficulties with his availability in that October period that has been set aside, in my
45 submission his evidence should proceed as far as it can be taken in the absence of documents. Of course if your Worship were to decline the

application, then that will conclude his evidence
and we won't need to trouble him again. If
your Worship pleases.

5 THE CORONER: We will adjourn until tomorrow
morning at 10 o'clock.

**MATTER ADJOURNED AT 3PM UNTIL THURSDAY,
26 AUGUST 2004**

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TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 72

Thursday, 26 August 2004

THE CORONER: I will give my decision on the matter of the production of documents.

5

Overnight I have reviewed the submissions made yesterday by counsel seeking the production of certain documents and have considered the cases referred to me and the principles contained in those cases. The submissions, arguments and cases must be viewed against the context of the provision of the Coroner's Act 1997 which governs this inquiry, in particular section 47(1) which provides that as coroner I am not bound to observe the rules of procedure and evidence applicable to proceedings before a court of law.

In addition to the fact that the rules of evidence do not apply, the thrust of the Coroner's Act is to bestow a very wide discretion upon a coroner on the conduct of the course of an inquiry.

Now having said that, there is, nevertheless, a clear and well established requirement to ensure proceedings are governed by the rules of natural justice and specifically procedural fairness, and cases such as Annetts v McCann, Maksimovich v Walsh and Musumeci are on point in relation to coronial proceedings being governed by natural justice and procedural fairness.

Now, I will quote some words of Chief Justice Young in Equity in the Musumeci case. On the copy that was handed up to me by Mr Johnson, it is at the foot of page 206 of that decision. What Chief Justice Young said there is:

"On the wider question of natural justice it is to be remembered that all courts and quasi judicial tribunals have an obligation to conduct fair hearings and to accord persons appearing before them natural justice. However, it is also trite law that the concept called natural justice is infinitely variable. As Lord Justice Tucker said in Russell v Duke of Norfolk [1949] 1 All ER 109 at 118."

The passage which has been cited constantly since. There is also reference there to Kitto J and cases. The quote is:

5 "'There are, in my view, no words which are
of universal application to every kind of
inquiry and every kind of tribunal. The
requirements of natural justice must depend
10 on the circumstances of the case, the nature
of the inquiry, the rules under which the
Tribunal is acting, the subject matter that
is being dealt with and so forth."

Now, for present purposes, procedural fairness
15 requires that persons who have been granted leave
to appear ought to be represented in this inquiry
but provided with copies and given access to
evidence which is before the inquiry; that they be
afforded the opportunity to test the evidence by
20 examination or cross-examination of witnesses;
that they be given the opportunity to bring to the
notice of the coroner relevant evidence or
material which may counter other evidence which is
already before the inquiry, such as by bringing to
25 notice other opinions or expert opinions, that
they be afforded the opportunity at the end of the
proceedings to make submissions and to reply to
submissions made by counsel assisting and other
counsel.

30 Furthermore, the expectation of procedural
fairness is reflected in the legislation itself,
in the provisions of section 55 of the Coroner's
Act which prevent a coroner from including in a
35 finding or report a comment adverse to a person
unless the coroner provides that person with a
copy of the proposed comment and allows time for
a response.

40 This inquiry has been and will continue to be
governed by those principles of natural justice.
It appears to me that the nature of the requests
made by counsel are more appropriate to civil
litigation in a court of law than to a coronial
45 inquiry unimpeded by the rules of evidence. For
example, the request for access to voluminous
documents gives every appearance of discovery and

in many respects they seem to me to be a fishing expedition without any real substance.

5 Now apart from three, the authorities relied on by
counsel to support their request are not directly
relevant to coronial inquiries but relate to civil
litigation. And of the three cases which relate
to coronials, and I have mentioned those, only
10 one, Musumeci, relates to the production of a
document, but that case can be distinguished on
its facts. Unlike in that case, I am not in
possession of any relevant evidence which I am
withholding from counsel, nor to my knowledge is
counsel assisting me.

15 Now the nature of the submissions made yesterday
by counsel have left me with the impression that
they are seeking to impugn the integrity of this
coronial inquiry and also the integrity of counsel
20 assisting. If this is the intent of the
submissions, then I reject them as being without
foundation.

25 Additionally, the nature of the request for
documents suggests an attempt by counsel to be
seeking or fishing for something upon which to
base an attack on the credit of Mr Cheney and
Mr Roche. Now, both of these persons have been
appointed by me in accordance with the provisions
30 of section 59 of the Coroner's Act to assist with
the investigation and were appointed as
independent and impartial experts.

35 However, if it is the aim of counsel to question
Mr Cheney and Mr Roche on issues of credibility in
relation to the preparation of their respective
reports, then I am satisfied that counsel will
have the opportunity to test their credibility
through the process of cross-examination.

40 Yesterday Mr Petty argued that Mr Cheney and
Mr Roche do not have any elevated status which may
prevent them from being challenged. I agree. And
the proper way and the only proper way to
45 challenge their evidence is by cross-examination.

Now, in this regard I consider it relevant to note

that Mr Cheney and Mr Roche's reports are extensively footnoted and, as such, provide an evidentiary trail which can be followed by counsel in the event that they wish to test the accuracy and veracity of the statements contained in the reports.

In short, I am satisfied that counsel has had the reports in question for a sufficient time to consider their contents and to be ready with whatever arrangements they need to make to deal with the material.

For the record, Mr Cheney presented his report - it is dated 3 October and I am sure it was available before that date - on 3 October, say, and he gave evidence in these proceedings in October 2003. Mr Roche presented his report in the middle of July, and counsel have had his report since the middle of July. Counsel likewise had been on notice since last year that Mr Roche was to provide a report and was to give evidence in these proceedings.

So consequently I am satisfied that the requirements of procedural fairness and compliance with the relevant legislative provisions do not require me to exercise my discretion to direct that the documents and records sought by counsel in relation to Mr Cheney and Mr Roche's reports be produced, and I do not direct that those documents be produced. That is, other than those which counsel assisting has undertaken to make available to the parties.

So, gentlemen, let's get on with the hearing.

MR CRADDOCK: Before we get on with the hearing, unless there be some suggestion there has been any implicit agreement by silence, let me say this: the impression that your Worship claims to have been left with, that the application that was made by myself and others was such as to seek to impugn the integrity of the coronial inquiry and counsel assisting is an impression entirely without substance and is plain and utterly wrong, and I reject it.

Now, having said that - and I want that on record
and clear - I now ask your Worship to allow those
of us who made the application an opportunity to
speak to our respective clients. I would ask that
5 your Worship grant us about 15 minutes to do so.

THE CORONER: You can do that in the adjournment,
Mr Craddock. I want to proceed with the evidence
of Mr Leonard. I will take a longer morning
10 adjournment if you wish and I will give you an
opportunity to speak to your clients after we
start the evidence of Mr Leonard.

MR CRADDOCK: If your Worship pleases.
15

THE CORONER: Is Mr Leonard available,
Mr Woodward?

MR WOODWARD: Yes, he is. I call Mr Justin
20 Leonard.

<JUSTIN LEONARD, AFFIRMED

<EXAMINATION-IN-CHIEF BY MR WOODWARD

25 MR WOODWARD: Q. Is your full name Justin
Leonard?

A. Yes.

30 Q. Mr Leonard, what's your current business
address?

A. CSIRO, Graham Road, Highett, Melbourne.

35 Q. Mr Leonard, you have provided a report for the
use of her Worship and the parties for this
inquest dated July 2004?

A. Yes.

40 Q. Do you have a copy of that report with you?

A. Yes, I do.

45 Q. For the record, the courtbook number of that
document is [DPP.DPP.0009.0210]. While that is
being brought up on the screen, Mr Leonard, have
you had an opportunity to review your report in
recent days?

47 A. Yes, I have.

Q. Are you satisfied that it is true and correct?

A. Yes.

Q. Are there any changes or additions that you
5 want to make to it?

A. No.

Q. You have provided as part of your report,
Mr Leonard, a CV which concentrates I think it is
10 fair to say on your various roles particularly
during your time with the CSIRO. And you also in
your references mention a number of publications
to which you contributed. Your CV doesn't set out
any of your qualifications, could you just outline
15 those please?

A. Sure. I am a qualified mechanical engineer
and following on with 12 years experience as a
fire science researcher, and I currently head the
team for bushfire research within my division of
20 the CSIRO.

Q. Your qualification as a mechanical engineer,
where did you obtain that?

A. At Melbourne University.
25

Q. And the actual degree you hold is what?

A. It is called mechanical and manufacturing
engineering, bachelor of.

Q. You mentioned the team that you head up at
CSIRO. It is as I understand it - I will get the
name right - the CSIRO manufacturing and
infrastructure technology division; is that
30 correct?

A. That is correct.
35

Q. What is the role of that division within
CSIRO, Mr Leonard?

A. The division seeks to provide a research base
40 for infrastructure based technologies in
Australia. So we support the building industry
and the transport industries and have a wide range
of research capabilities to understand the science
behind industrial processes, transport mechanisms,
45 effective building design and regulatory reform.

Q. Within that division there are presumably

subdivisions, is that correct, or teams?

A. Yes, that's right.

Q. The one that you head up is concerned
5 exclusively with the effects of bushfire on
structures; is that essentially it?

A. Yes, we deal with the effects of bushfire on
infrastructure. We deal with structures
principally as well as things like firefighting
10 vehicle design and other things that relate to
bushfire impact on infrastructure.

Q. The research that you undertook in relation to
the fires in Canberra, Mr Leonard, was similar to
15 research that has been undertaken by that team
over several years; is that correct?

A. Yes. The team has a long history of
investigating urban and periurban impact by
significant bushfires in Australia. That survey
20 initiative occurred from Ash Wednesday through to
the current time.

Q. And so the work that you have done, although
now provided for the benefit of this inquiry, is
25 research that would have probably have been
undertaken by your team in any event; is that
correct?

A. Yes, it has been a tradition that we
investigate fires of the magnitude of Canberra,
30 particularly bushfires that involve significant
levels of house loss.

Q. You used in your answer a short time ago
"periurban", could you define that for us?

A. Periurban is an area where houses are placed
35 on large acreages. So you have a continuous bush
environment and then that may turn into an
inter-mix of bush and placed houses. And then an
urban environment is a hard interface where a
40 bushfire may come up to a very distinct transition
into an urban environment.

Q. So as I understand that definition, is what
has been described as the urban edge or the urban
45 interface in Canberra falls into the latter
category?

A. That's correct.

Q. Your report commences on page 4 setting out the objectives as you define them. You then have a section that deals with comparison of the ACT bushfire's consequences with previous bushfires.
5 You make the point in that section in the third paragraph under the second heading, Mr Leonard:

10 "In terms of insured losses, Ash Wednesday stands as Australia's largest bushfire event and sixth largest natural disaster. If the Ash Wednesday losses are indexed to inflation to today's prices, it represents a total insured loss of \$300-350m, with 1511 houses lost."
15

That is both in Victoria and South Australia; is that correct?

A. Yes, that's correct.

20 Q. You say:

25 "Canberra's total insurance loss approaches this level with approximately 516 houses destroyed."

And then, as I understand it, you provide an explanation for the fact that whilst a far fewer number of houses were destroyed, the insurance losses after adjusting for inflation is about the same. Why is that, Mr Leonard?
30

A. It appears the value of an insured house in an interface region appears to be increasing quite significantly, potentially more so in the more affluent suburbs in Sydney as in Canberra.
35

However the areas in Canberra that were affected were quite affluent.

Q. You make the point obviously:

40 "Thankfully, life loss has not followed the same trend, with 75 lives lost in the Ash Wednesday fires compared to 4 lives lost in the ACT fires."

45 You then go on and you pick this up elsewhere in your report to say:
47

"However, structural loss so deep into the urban area interface has not been observed since the Hobart fires."

5 When you say "deep into the urban interface", what are you referring to there?

A. Traditionally you would lose a certain percentage of the first row of houses, so something like 70 per cent. And the second row of
10 houses you would say lose something like 30 per cent, and then only a few in later rows. The Canberra and the Hobart fire events are in particular different in that the fire has impacted on the urban interface. But what appears to have
15 happened is that a structurally based fire spread has ensued after that initial attack. There are a whole range of reasons why those two are different.

20 Q. I know you do cover some of those, but just in summary, what are the sorts of factors that appear from your research both into Hobart and Canberra have impacted or caused that depth of impact?

A. The density at which the urban environment is set up seems to have an impact. So in the area of
25 Duffy where we concentrated our investigation, the positioning of relatively large houses on medium sized blocks tended to promote house-to-house transfer of ignition and the exacerbation of the
30 weather condition. So a prevailing wind that ensued throughout the fire event and for many, many hours afterwards tended to assist in the ember production from burning house wreckages downwind impacting on further houses and also the
35 extremely low humidities and extremely high temperatures increased the susceptibility of those structures to ember attacks.

40 And also in both Duffy and Hobart the urban assets were not designed with any fire resistant or bushfire resistant principles in mind.

45 Q. Over the page on your report in the bottom half of the page you set out some comparative statistics in relation to bushfire events going back as early as 1939 and provide a summary, as I understand it, of the research that had been done

over that period on house loss resulting from those fires. Have I understood that table correctly?

5 A. That's right. That is an extract of a report that basically created a summary of the investigative processes from the earliest recorded bushfires.

10 Q. In relation to Hobart, I gather from that report that house loss was 1300 plus and there was a CSCEBS CSIRO questionnaire distributing even as early as that?

15 A. That's right. Those investigations certainly weren't of the magnitude of the survey and issues performed post Ash Wednesday. Nevertheless, there were some early initiatives to understand certain aspects of the bushfire attack.

20 Q. And the Ash Wednesday and post Ash Wednesday studies that have been done are listed there as the Ash Wednesday fires themselves; Avoca Maryborough where 61 houses were destroyed; Sydney and surrounds in 1994; and the Dandenong Ranges in 1997.

25 A. That's correct.

Q. Is that the full list post Ash Wednesday of perhaps in-depth surveys?

30 A. No, the time of this report was prior to the Sydney Christmas fire events of a few years ago, and of course the Canberra event.

35 Q. You provide in the next part of your report under the third heading "summary of the relevant environmental conditions" on the 18th and 19th of January. We have had considerable evidence about that so I won't take you to that material.

40 On page 7, which is 0216 of your report, you then explain the way in which you approached the survey which is the subject of the report. In particular, the way in which you focused on a particular area. If I could get the page 0219, page 10 of your report, just the top half of that
45 on the screen.

As I understand it, Mr Leonard, that blue line

shown on the map at the intersection of Eucumbene and Warragamba is an outline of the detailed survey that you conducted following the fires on 18 January; is that correct?

5 A. That's correct.

Q. So although you recognise in your report that obviously the house loss was far more widespread, that was the area that was the subject of your
10 specific survey?

A. Yes. The intention is to allocate a limited amount of resources to understand in a high level of detail the issues of an area, hoping that that
15 indicatively represents the attack on the other areas of Canberra.

Q. You say in your report, on page 8:

"Over 229 Duffy houses were surveyed and were
20 categorised as untouched, damaged or destroyed houses. During the course of the data collection, particular attention was given to gathering information on how the houses might have been ignited, and thus
25 ultimately destroyed. This was done by examining each house with particular attention given to those that had been damaged but not destroyed, and/or had occupants present."

30 So, again as I understand it, Mr Leonard, one of the important aspects of your survey particularly in this particular area is that, in addition to examining houses that were destroyed, you also
35 looked very carefully at those that suffered only minor damage and indeed those that suffered no damage at all; is that correct?

A. Yes. That particular strategy is so that any statistically relevant bias between destroyed
40 houses and damaged or undamaged houses can be gleaned. If you imagine that you survey simply the destroyed houses, you don't have a statistical basis on which to compare. Also, the damaged or partially damaged houses for which we survey we
45 find provide the most relevant understanding of attack mechanisms because these partially damaged houses tend to have a preserved ignition point

where an occupant may have actively defended that house and hence preserved an ember attack point or a broken window or a particular point of weakness on that structure. And those case studies
5 relating to those damaged houses are of particular value to developing an understanding of bushfire attack.

Q. As I understand that, just taking that to the next stage, that is because if a house is totally
10 destroyed that sort of evidence generally would not be available?

A. Yes. It is particularly difficult to recreate that scenario without having personal accounts or
15 video evidence of the house being destroyed, or going to the trouble of collecting detailed understanding of the house's design prior to its loss.

Q. You refer to the process of data collection, just further down on that page and in particular the questionnaire that you sent to residents or provided to residents. A copy of that
20 questionnaire is actually an annexure to your report. Out of interest, how was that survey distributed? Was it put in letter boxes or handed to people?

A. The survey provided at the end of the report was a survey filled out by experts that were
30 allocated by myself to create a small team, a mixture of skilled volunteers and researchers within my team. We didn't tend to provide that as a survey for occupants, although the survey initiative does involve taking the opportunity to
35 interview occupants that are present at the time.

Q. So your team with copies of the survey went around to each individual house and, if there were occupants either there or who arrived at a
40 convenient time, you approached them and got some information from them?

A. That's correct. As well as performing a detailed photographic survey, ground based
45 photographic survey, and also on the Wednesday after the event we performed a detailed aerial survey of all the affected areas of Canberra.

47

Q. In addition to the particular area that you focused on for your survey; is that correct?

A. That's right.

5 Q. Beginning on page 12 of your report you provide a summary of the of what you describe as the mechanisms of bushfire impact on urban assets commencing with a discussion of ember attack. At the top of page 12 under - you say first:

10

"The principal mechanisms of bushfire attack can be categorised into direct flame, radiant heat and embers. Previously CSIRO research has shown that the majority of houses destroyed in bushfires usually survived the passage of a fire front, but burned down during the following few hours due to fire spreading from small ignitions caused by burning debris."

15

20 You then speak of each of those different forms of attack and beginning with ember attack discuss the way in which that mechanism can cause house loss. I just wanted to ask you about the paragraph that is just at the bottom of the screen where you say:

25

"Embers are the major cause of ignition, as they can attack a building for some time before a fire front arrives, during the passage of the fire front and for many hours after the fire has passed."

30

Is there much evidence to indicate how long before the fire front arrived ember attack can affect houses?

35

A. That probably tends to be very fire specific and has a lot to do with the dynamics of the fire plume. In some bushfires, embers can rain out of the plume if they are of the appropriate properties. But in many cases the ember attack becomes significant at a similar time as the fire front reaches the asset.

40

Q. I hesitate to use the word "typical", would there be a period of say half an hour before a fire front arrives that you might be expecting some form of ember shower, or is that too long a

45

period?

A. It is difficult to say and probably best to present that sort of question to an expert that studies specifically bushfire behaviour. But I
5 would certainly say up to half an hour.

Q. In the next paragraph you use the expression where you are discussing the way in which embers affect structures:
10

"The quality of the embers."

What do you mean by that?

A. There are a number of ways a house is
15 susceptible to ember attack. If you take the example of the entry of embers into a structure igniting elements either within the house or within the enclosures within the house, like a floor space or a roof space, in that case the
20 quality of the ember is the size. So a small ember that is still ignited that has the ability to enter through a small gap is the most aggressive. Whereas, when you look at the way an ember may build up or rest against a combustible
25 external facade along with a large degree of unburnt windborne debris, the quality of the ember refers directly to its ability to continue to glow once landed and develop into a flaming mode of
30 ignition and attack the house in that way.

So the quality of an ember has a large diverse range of definitions and has a lot to do with the amount of unburnt material that is travelling - that the ember contains - and also the type of
35 material which is going to define how long it will glow for and with what intensity that glow will occur.

Q. That in turn would be, to some extent at least, dictated by the sort of vegetation from which the ember is coming, so whether it is a pine forest or a eucalypt forest and so on?

A. That's correct. It may be a leaf, it may be a bark - a piece of bark or even a fine branch. It
45 may in fact be glowing or even flaming while it is travelling in the air.

47

Q. You then deal with the other two forms of fire attack over the page on 0222, being flame front radiation or radiation attack and then flame front contact. In those two you are talking about the
5 actual fire that is coming out of the forests, in this case either through radiation or through direct flame contact affecting the structure; is that right?

A. That's correct. There referring to the
10 ability of the flame front itself to attack a structure, and in comparison these two attack mechanisms have a relatively short reach, as it may, compared to an ember attack which can travel much larger distances than these two attack modes
15 can achieve.

Q. So factors as simple as a setback of an urban edge, for instance, from a forest is going to directly affect the extent to which these factors
20 are going to influence house loss?

A. Yes, that's correct. And that's a traditional way a building standard might limit the level of attack from these two approaches by simply using
25 distance.

Q. I want to come to the building standard in a moment. In respect of those two forms of attack, your report states in effect no evidence was found in the Duffy survey of either of those forms of
30 attack. What kind of evidence would you expect to find? What would you look for to suggest the fact that that form of attack had occurred?

A. What was very evident when we performed our initial investigation of the area was that the
35 road and clearance zone that formed the perimeter of the Duffy area between the continuous forest fuel and the structures were significant enough to prevent radiation and flame in themselves causing damage to the structures. And that was reinforced
40 by the evidence that the vegetation in the front gardens of all of those structures were not significantly damaged by direct flame impingement or radiation modes. There wasn't a direction specific impact on that vegetation that rested
45 between the structures and the source of the main fire front.

47

There was some degree of impact from hot air or convection columns that were coming out of the structure. That tends to have a non-directional thermal impact on that vegetation. So it was very
5 clear that radiation flame didn't play a direct role in an impact on the structures.

Q. Just to give a practical example of that, the trees along some of those roads as I understand it
10 were left unburnt. Is that the sort of thing that you look for to suggest if there is some vegetation between the edge of the forest and the structure and that is unaffected in any serious way by fire, that would indicate that you haven't
15 had a flame front contact?

A. That's correct.

Q. You first referred to the issue of building design and in particular the building standard AS
20 3959 at the bottom of page 0222 or page 13 of your report. I just wanted to, because it is relevant to later parts of your report, to ask you some questions briefly about that standard.

25 The standard was provided as part of the first phase brief. It is [AFP.AFP.0091.0523]. While that is being brought up, Mr Leonard, the standard is dated 1999. It has undergone some minor amendment since then; is that correct?

30 A. Yes.

Q. But it is currently undergoing a more comprehensive review, as I understand it?

A. That's right. The standard is under a
35 continual process of review. However, the next edition of the standard, whenever that is produced, will provide a significant development in the complexity of the standard.

40 Q. You have some role in relation to that review process; is that correct?

A. Yes. I'm the science adviser to the committee responsible for reforming the standard.

45 Q. Did you incidentally have involvement in the current standard?

A. No. My direct involvement occurred after the

'99 draft was produced.

Q. The standard only deals with building design; it doesn't address issues of planning and siting
5 and so on; is that correct?

A. Yes. The approach of the standard is to assume that the siting is as it lies and that the building design must be commensurate of the level of impact that the standard deems that house may
10 receive. It doesn't attempt to suggest that the siting needs to be adjusted or that the vegetation needs to be modified.

It simply says, "In this situation your house
15 requires these types of factors so that it can appropriately resist a bushfire attack that may ensue".

Q. I want to come back in some detail to the
20 design features that are dealt with. In more general terms, perhaps the best way to do this is to go to section 2, which is page 0531 of the document. That section deals with the way in which a house susceptibility is determined; is
25 that correct?

A. That's correct.

Q. It sets out a procedure for classifying whether a house falls into either an extreme level
30 of attack, a high, medium or low level?

A. That's right.

Q. If we go over to the next page, 0532, at the bottom of that page there is a chart. I will just
35 get you, if you would, briefly explain how that chart operates?

A. Are you referring to figure 2.1 or table 2.1?

Q. No, I was actually referring to table 2.1
40 first, although I understand figure 2.1 to some extent informs table 2.1; is that correct?

A. Yes, figure 2.1 defines the category of bushfire attack given that you have determined the predominant vegetation class which is going to
45 define the fire behaviour that is likely to approach the house. And then the top of the table defines the proximity to that predominant

vegetation class that you have assessed and also
has some adjustment for the slope, which is
obviously going to increase or decrease the
ferocity of the fire attack under those
5 circumstances.

Q. So, just again to take an example, if we go to
line A that is shown on the screen you have
"forest" and some numbers that follow that. They
10 are different forest types; is that correct?

A. That's correct.

Q. And then the category within which a structure
will fall effectively with some adjustment for
15 slope will depend directly on how far it is from,
in effect, the edge of that forest; is that right?

A. That's right.

Q. So where a structure is between 40 and
20 100 metres from those types of forest, regardless
of slope they would be categorised as medium
level?

A. Yes, either medium or low. So the
categories - for instance, if you are categorised
25 as low, you don't require any specific building
mitigation requirements. The category of medium
refers specifically to ember attack type
mechanisms. And then high and extreme deal with
obviously flame and radiation as the table deems
30 that you are sufficiently close to the predominant
vegetation type to be impacted on by those
approaches.

Q. So that is clear we will come to briefly the
35 different levels of construction required
depending on which category you fall into. As I
understand what you have just said, if you fall
within the medium category, the level of
construction concentrates almost exclusively on
40 ember attack as the form of potential loss of the
house; is that right?

A. Yes.

Q. If you move up into the higher extreme range
45 then the building requirements contemplate what -
the possibility of radiation and/or direct flame
contact?

A. That's right. As well as a high level impact of embers, as embers do tend to have a distance relationship where their intensity builds up as you come closer to the source of the ember.

5

Q. Just jumping ahead then to the building construction requirements that are then prescribed under the standard, these commence at page 534. Again while that is being brought up, as I understand the standard, Mr Leonard, it only prescribes two different levels of construction; is that correct?

A. Yes. There are only two levels for which building solutions are offered and that is medium and high.

Q. So the building solutions offered for level one which focus only on ember attack relate to a medium form of bushfire attack, and level two relates to a high construction where there is a high prospect of bushfire attack?

A. That's right.

Q. There is no prescription in the standard for extreme levels of attack. Why is that?

A. I can't speak for what was the intent of the committee, as I wasn't part of that at the time. But as it currently stands, the extreme level is defined as requiring a specific engineering solution. That was not easily addressed by a list of prescriptive requirements that could simply meet that level of attack.

Q. So in a practical sense what does that mean for someone who sees that, having done an assessment based on the various guidelines in section 2 assesses that they are in the extreme area, what does that mean in a practical sense for them if they are contemplating building in that area?

A. They are obviously being assessed as being in a lot of trouble in a bushfire event and really need to consider either modifying the landscape, the position of the house, modifying the predominant vegetation which is produced in a bushfire or building a particularly high level of resistance into their building akin to something

like a concrete bunker.

Q. The application of the standard requires, as I understand it two things: firstly, it requires the local government or planning authority to actually designate an area as bushfire prone and to say, "Accordingly this standard will apply to all buildings in that area"; is that how it works?

A. Yes. It is a voluntary standard and the various regulations in each state seem to call it up in different ways, but that is a predominant way that the states tend to adopt it.

Q. For it to apply in Canberra, for example, a decision would have to be made by the relevant planning authority to effectively prescribe in one way or another that this standard would apply to all or part of the Canberra urban area; is that right?

A. I'm not certain of that but I would assume that would be the case.

Q. Of course, it also only applies to new buildings, it doesn't have any effect on existing structures; is that right?

A. That's right. The predominant role of the standard is to provide guidelines for the construction of the house so that you can obtain an occupancy permit and then, as a secondary role, as providing some advisory information for those that would like to adopt these types of mitigation approaches as a voluntary approach.

Q. Now you refer in there to the way in which different jurisdictions have called up the standard. Is it correct that, if you go to appendix B of the standard which is at 0550, there sets out some examples of the way in which the standard has been called up in different jurisdictions?

A. Yes.

Q. Starting with Victoria and then New South Wales, South Australia and Queensland?

A. Yes.

Q. Perhaps let us just take the first, Victoria

as an example, how as you understand it has it been applied in Victoria?

5 A. The Victorians or the CFO have produced a wildfire management overlay strategy where it actually defines areas where bushfire risk has a reasonable potential, and therefore the local council jurisdictions have then deemed those to then require the use of AS 3959 as part of the local building regulations in that region.

10

Q. You may not know the answer to this, Mr Leonard, but, as far as you are aware, has it been called up in any part of the ACT?

A. I'm not aware that that is the case.

15

Q. So to the best of your knowledge it hasn't?

A. Mmm.

20 Q. The bulk of the standard obviously deals with the actual specific construction requirements which would need to be incorporated into a new building before it would obtain a certificate of occupancy, some of which or most of which you pick up directly or indirectly in the balance or parts of your report; is that correct?

25

A. Yes.

30 Q. We might come to those in the report. You begin to deal with the way in which the fire affected the particular area of your study on page 14 of your report. I will get your report brought back up [DPP.DPP.0009.0210] at 0223. And there you say:

35

"This section first presents a brief analysis of the degree of damage and house loss. The causes of these losses, and how the siting of homes and other structures contributed to house loss is then presented."

40

Actually Mr Leonard, just on that point, I think you said earlier that the building standard doesn't address siting at all; is that correct?

45

A. It doesn't attempt to regulate siting. It certainly takes siting into account when defining the level of impact the structure may receive.

47

Q. In the sense of how close it is to the nearest vegetation?

A. To the predominant vegetation class that is deemed to support bushfire spread.

5

Q. The other thing which we will come to a little later that the standard doesn't deal with, as I understand it, is vegetation around the house and outbuildings like sheds and the like; is that correct?

10

A. Yes. The classification of cultured gardens directly around the house, unless they are so predominant that they could be classified as one of these classes, but also you mentioned the other infrastructure like sheds and fences - their impact isn't a consideration in defining a standard in that it only deals with the structure itself and the predominant vegetation. So, therefore, to achieve an appropriate outcome the occupant should have some responsibility in contemplating or understanding the relative impact of combustible fences or sheds that are placed relatively close to the main structure.

15

20

Q. Are those, particularly the combustible fences and sheds, is that something that has been addressed in the updated version of the standard; or is it still going to only concentrate on the predominant vegetation and the main structure?

25

A. No, the second case is true.

30

Q. Just moving to the bottom of the page you set out there in graphic form the overall finding in respect of house loss, as I understand it, in that pie diagram which shows of the 229 houses in your survey area 47 per cent were destroyed, which you define as total structural loss; is that correct?

35

A. Yes.

Q. "9 per cent light damage" - which you define as:

40

"Some penetration before extinguishment, confined to item first ignited and immediate surroundings."

45

Perhaps if you could explain with an example you

would mean by that?

A. Light damage would be an ignition point that has developed to the point of threatening entry or actually entering a structure. But it hasn't
5 developed to a point where it has involved a large part of the structure or has approached something like a total loss scenario.

10 Q. And "superficial" means:

"Small ignitions that were, in almost all cases, extinguished before they entered the structure."

15 A. Yes, something like a preserved ignition point that had not had the opportunity to develop to involve its surroundings would be classified as "superficial".

20 Q. And "untouched" means what it says, I assume?
A. That's correct.

25 Q. And as I understand it, although you have said in defining that as "directly threatened by bushfire but no house damage", in a sense you just mean a house within that envelope that you determined as your survey area?

30 A. Yes. We deemed that all houses within that survey area had been threatened by bushfire attack, being the ember attack mode only.

Q. Under the heading "paragraph 6.1" a little further up that page, you again say:

35 "Analysis of the data indicates that no houses in Duffy were directly impacted by flames from the fire front itself. In 50 per cent of cases, the bushfire attack mechanism were via embers, and 35 per cent were via
40 ember and some radiant heat from surrounding isolated vegetation or isolated structures."

45 So 50 per cent ember alone, 35 per cent ember and some radiant heat and, as I understand it, the findings in that regard are shown in the graph over at the top of page 15; is that right?

A. That's right. It is important to note that ember attack is exacerbated by radiant heat. The

radiant heat referred to here is not radiant heat associated with the flame front itself but with secondary items around the house either being an adjacent house, a shed, a fence stored material or
5 localised vegetation to the house.

Q. You use this form of graph a number of times in your report, so I might just ask you as an example to take us through what each of those
10 columns in the column graph are showing?

A. The graph simply pairs columns up under each category and the blue column refers to destroyed houses and the maroon column refers to surviving houses so you can quickly observe whether there is
15 a specific bias or tendency between one category to the next in relation to destroyed or surviving houses.

Q. And in that category of survived we find what in the pie graph are untouched, superficial and light damage; is that correct?

A. Yes.

Q. To take embers only, your survey showed that, in the case of destroyed houses, 60 per cent of them appeared to have been attacked by embers only. I think you have added to that in your remark a moment ago some effect from radiant heat out of the actual forest?

30 A. Yes. The first category is embers and some radiant heat.

Q. As I understood what you said earlier, radiant heat in that context refers to radiant heat from nearby houses or structures?

A. That's correct. Not the main fire front.

Q. Embers only would obviously include the main fire to the extent that there was radiant heat effect out of the main fire?

A. Yes.

Q. In the way you described before, it does attribute to, if you like, the success of the ember affecting a house?

A. That's correct.

47

Q. Of the survived houses, a little under 40 per cent were affected only by embers on your assessment; is that correct?

A. Yes.

5

Q. You then, just below that chart, refer to a particular case study. I just want to quickly, because it is the first example, refer to some of the photographs and other documents that you have provided. This is 73 Somerset Street where you say:

"The occupant of this house elected to stay. Inside the house he found that windows on the north facing wall were broken or cracked from radiant heat from a neighbouring house (main structure and fences."

15

Then you continue:

20

"Curtains were heat affected, embers entering through broken windows had caused burn marks on the carpet."

Is that the sort of information you were getting from individuals who were present at the time the survey was undertaken?

25

A. That's right. That's a classic example of the value of the information that you receive when an occupant is present. They give you an indication whether there was occupant or brigade interaction involved in that house impact scenario as well as giving you the further opportunity to observe the impacts within the house in this case.

30

35

Q. And your report then follows with several photos of what you just described beginning with the windows there. It is not entirely clear but that shows the breakages referred to.

40

A. Yes, figure 9 shows there are a large number of cracks in the windows that had been taped. In this case the window glass had not fallen away and allowed ember entry into the structure through that actual opening.

45

Q. Over the following two pages there are further photographs. In particular at the top of the next

page, which is 0225, you show evidence of radiant heat impact on eaves. That is the bubbling we can see under the spouting there?

5 A. That's right. That's an indication of a point where any further escalation of radiant heat load on this structure may in fact cause the eaves to burst into flames.

10 Q. You identify that that is caused by an adjoining structure, presumably just simply because of the location of another house that has burnt down or something of that kind?

15 A. That's right. That's why there is some contribution to the vegetation between the house and in this case a combustible fence.

Q. On the top of the next page you have shown the ember attack inside the house from burns on the carpet, is that what that shows?

20 A. That's correct.

25 Q. In paragraph 6.2 you begin a discussion of house-to-house spread. That is on the page 227 and make the point, which I think you have already made in your evidence, that it played an important role after the passage of the fire front. Just under the graph that you have included on that page you say:

30 "These impacts persisted for hours rather than a few minutes it takes for a flame front to pass. This effect was exacerbated by the placement of relatively large houses on medium-sized blocks."

35 I think you made reference to that a little earlier when you were discussing the value of losses. But was that a particular feature that you observed in this area that you examined?

40 A. It certainly was. The proximity of adjoining houses definitely was a contributing factor to the level of loss not only because large houses were placed on relatively or moderately-sized blocks but because the houses were all constructed with a similar setback. So that the structures all
45 formed the line at a similar distance back from the front of the property. So that the proximity

of each house was almost minimised by that strategy.

5 Q. Just on the other side of that, you might expect a different effect if you had a more staggered placement of houses on the individual blocks?

10 A. Yes, certainly. Or the adoption of features that meant that the house resisted a radiant heat attack by using a non-combustible fence or having relatively featureless walls that abutted an adjoining house.

15 Q. At the bottom of page 18, you say:

"These impacts endured throughout the afternoon and well into the night. We found many examples of community and agency suppression activities during this time, and examples of many houses being saved. It was highly likely that if no suppression activity occurred during this time, the house loss would have approached 100 per cent in the surveyed area."

25 It may be self-evident, Mr Leonard, but can you be confident about that? And is it because of the sort of factors you have been discussing, namely the location of houses so close to each other and so on, that would have led to that 100 per cent loss?

30 A. We certainly found examples where occupants were unable to defend against an adjoining house fire due to the magnitude of it and due to the relatively low level of suppression devices an occupant has. Certainly a brigade has quite a lot of capability in limiting house-to-house transfer.

40 But what appeared to be quite evident was that, in looking at the overview of where houses were in fact lost and surviving the isolated clumps of surviving houses usually were associated with a story of occupant or Fire Brigade interaction that actually saved those structures.

45 So the reason why that comment was made was that there appeared to be a story behind each surviving

house or most surviving houses. Hence you could assume that a loss scenario approaching 100 per cent would occur if absolutely no person was present in the Duffy area for say 12 hours after
5 the impact had occurred.

Q. Just jumping ahead. There are a number of examples of this in your report, but just to take this as one example, at page 21, which is 0230,
10 two pages further on, you have an aerial photograph of houses in Somerset Street where in broad terms you have identified that - perhaps if I just read the passage that is beneath that
15 photograph:

"These four destroyed houses were deep within the suburb and surrounded by surviving houses. It is highly likely that an ember attack ignited 31 Cargelligo Street, which
20 then became the predominant source of fire attack on the area of 14 Somerset Street."

31 Cargelligo Street is at the top of the photograph. That is to the west, is it, of the
25 houses in Somerset Street?

A. I am unsure of the specific orientation. My recollection is that the wind direction is from top to bottom on that photo.

Q. So that because there are survived houses either side of that structure - perhaps I should ask: what factors did your team observe as giving you that indication that that is how the loss
30 occurred?

A. A range, a culmination of occupant observation as well as observations of vegetation impact in the region and also the presence of susceptible features on a structure. For instance, 16
35 Somerset on the left had a large timber deck relatively close to a fence which was close to 14
40 Somerset.

So there was quite an obvious case for flame progression up to that house. And also they were
45 relatively closely orientated. And also the fact that 10 Somerset on the far right had an occupant present who aggressively defended his house

against the structural fire at 12 Somerset gave you an indication of how those structural fires had a flow-on effect.

5 Q. You touch briefly on the issue of susceptibility due to urban design in the surveyed area in two pages further on, 0232, at the bottom of that page where you say:

10 "The general town planning design of providing perimeter roads as a buffer zone between houses and forest fuels is considered to be a very effective measure to prevent direct flame and radiation impact. The
15 configuration of Duffy indicated that the houses were far enough from the forest not to be impacted directly by flames from the fire front. However, the particular conditions of wind and burning vegetation combined to
20 generate a large amount of burning debris. The houses in Duffy were particularly vulnerable to this ember attack as they had no specific design requirements to mitigate the entry of embers into the structure."

25 That is in a sense confirming what you have already indicated that, whilst you get advantages from the setback in preventing loss from radiant heat or direct flame content, the major source of
30 attack in any event is going to be embers. And if you don't have the protection from that, that is where you would get substantial losses?

A. That's right. And to achieve ember mitigation through a setback approach you would be looking at
35 quite extensive buffer zones that may not meet the aesthetic expectations of those living in an urban interface.

Q. In a sense what that leads to is the
40 importance of having a combination of the setback to try to reduce the risk from direct flame as well as the sorts of measures that you go on to refer to protect against particularly ember attack?

45 A. That's right. That is particularly highlighted by the fact that ember mitigation principles on a structure are achieved at

relatively low cost.

Q. I want to return to that. Commencing on
page 7, I won't go to each of these unless there
5 is a particular example that you want to pick up
in your report, you deal with each of the various
parts of the house structure that can contribute
to or be relevant to the issue of house loss. I
just wanted to ask you, and if you think it is
10 helpful to refer to any of the particular photos,
just briefly explain - I will take you to each one
of these - how it is that, for example, with the
flooring system and external walls, how the design
of that feature can contribute to loss?

A. Okay. A typical way an ignition is achieved
on a house is for embers to enter a sub-floor
space. In a sub-floor space, if it is not
completely enclosed there is usually a large
collection of unburnt debris over many years.
20 That is readily ignited by embers that enter under
that structure. So the ember finds a stagnant
wind region which then assists in promoting the
transition to a flaming attack. And the house
then is at great risk of a structural fire
25 resulting from flames burning up through the
flooring system.

Q. You then go on to doors, and perhaps it would
be useful to bring up the photograph that appears
30 at the top of page 0235. While that is happening,
could you explain how it is that the design of a
door can be relevant to house loss?

A. Certainly. Any feature on a house that
involves a re-entrant corner, which is a three-way
35 containment or a corner is a typical stagnation
region where an ember or combustible debris can
collect. This example, figure 23, shows how
embers have collected and began to impact and
generate a small flame attack or a charred region
40 in the two re-entrant corners at the base of this
door. In fact, after those have been effectively
extinguished by the occupant, further leaf debris
has collected in that point. That emphasises the
particular susceptibility of that location of a
45 combustible door and door frame.

Q. Because in addition to the actual ember, you

are also getting unburnt material gathering in that corner which will then assist the overall ignition of that spot?

5 A. That's right. That principle is another reason why ember attack is such a virulent attack mechanism in that the bushfire scenario generates a lot of unburnt combustible debris as well as combustible embers that are all blown together onto structures. There is actually a significant
10 enough amount of unburnt debris landing on structures or in gutters to create their own localised flame attacks on these structures in any given event.

15 Q. Going to the next page. Window frames has been another example of a re-entrant corner for the same reason, as I understand it?

A. That's right. It is a slightly less issue compared to a door in that you have one surface
20 which is essentially non-combustible, the window. However, if the frame itself becomes extensively involved, you are likely to lose the window glass in that event and have a direct entry of flame and embers into the structure.

25 Q. Over the page you commence to deal with common gaps and entry points and in particular with vents, that is sub-floor vents you are referring to there; is that correct?

30 A. Sub-floor vents, gaps in roof structure. For example, a tiled roof without significant sarking protection underneath the tiles is an area of ready entry into a structure. If gaps under doors are greater than 2 mm, then embers have been
35 observed to enter and potentially ignite internal fixtures of a building.

Q. Just stopping there just to give an example, on page 0239 you have a photograph of what you
40 describe as an unprotected vent. Now, that has a grille over it. As I understand it the difficulty there is the holes are too big?

A. That's right. To be effective you must have gaps smaller than 2 mm in your grate to
45 effectively mitigate ember entry. Embers that are small enough to enter through a 2 mm opening in a mesh simply don't have a significant probability

of ignition.

Q. Just on that, to go back just one page, you provide examples of some of the mitigation
5 measures that can be used for that particular problem, which is essentially the use of a metal mesh of some type?

A. That's correct. And to emphasise the issue of how important protecting entry points, the figure
10 directly below that figure shows a statistical tendency towards having a larger number of destroyed houses for those houses that were assessed as having no protected vents in the structure compared to houses that have each vent
15 protected. So there is a fairly clear statistical verification of the impact of protected versus non-protected vent systems in houses.

Q. I have covered roof and in particular the
20 importance of sealing roofs because, like the under floor, that could be a point of entry that is very difficult to extinguish fires once they begin; is that correct?

A. Yes.
25

Q. On page 0242 you commence to deal with decks and verandahs. Perhaps on the next page you have some photographs of problem areas for in that case
30 poor fitting capping. And then on the next page ember attack affecting a deck.

A. Yes. They are just provided as typical ember
attack points. If you look closely at the deck ignition, you will notice that an ember has landed on a supporting bearer underneath the main gap
35 boards that form the deck surface. That area there is akin to a re-entrant corner with an ember can lodge in a relatively low wind region and then develop into a flaming attack on the deck and if left unchecked you have a large amount of
40 combustible material, usually adjacent to a glass door or timber door or window on the main structure. That is a very typical entry point or mode of attack from an ember attack.

Q. The last two things you deal with is
45 outbuildings and vegetation. At 0246 you have provided a graphical representation and a

photograph of the effect of outbuildings. What significance is there in the graph, what statistical significance can you draw from that?

5 A. There is a strong statistical bias to show that a destroyed building has a much higher chance of having a destroyed outbuilding associated with it. That is obviously influenced by a wide range of things in that the structural fire may directly impact the outbuilding and cause an outbuilding
10 fire, or that simply the outbuilding and the structure existed in a higher level of ember attack. Nonetheless, it could be presumed that a component of that statistical bias shown in the graph was due to the fact that the outbuilding
15 represented a significant additional attack on the main structure through flame radiation and ember source.

20 Q. So in that case you have got a potential for an outbuilding to ignite first and then burn the main structure?

A. Certainly. And as a general rule an outbuilding is designed with many more gaps due to their cheap construction, due to the fact that
25 they are usually constructed out of steel cladding and there is no real reason to create a relatively airtight structure for thermal heat conservation or any of those types of approaches. Also these sorts of sheds and garages or whatever the
30 outbuilding might be tends to contain a large number of readily combustible items like stored timber, paint tins, rags, clothing, et cetera.

35 Q. If we could perhaps move that down to show that particular shed fire damage. That suggests that something has exploded, is that what that is showing there?

A. Not necessarily exploded. But having a very extensive internal fire that has simply buckled
40 the steel cladding of the shed.

45 Q. On the following few pages you deal with vegetation, which we won't go into because it has covered particularly by Mr Ellis's report in the first phase. You then deal with two other particular issues starting with fences at 0250. What sort of contribution can a fence make to a

house loss?

A. Because fences represent a large component of dry fuel load - dry timber load, usually very close to a main structure, it is readily ignited
5 by an ember attack. The figure just below emphasises an example of where embers can lodge using a re-entrant corner principle and then rarely develop into a large fire. The orientation of a timber fence means a lot of timber is
10 presented and can create quite a significant front.

There are many examples of where combustion of a fence alone is enough to break a window and cause
15 combustion of internal features within a structure. In contrast to that, something like a metal deck fence which doesn't burn in itself could actually present a very significant radiant heat barrier between an adjoining house structure
20 which may be burning.

Q. And, finally, you deal with gas lines commencing at page 42 and in particular refer to the fact that mains pressure supply lines to many
25 of the Duffy houses were provided by a flexible polymer hose. You say:

"In a number of cases, these flexible lines ruptured after receiving low-level flame
30 contact. The presence of a burning gas plume adjacent to a structure represented a significant risk to the structure."

And you refer to the requirements under AS 3959
35 for all pipe infrastructure supplying a dwelling with essential services utilise non-combustible piping. Then two pages over you have a photograph depicting the effect of a flare from a gas line; is that what that photo shows?

A. Yes, that's correct. That gives you an idea. In this case the gas meter had been replaced prior to the photo being taken, but you can see the degree of impact that the rupturing of that gas
40 line had produced on the house structure. And thankfully that wasn't sufficient to destroy the structure, and there was obviously some occupant or brigade interaction that limited the spread of

that to a main structure fire.

Q. You mean by that type of mechanism, as I understand it, to identify with houses which have
5 survived what effect a burst gas main may have on a surviving house. To what extent, if at all, can you identify the effect of ruptured gas main on a destroyed house?

A. Once a house is reduced to rubble, it is
10 virtually impossible to determine that its loss was due to a gas line. We certainly don't have the skill to recreate that as being a categoric assessment of the fact that that house was lost due to that gas main rupturing. So the only
15 evidence that can be provided is the observation of surviving houses and a potential extrapolation of that to say that potentially some destroyed houses may have been destroyed through this mode, but we certainly can't categorically say that that
20 was the case.

Q. The next chapter deals with the role of occupant, much of which you have already referred to in your evidence. Perhaps I won't go back to
25 that other than, as I understand it, the point you made earlier was that it will have a significant effect on how survival because you are obviously eliminating one house from the house-to-house spread process?

A. Previous survey investigations have
30 highlighted that the presence of occupants have had the single greatest impact on the probability of house loss compared to any other single factor. That is likely to be the case in the Canberra
35 situation as well.

Q. Chapter 10 you have headed up as "time-based study of house loss". As I understand it as an
40 example of the point you make in that chapter, you have a photograph at the top of page 0257. I would just ask you, although you have done it in your report, to explain what the significance of that photograph is.

A. The significance of this photo is that it was
45 taken at approximately 7.09pm on the day of the fire impact. The fire was deemed to have approached this region very shortly after 3.05pm.

Hence, the observation that 37 Warragamba Avenue is at a point where it is well alight, which would suggest that the contents of that house had only been burning for as long as, say, three-quarters
5 of an hour.

Adjacent to 39 Warragamba Avenue, which had been burning for obviously a significantly greater amount of time and had been reduced to rubble and
10 only had a small number of small flames emitting from that rubble suggested that in the order of 45 minutes prior to the aggressive burning of 39 Warragamba Avenue caused sufficient impact on 37 Warragamba to in fact ignite it. That was the
15 predominant transfer mechanism that long after the fire front had occurred.

Q. That long being 2 to 3 hours after?

A. Yes.

20

Q. You say at the beginning of point 10:

"As a general rule, houses are reduced to rubble within one hour of the internal
25 furnishings become involved in fire."

That is the base upon which you extrapolate that 37 Warragamba was ignited some time within 45 minutes before that photograph was taken?

30 A. Yes, as a rough estimate, yes.

Q. Now, finally, and perhaps relevant to that comment, Mr Leonard, you have a series of recommendations in relation to the future for
35 house design. In particular, you would recommend that AS 3959 apply to the Canberra interface; is that correct?

A. Yes, the implementation of AS 3959, though it would take a significant amount of time for it to
40 take effect given that it only applies to new structures, over a long course of time you would end up with a significant number of structures in the previously affected region having the minimum level of resistance to mitigate against ember
45 attack, and hence the urban interface would then be far better prepared for a repeat of the incident.

Q. The way that we have discussed the standard applies, in a sense you could actually apply it to the whole of Canberra, but that would still only require that probably houses on the urban fringe
5 be built in accordance with the standard, because the standard effectively only comes in if the house is within a certain distance of vegetation?

A. That's right. Virtually all houses of Canberra, if you apply it to the whole region,
10 would be classified as low and not requiring any mitigation requirements. However, houses that are relatively close to the urban fringe and are abutting continuous forest fuels are likely to be classified as moderate and requiring ember
15 mitigation requirements.

Q. You make the point that, if that were done, there would be a significant time lapse between it having any real effect because it only applies to
20 house losses. But just as a final question, if I were, say, a resident of Warragamba Avenue or Eucumbene Drive, the area you surveyed, and was fortunate enough that my house survived but wanted now to do something that would provide some
25 protection house in a similar event, could you list in order of significance or impact the sorts of measures that a resident could undertake at reasonable cost to improve the capacity of a house in those areas to ember attack?

A. Sure. I would certainly advise them - I guess there are two angles to that. One is that they obviously have a concern about their own personal safety. I'd encourage them to develop an
30 understanding of bushfire related attack and how their behaviour can influence their own personal risk. Part of that obviously is developing an
35 understanding and a building design strategy so that their house maximises its survival.

I would say the first point of call is for them to approach their local brigades to understand what level of risk their house is posed by and then go through the process of responding to that level of attack with appropriate design measures on their
40 structure.
45

And typically that will result in at least meeting

the ember mitigation approaches. And that would be involved in sealing up vents using mesh with an eye smaller than 2 mm; considering the issues of whether they have timber decks or stored materials adjacent to their structure; dealing with issues of fence combustibility and how close that is to the main structure. Looking at whether their roof is a tightly sealed envelope and doesn't allow ember entry into the roof space, which is particularly difficult to defend. Looking at the combustibility of any external facades within the first 400 mm of the ground or horizontal surface, and all of the other points that AS 3959 directly refer to. In fact, it is a very good check list in itself of measures that you should consider to mitigate each category of attack.

Q. And that would include things like non-combustible screen doors to avoid re-entrant corners on wooden doors, non-combustible fly screens on windows and the like?

A. That's correct. That's obviously features that are prolific on houses that aren't directly associated with mitigating a bushfire attack. Screening open portions of windows and if you want to be fastidious, non-opening portions of windows and screen doors are a classic example of how a significant risk can be mitigated.

The overall principle should be that you should assess your whole house and look at the most vulnerable aspects of that house and work from the most vulnerable aspects down the list, because a house is really only as strong as its weakest link in the case of ember attack.

MR WOODWARD: Yes, thank you, Mr Leonard. I have no further questions. Thank you, your Worship.

THE CORONER: We will take the morning adjournment. Mr Craddock, let me know when you are ready to proceed.

SHORT ADJOURNMENT

[11.32am]

45

RESUMED

[12.02pm]

47

MR ERSKINE: Your Worship, before any cross-examination starts, I wonder if I might be presumptuous and ask if your Worship would give a marking for Mr Cheney. I have gained some
5 information and I understand my learned friend Mr Stitt is going to be something less than an hour but let's say 45 minutes. Mr Archer apparently has a few questions and so does Mr Johnson. That would seem to take us so close
10 to 1 o'clock that, even if they were too cautious in their estimates and they finished at quarter to one, there is not much point to start Mr Cheney at that point. So what this is all leading to is may I be excused until 2.

15

THE CORONER: Certainly if that is convenient to Mr Cheney. If counsel is going to take the next hour or so until lunch there is no point having Mr Cheney sitting here either. Mr Erskine, you
20 can be excused. I will say not before 2 o'clock. Likewise with you, Mr Cheney, if you wish to leave.

Mr Woodward, had you finished?

25

MR WOODWARD: Yes, I had.

THE CORONER: Q. I just wanted to ask you some questions, Mr Leonard. There had been some
30 submissions and one in particular to the inquiry and it was about water meters. I have given counsel a copy of this letter - it related to a premises in Chapman where the house was burnt down but the occupants of that house say they had no
35 water at all to fight the fire, not just reduced pressure which a number of residents did complain of which is perhaps understandable in a situation where there is a high demand on water.

40 But in this case the occupant of the house was talking about the water flow that had stopped from what he believed to be a fusing of material over the water meter. He said that the water meter in question was not located on his property; it was
45 located outside the boundary of his property and it was above ground, not below ground, as I understand is normally the case.

Did you see anything like that in the area that you surveyed or indeed in other areas that you may have visited - with destruction or damage to water meters?

5 A. That is the first example of a water meter impact resulting in a loss of water supply, to my knowledge, in any of the surveys that we have performed. But it certainly --

10 Q. You haven't seen that?

A. I haven't seen that at all, your Worship. Although the lack of water, the loss of water is a common theme among virtually all bushfires. And that's due to the high demand that is imposed on
15 the water network during the event through appliances hooking up to water mains and also through the damage of the structural fires leaving most of the water infrastructure open, and water will just freely flow from house wreckages. And
20 only in a few isolated examples in Duffy, we found that some people had the foresight to turn water supplies off to destroyed structures and actually experience some return of water pressure in that area.

25 THE CORONER: Thank you.

MR STITT: Your Worship, could I just respond to that because I was handed this just at the
30 adjournment. My position is this: we have simply not, in the time available, been able to get instructions.

35 THE CORONER: I understand.

MR STITT: What brief instructions I did receive seemed to cast some doubt upon the accuracy of this document. I don't say any more than that. But could I just say that what we propose to do,
40 subject to anything that you direct, is to make our inquiries and perhaps respond to this in some form of a short response in writing.

45 THE CORONER: Yes, I think that is appropriate, Mr Stitt.

I just wanted to bring it to your attention. It

only came to my attention fairly recently. I have arranged to put it into courtbook and it is in courtbook. I just wanted counsel to have a copy.

5 I note that the author of the report did say he sent it to ACTEW and Totalcare but I am not surprised that it hasn't reached you, Mr Stitt. I will see if counsel have questions for you, Mr Leonard. I gather they do. Yes, Mr Archer.

10

<CROSS-EXAMINATION BY MR ARCHER

MR ARCHER: Q. If you have your report there, I invite you to go to page 7 of your report, which is [DPP.DPP.0009.0210] at 0216. So far as your selection of the surveyed area is concerned, you chose that particular area for what reason?

15

A. It had the potential to provide all indicative observations that were relevant to the rest of Canberra without an expectation that it would in fact cover everything. The house loss was particularly deep within the urban interface in that region. We wanted to capture the reasons why that impact had occurred at such depth. They were really the major reasons.

20

25

Q. So it was at one level indicative but at the same time the choice was made on the basis of potentially unusual features because of the depth of penetration and the damage was unusual?

30

A. That's correct.

Q. So far as your report is concerned, when you thereafter refer to Duffy you are referring to the survey area?

35

A. That's correct.

Q. I then invite your attention to page 45 of your report which is 0254 and 0255. We have had some discussions outside the Court at the morning adjournment about this. The figure that you refer to at the third paragraph on page 0254, is that a typographic error and is that figure 50 you are referring to there?

40

A. Yes.

45

Q. That figure there, figure 50 picks up and I appreciate the figures are in the following table

2 headed "occupant behaviour" on the following page?

5 A. There is a slight difference I believe in that figure 50 refers to the house loss behaviour for the area of Duffy that was surveyed; whereas table 2 refers specifically to the behaviour in the first and second row of houses that were exposed directly to the fire front attack, i.e. adjacent to Warragamba and Eucumbene.

10

Q. Going then to table 2, the total number of houses in the sample there were 229, I think. The number of houses that are identified - and I take the bracketed numbers at the top of the table there - add up to 76. Now, that figure is the total number of houses on the first and second line; is that right?

A. That's correct.

20 Q. Now, what do you mean by the first and second line?

25 A. That means that the first row of houses would be those with frontages directly on Eucumbene or Warragamba, and the second row would tend to be those houses that shared a rear boundary to those first line houses.

Q. Tended to or were the ones that shared the back fence?

30 A. Well, in the general sense did, but there obviously would be a few exemptions to that - for instance when there is a parkland in fact in the first row.

35 Q. That table, so far as there are figures within it, was reliant on people answering a survey; is that right?

40 A. It was reliant upon the opportunity of happening to meet the occupant during the survey initiative.

Q. And there were a similar number of instances where you weren't for whatever reason able to speak to the occupant of the house?

45 A. Yes, it is reflected in the large number of "unknown", particularly for destroyed houses listed as the last row in that table where in fact

their behaviour was not known.

Q. So I presume you don't know in relation to the figures - if I can take you to the table and under
5 "unknown" on the bottom line there is a figure of 14 and 11, you simply don't know where otherwise they might fit within that table?

A. That's correct.

10 MR ARCHER: Yes, thank you.

THE CORONER: Yes, Mr Johnson.

MR JOHNSON: Yes, thank you.

15

<CROSS-EXAMINATION BY MR JOHNSON

MR JOHNSON: Q. Might page 6756 be brought up of today's transcript. I want to ask you some questions, Mr Leonard, by reference to some
20 evidence you gave earlier in the day. And page 67 56, is that in the screen in front of you.

MR WOODWARD: I must indicate it is very difficult to get current transcript up on the screen, I am
25 afraid.

MR JOHNSON: Perhaps I will just read quickly some portions. Mr Woodward was asking you questions about two levels contained in the Australian
30 standard, being levels 1 and 2, level 1 being the medium bushfire attack, level 2 being the high bushfire attack. They appear in the Australian standard. Perhaps if that might be brought up - it is [AFP.AFP.0091.0523] at 234, and in
35 paragraph 3.2 there is reference to those two levels. That is something I think you were asked about this morning.

You were asked by Mr Woodward at line 42 on page
40 6756:

"Q. Just jumping ahead then to the building construction requirements that are prescribed under the standard, these commence at
45 page 534. Again whilst that is being brought up, I understand the standard, Mr Leonard, only prescribes two different levels of

construction; is that correct?

"A. Yes, there are only two levels with building solutions offered, and that is medium and high. ...

5

"Q. There is no prescription in the standard for extreme levels of attack. Why is that?"

I just wanted to take you to a portion later in the Australian standard, this is the page ending 0557, if that might be brought up. These are some amendments to the Australian standard that have been made since 1999; that's so, isn't it?

10 A. Yes.

15

Q. And in 2000 there was in fact provision made for level 3 construction being extreme bushfire attack; do you see that? It is amendment number 1. Perhaps a little bit like statutes and loose leaf services, sometimes they don't include this in the body of the text but it needs to be read in conjunction with the text. Could you just go to that, if you would. It is in the last few pages of the Australian standard?

20 A. Yes, I see that.

25

Q. It in effect asks the reader to interpose these portions into the body of the Australian standard. This in fact does create a level 3 construction for the category for extreme bushfire attack; doesn't it?

30 A. It does.

Q. It does in certain places merely apply, without further extension, the level 2 rules but from time to time it says the level 2 rule will apply except that something further will need to be done, and there are a number of examples of that there. Is this something that you also have had regard to for the purpose of preparing your report, the existence of the third level of construction under the Australian standard?

35 A. The relevance of the third level of construction doesn't really have any direct
40 relevance to the survey work and assumptions -
45 outcomes made in the Duffy report, mainly because level 1 construction is the only really relevant

construction level for which it applies.

5 Q. Perhaps then to complete this, insofar as it was put to you on page 6757 that there is no prescription for the standard of extreme levels of attack, that is not correct, there is. That's so; isn't it?

10 A. That's true. The draft 99 without revision has no prescription. However with amendments it does consider that, and certainly with the discussions on further amendments there is potential for that to also occur or in fact be revoked.

15 Q. What you were saying, though, is the existence of the level 3 construction doesn't bear upon the content of your report because you are really dealing with level 1 situations in effect?

20 A. Yes, that's true.

MR JOHNSON: Thank you, your Worship. Thank you, Mr Leonard.

25 THE CORONER: Yes, Mr Stitt.

MR STITT: I would like to go last if possible. I don't know if anybody else has got any questions.

30 THE CORONER: Mr Watts?

MR WATTS: No, thank you, your Worship.

THE CORONER: Mr Walker is not here, Mr Whybrow is not here. Yes, Mr Stitt.

35 MR STITT: So it is my turn, your Worship.

<CROSS-EXAMINATION BY MR STITT

40 MR STITT: Q. Mr Leonard, the report which you have prepared in July of this year is a fire specific report; is it not?

A. Yes, it refers specifically to the fire event that impacted Canberra on a given day.

45 Q. So you are directing your observations, opinions and conclusions to the precise events that impacted in this specific bushfire?

A. I believe in certain cases we've drawn on previous experience and provided that to support observations here, general observations.

5 Q. That is in respect of historical data. But the conclusions which you draw and express are specific for the Canberra bushfire; isn't that so?

A. I'd have to consider each conclusion carefully to see whether that was the case.

10

Q. But it is directed to the Canberra bushfire, isn't it?

A. Well, in certain cases the conclusion might actually refer to a situation where the Canberra bushfires provide further justification or further verification of a particular principle.

15

Q. What you have done in your report is basically to have two objectives, is it not? One is to identify the mechanisms of ignition and propagation of the fire in respect of this bushfire; and, secondly, to identify the attack mechanisms which played a role in the propagation of this particular fire; isn't that so?

20

A. That was one of the objectives, yes.

25

Q. In performing that objective, did you think it useful to have regard to the evidence which has been given to this inquiry about this particular bushfire?

30

A. The report was written predominantly on the evidence that was collected within the survey and the evidence that was provided in the reference documents that the document refers to.

35

Q. Well the report makes that plain that you are really dealing with your survey. But my question is: did you think it was useful in preparing your report to have regard to the actual evidence which has been given in this inquiry to her Worship?

40

A. Yes, I believe the evidence provided by Dr Cheney had been integrated and considered to some extent in relation to the weather conditions and environmental conditions and time of impact that the fire did occur. And that has been considered and referenced in the document.

45

47

Q. But apart from that which is referred to in the report, did you in fact consider other evidence? Did you read the transcript of evidence of witnesses who have described the events relating, for example, to their individual properties? Did you read any of that evidence?
5 A. Not with an objective of integrating it into this report.

10 Q. Well, did you read it at all?
A. No.

Q. So that so far as the report is concerned, whilst it is fire specific, you have not had regard to the evidence of people whose homes, for example, were burnt or to the events that directly impacted on those people; is that fair and accurate?
15 A. The information on the occupants' behaviour or reports of the incidents were limited to those interviews that occurred during the survey process.
20

Q. Well, for example, you refer to Mr Cheney. Did you have regard to some of the evidence which he has given to this inquiry about the profile of the fire and the fire front? Did you have regard to that evidence?
25 A. We - not specifically - I'm really not sure that we've referred to it specifically in this report.
30

Q. Well, did you have regard to it? It is either yes or no?
35 A. I do believe I've read the document, so yes.

Q. Did you read his evidence, for example, at page 516 and following in the transcript, where he gave a description of the profile of the flame and of the fire? Did you read that?
40 A. I don't recall the specific text that you referring to.

Q. So that you are at no disadvantage, let me remind you what Mr Cheney said about the fire and the flame profile. He said:
45
47

5 "Lower down the flame the temperature could
raise to something of the order of
1,200 degrees Centigrade and the profile of
the flame driven by the wind was when it left
the pine forest it came out more horizontal
than vertical."

And he said:

10 "The last part of the flame is being blown
straight out generally at a low angle."

He said:

15 "The flames are basically coming from the
last part of the canopy that is burning and,
because of the downdraught that follows
behind the flame, these may have been
directed downwards in some circumstances."

20

Then at 517 he said:

25 "The temperature of the order of
1,200 degrees Centigrade are then carried in
a horizontal plain forward only to the extent
that they extend forward."

And then he said, "The extent or the length of
those flames would depend on a number of factors."

30

Did you read all of that evidence?

A. I don't recall reading that in completion.

35 Q. Would you agree with Mr Cheney's description
of the profile of the flame as it, for example,
left the pine forest and impacted on what here is
being called the urban interface? Did you
consider that evidence?

40 A. No, I didn't consider it directly when
compiling this report.

45 Q. As I understand your report, you say that the
attack which you call of the bushfire has a number
of features. It seems to be a three-phase
exercise. The first phase is the embers which
travel in front of the fire front; is that
correct?

A. The embers don't necessarily travel in front of a fire front. They are omitted from combustible or combusting debris within the fire front and within the debris that is left after the fire front meeting heavy fuels, et cetera.

Q. No, I am talking about the embers that travel in front that are thrown ahead, are there not embers which are thrown ahead of the fire front?

10 A. Yes. The wind can carry embers from the fire event ahead of the fire front.

Q. So that that ember attack can occur before the fire front arrives?

15 A. That is possible, yes.

Q. Then the second phase is the fire front itself as it moves forward; is that correct?

A. Yes.

20 Q. And then the third phase is the ember attack which follows the vortices of the fire after the front has moved forward; is that correct?

25 A. The third example, the embers are usually transported by the prevailing winds that ensue after the main fire front effect has passed.

Q. But that's the mechanism. I'm asking you about the phase. That is in fact the third phase, is it not, of the passage of the fire?

30 A. I don't usually associate the description of a fire front as being those three phases.

Q. But I'm suggesting to you that, on analysis, that is a correct process of reasoning that there are, in truth, three phases as the fire progresses?

A. For some purposes that may be appropriate.

40 Q. Now, you said that it depends upon the wind and the wind force. Did you, in that regard, have regard to what Mr Cheney said about the wind force on this occasion where he said that the wind was of tornado force of perhaps 200 kilometres per hour; did you have regard to that?

45 A. I have heard that being referred to. However, I don't believe that refers to the specific region

for which this survey occurred. And certainly within the survey initiative that we did perform, we found little evidence of wind specific damage that would occur if winds had impacted the Duffy survey area of that magnitude.

5
Q. Well, Mr Cheney went on to say that that passage of the wind was then followed by the attack of embers immediately behind the path of the vortices?

10
MR WOODWARD: Your Worship, I hesitate to interrupt but there is scope for confusion in relation to these questions. I think Mr Leonard has picked up the difficulty. The fact is that these references to vortices, as I understand it, are references to a tornado event which clearly on the evidence of Mr Cheney affected suburbs south of the area that is the subject of the survey area. I am concerned that the questions and their continued reference to vortices has the potential to confuse the prevailing wind in other areas with the particular tornado event that happened considerably further south than the survey area.

15
20
25
THE CORONER: I think Mr Leonard has picked that up.

Q. Are you aware that there was some evidence about a tornado?

30
A. That's right.

Q. In the Chapman area - more in the Chapman area?

35
A. That's right. We had the opportunity to briefly have an overview of the Chapman area impact and did see a lot of wind specific damage and wind and fire combined damage. However, that wasn't the focus of the survey that we are presenting here.

40
MR STITT: Q. But what your survey and inquiries do reveal, I suggest, is this specific fire was one of extremes: it was of extreme temperature, extreme wind and had an extreme effect; do you agree?

A. From a house's perspective the only thing

extreme that houses in the surveyed area received was, in some cases, an extreme level of ember attack. It certainly didn't receive extreme levels of radiant heat and flame contact or
5 extreme levels of wind impact.

Q. Well, when you talk about ember attack, you were talking about leaves and bark and the like. Is that what you were referring to?

10 A. Leaves and bark can be materials that embers consist of.

Q. But did you have regard, for example, to the evidence about a man who was living in Eucumbene Drive, Duffy? That's right in the middle of the area that you surveyed; was it not?

A. Yes.

Q. Mr Evans gave evidence to this inquiry about the embers which affected him and his property at 20 56 Eucumbene Drive, Duffy. I take it you didn't read his evidence?

A. I don't recall reading it.

Q. Which was given before your report was prepared. Let me just remind you how he described the embers. He said this:

30 "The embers were hitting the house and smashing the tiles."

That would seem to indicate more than just leaves and bark, wouldn't it?

A. Yes, that would, if you took that in
35 isolation.

Q. And he said that the wind was so strong that the tiles were smashing and the windows were smashing?

40 A. If I can just refer back to the address you are referring to - 56 Eucumbene, that may in fact not be within the surveyed area.

MR WOODWARD: I think that is right, your Worship.
45 If you go to page 10 of Mr Leonard's report, the house numbers are shown.

47

MR STITT: Q. Well, it is very close to where you drew your boundary though, isn't it?

A. I believe the boundary ends at approximately 76 Eucumbene.

5

Q. Well, Mr Evans described the embers which were impacting on his house. He said:

10 "The force of the wind was quite strong but the embers were coming horizontally. ... There were quite large. They were breaking the - smashing the tiles on the roof. They were coming with a force and hitting."

15 That seems to indicate a considerable degree of impact from ember, would it not?

A. That would suggest an extraordinary attack mode. I haven't observed --

20 Q. But you weren't aware of that?

A. I haven't observed damage of that nature within the surveyed area. Issues of glazing damage or damaged roof tiles would be a specific impact type that would be readily picked up within 25 our survey initiative. However, that wasn't the case.

Q. But if Mr Evans' evidence is correct, it does indicate a considerable attack by large embers; 30 does it not?

A. In terms of classifying an ember, I would classify an ember as being produced from fine fuels, which by definition is everything smaller than the diameter of a pen in terms of being a 35 stick or leaves or bark. That is particularly small. So something that has the ability to smash a tile, I would suggest, isn't by strict definition classified as an ember.

40 Q. He was giving this description of the events that occurred before the fire front arrived. You wouldn't call that an ember attack then, I take it?

A. No. Something smaller than the diameter of a 45 pen, I would suggest, doesn't normally have the ability to smash a roof tile.

47

Q. Once tiles are smashed, that lets into the roof cavity other burning firebrands, doesn't it?

5 A. Yes, extreme wind events that were observed to lift roof tiles or smash windows, and that presented a significant escalation in the susceptibility of houses in that event, yes.

10 Q. And once the house is breached in that way, the fire which follows is almost inevitable; isn't it?

15 A. Provided that that house is exposed to a moderate to high level of ember attack, its probability of loss is higher.

20 Q. In your report at page 13, 14 and 18, you make the statement that there was no damage to any house in Duffy caused by radiation attack or radiant heat. At page 13 you say:

"As no evidence was found in the Duffy survey of direct radiation attack, this subject needs no further qualification."

25 And you have expressed the opinion several times that there was no damage caused by radiated heat; is that still your position?

30 A. That is radiated heat sufficient enough to cause damage in its own isolation that was sourced from the fire front itself.

35 Q. Are you aware of the debriefing given on 18 January 2003 immediately after the fire by Mr Ian Bennett, the Fire Commissioner for the ACT, which is part of the evidence before this inquiry, in which Mr Bennett, the Fire Commissioner, said this:

40 "Houses in Warragamba and Dixon Drive in Duffy were destroyed with impacts occurring two house rows behind. Over 100 houses were burnt. New house ignitions were predominantly caused by radiant heat."

45 Are you aware of that evidence?

A. No. But since you have raised my awareness, I would like to raise a point that the ambiguity

between radiant heat from the fire front and radiant heat from adjacent house fires might in fact be confusing the issue here.

5 Q. I suggest to you that to suggest that Mr Bennett was confused is a little unfair on Mr Bennett; isn't it?

A. I'm not suggesting that Mr Bennett went to the point of referring to the radiation from the flame
10 front or from the house or structural fires themselves.

Q. Well, if Mr Bennett there said immediately after the fire, when he apparently had had an
15 inspection that over 100 houses were destroyed, predominantly caused by radiant heat, that is in conflict with the view which you have expressed; isn't it?

20 MR WOODWARD: I object to this, your Worship. The report is quite clear. In fact, I took Mr Leonard to that part of his report where he says that 30 per cent of the houses were damaged and destroyed by radiant heat; that is, radiant heat from
25 neighbouring houses. It is important that there is a clear distinction drawn between that and radiant heat out of the forest --

THE CORONER: Yes.

30

Q. Just to clarify that: at 5.2 on page 13 when you say, "No evidence was found of the Duffy survey of direct radiation attack", you mean, as I understand it, directly from the fire front?

35 A. That's correct.

Q. As opposed to, which perhaps is what Mr Bennett is referring to, radiant heat from structures or from other houses?

40 A. Any range of elements or combustible media directly around the house.

MR STITT: Q. But you are simply speculating there, are you not, as to what Mr Bennett meant?
45 Indeed, until I read it to you you weren't even aware of it.

A. My evidence that I'm providing here has - I

have attempted to present an independent version
of the events that we collected from a survey and
a collective experience of what our bushfire teams
have collected from prior survey events. I am not
5 attempting to assimilate other people's expert
opinions or explain them.

10 Q. So that may be Mr Bennett's opinion and it may
be correct.

MR WOODWARD: Your Worship, I am sorry to keep
interrupting, but Mr Bennett talks about radiant
heat. His comment does not draw distinction
between radiant heat from the forest or the
15 houses. To put to this witness in effect that
Mr Bennett is talking about radiant heat from the
forest is, in my submission, unfair. He uses the
term generically. He could well be referring to
radiant heat from houses, in which case this
20 witness's evidence would be consistent.

THE CORONER: I think that is right, Mr Stitt. He
is talking about two separate events.

25 MR STITT: Q. The report in which you have
expressed your opinion and conclusions relies, to
a certain extent, on AS 3959 and you have given
some evidence about that. Do you agree that that,
as a standard or code, has no relevance at all to
30 the gas infrastructure or gas network and
distribution systems?

A. I believe that the standard attempts to refer
to infrastructure supply piping as being
non-combustible, I recall.

35 Q. Well, are you aware that there are in excess
of 150 Australian standard codes which deal with
the gas infrastructure and the gas network and
distribution system?

40 A. I'm not aware of that.

Q. And that this gas network and distribution
system in the ACT complies with all of those
codes; I take it you are not able to comment on
45 that either?

A. I don't think it is appropriate for me to
comment on it.

Q. But what is clear though, I take it, is that you don't suggest that AS 3959 is relevant in terms of recommendations to her Worship about the way in which the gas distribution network should
5 be constructed or maintained?

A. Sorry, could you repeat the question.

Q. You don't suggest that AS 3959 is relevant to the gas distribution network as to its
10 construction or the way in which it is maintained?

A. I don't believe AS 3959 was enforced prior to the fire event.

Q. Mr Leonard, in your report you have made some
15 recommendations as to the way in which you think these buildings and structures could be better dealt with, and you set that out in your report at page 49. In point 5 on that page you talk about
20 "influencing the priorities which all regulatory reform and community education are based". Would you agree that, in terms of safety, it would be preferable to have gas removed entirely from the gas distribution system in a timely and safe fashion before the arrival of a bushfire?

25 A. I would suggest that, if that was possible, some risk may be mitigated by that approach.

Q. Well, would you therefore support the introduction of protocols which brought about that
30 event; namely, to withdraw the gas and purge it from a system in a timely and safe manner?

A. I'm not intimately aware of all of the ramifications that that approach may have, whether there is a whole range of negative ramifications
35 that in fact create a negative effect. I'm not sure of the adverse effects of that approach. For instance, everyone's pilot lights going out and having to be reignited and re-established, I'm not really an expert to comment on that approach.

40

MR STITT: Thank you, Mr Leonard.

THE CORONER: Thank you, Mr Stitt. Yes, Mr Woodward, any re-examination?

45

MR WOODWARD: Just one.

47

<RE-EXAMINATION BY MR WOODWARD

MR WOODWARD: Q. Could I have the standard brought up [AFP.AFP.0091.0523] at 0546. That is page 22 of the standard, Mr Leonard. When you
5 were asked by my learned friend Mr Stitt about the extent to which AS 3959 relates to gas infrastructure, you said you thought there may be something in the standard about that. Do you see there prescription for level 1 construction and
10 level 2 construction: "all exposed piping for water and gas supplies in level 1 shall be metal"; is that what you are referring to?

A. Yes.

15 MR WOODWARD: Yes, that's all. Thank you, your Worship.

THE CORONER: Thank you, Mr Leonard. You are excused. You are free to leave, if you wish.

20

THE WITNESS: Thank you, your Worship.

THE CORONER: We will adjourn until 2 o'clock.

25 **<THE WITNESS WITHDREW**

25

LUNCHEON ADJOURNMENT

[12.47pm]

RESUMED

[2.00pm]

30 MR WOODWARD: I call Mr Cheney, please.

MR CRADDOCK: I have a further application to make, and that is that your Worship at the end of Mr Cheney's evidence-in-chief not call on my
35 client to cross-examine Mr Cheney. I have instructions to seek a ruling from the Court with respect to your Worship's ruling this morning. My application is that I not be called on to cross-examine Mr Cheney until such time as I have
40 taken that step.

Now, it goes without saying in making an application such as I do now that I would give an undertaking to the Court to move expeditiously.
45 And although from out of town, I am told that there is some prospect proceedings could be moved in court tomorrow. I don't know precisely what is

possible just yet.

But the application that I make on behalf of my clients is that we not be called on to
5 cross-examine. Implicit in that is that we should certainly proceed to have the remainder of Mr Cheney's evidence-in-chief. More particularly, because as I understand it, it will travel some way beyond what he has thus far put in writing.
10 That's the application, if your Worship please.

THE CORONER: Do you wish to be heard as well, Mr Walker?

15 MR PHILIP WALKER: I was going to make a similar application. Mr Craddock has said everything I would have said in the application I would make myself. I formally make the same application.

20 THE CORONER: I don't intend to delay Mr Cheney's evidence at all but I am mindful of the fact that Mr Pike wishes an opportunity to cross-examine Mr Cheney on Monday, as I understand it.

25 MR WOODWARD: That is so, your Worship.

THE CORONER: But it is again a question of delay. It has been known by counsel that Mr Cheney was to give his evidence this week and to be
30 cross-examined this week and next week. Now, you gentlemen can make whatever arrangements you wish, but I am reluctant to again adjourn or delay these proceedings. And that is really what you are asking me to do to suit --

35 MR JOHNSON: If I could be heard shortly, your Worship. I can indicate that an application was brought in the Supreme Court of the Australian Capital Territory on behalf of my client as well.
40 I can indicate that it will certainly be done as expeditiously as possible and hopefully with proceedings to initiate in the morning, if not earlier.

45 I have heard what has been said by your Worship. I would indicate that the nature of the application would seem to raise issues of some

significance as to the administration of justice
and that it is important, I would submit, that
your Worship allow time for a review of the
decision by your Worship given as recently as this
5 morning.

I am conscious of your Worship's desire that the
matter proceed as quickly as possible. That is
certainly the desire of my client as well. It is
10 anticipated and hoped that any proceeding in the
Supreme Court might be heard and determined as
soon as possible as well.

The difficulty that would seem to arise is the
15 difficulty of the type identified by the Court of
Appeal in Musumeci when they pointed to the
prejudice that can occur if cross-examination
commences, some material is provided and a witness
is required to be recalled. Indeed, the Court of
20 Appeal, paragraph 36 of Musumeci, suggested that
was no answer to the procedural fairness problem.

I submit that it is important that your Worship
allow some time. Mr Pike's position, it seems, is
25 clear as to Monday. I would invite your Worship
to take the evidence-in-chief of Mr Cheney. If
that is completed by 4 o'clock today, I would ask
your Worship to certainly not sit tomorrow because
I suspect there would be a number of persons
30 involved in this proceeding who may need to appear
elsewhere in relation to this matter. This is not
said in any way in terrorem; it is put in a way so
the issues are understood. It is appropriate that
there be a fair opportunity to test the ruling by
35 your Worship.

MR WATTS: Can I just indicate that, like
Mr Johnson, my instructions are to test the ruling
of your Worship by an application to the Supreme
40 Court. I make a pursuant application that I not
be required to cross-examine until that
application is dealt with.

MR WOODWARD: As I apprehend it, there are two
45 difficulties adverted to in the application today.
The first is a very practical one; namely, that if
an application were to be made tomorrow before the

Supreme Court, there would be people present before your Worship now that might be required to appear at that application. That does present a difficulty which it is difficult to respond to.

5

On the broader question, however, of the need to defer Mr Cheney's cross-examination, the parties were notified when this issue first arose that, regardless of your Worship's order in relation to access to documents, we would be urging your Worship to proceed with the examination and cross-examination of Mr Cheney. Because unlike the position in Musumeci, which was an entirely different set of circumstances involving the potential for the coroner to make a determination in respect of an indictable offence, in my submission there would be no prejudice whatsoever to any party in continuing with the cross-examination of Mr Cheney in relation to the documents now sought from him.

If, as we indicated in correspondence last week, ultimately orders are made requiring production of documents that parties don't presently have, then the way to respond to it is to re-call Mr Cheney who after all is about to commence his second stint in the witness box, and a third one I am sure he would prefer to avoid. If it has to happen, then so be it. There can be, in my submission, no serious suggestion that any party will be prejudiced providing that they know that, if documents are ultimately produced, they will have an opportunity to cross-examine Mr Cheney on those documents.

35

In my submission, subject to the practical problem the cross-examination of Mr Cheney should proceed. Can I mention in that regard, your Worship, my anticipation in relation to the time. I would expect to take more than this afternoon to conclude Mr Cheney's examination-in-chief. I would hope to conclude certainly by the morning adjournment tomorrow and, as I understand it, having spoken to some of the other parties about their plans for Mr Cheney, it is likely that he his cross-examination could run into two or three days.

45

In those circumstances, putting aside the practical problem, in my submission the matter should proceed. His cross-examination should proceed. I make that submission particularly
5 conscious of the fact that, when we next come back before you under the current proposal in October, Mr Cheney would by then be unavailable.

10 THE CORONER: And counsel have also been aware of that.

MR WOODWARD: It would have a very significant effect, in my submission, if - as is possible - Mr Cheney being unavailable in October we then had
15 to defer him until some date in possibly November. That would have a seriously detrimental effect on what would otherwise be achievable. In those circumstances, his evidence should proceed to conclusion because, your Worship, if any
20 application is made that is unsuccessful, that will be the end of Mr Cheney's evidence and we won't have to trouble him again.

Balancing those various considerations in my
25 submission would lead to the inevitable conclusion that his evidence should proceed to finality if at all possible over tomorrow and the balance next week.

30 THE CORONER: That is the way I intend to proceed that Mr Cheney give his evidence-in-chief today and tomorrow, and the cross-examination of Mr Cheney commence today and until Mr Cheney's evidence is completed.

35 If there is a proceeding in the Supreme Court and if different orders are made, then that is a matter that can be dealt with at a later date. I am not going to anticipate, and it is not proper
40 for counsel to anticipate, the decision or any other decision that may be made in relation to the documents.

45 It was always the plan to call Mr Cheney today. In fact, originally when we adjourned the plan was to call the evidence of Mr Cheney on 9 August. That was the original plan. We are now at the

26th of August, and I am being asked yet again for another delay in these proceedings. I refuse that.

5 We start with Mr Cheney today with his
evidence-in-chief, and we start cross-examination
for those counsel who wish to cross-examine
tomorrow. You have had plenty of notice of
Mr Cheney's report and the contents of that
10 report. You have had plenty of opportunity, all
of you, to meet the information that is contained
in that report. You are being given the
opportunity to cross-examine and clarify any of
the information that you wish. That is the way we
15 will proceed.

MR WOODWARD: If your Worship please.

<PHILLIP CHENEY, SWORN

20

<EXAMINATION-IN-CHIEF BY MR WOODWARD

MR WOODWARD: Q. Mr Cheney, this is your second
stint in the witness box, having been before her
Worship in October of last year, so I won't take
25 you to the formalities of full name and so on. I
will just ask you about the reports that you have
prepared since that time. There are essentially
three sets of documents, if I can use that
expression, in respect of the work that you have
30 done since October.

They are firstly a report dated 7 June 2004
entitled "fuel management in the ACT", which is a
report into fuel management. It is
35 [DPP.DPP.0008.0001]. Do you have a copy of that
in court, Mr Cheney?

A. Yes, I do.

Q. Just as you are finding it, have you had an
40 opportunity to read it or consider it again in
more recent times?

A. Yes, briefly.

Q. Are there any matters in it that you wish to
45 correct or amend?

A. Not of a major nature. I think there are some
typos in it which, on re-reading them, one finds

after this time.

Q. We might pick those up as we go to the extent that they are important. The second document,
5 Mr Cheney, is your report presented originally in October of last year entitled "Origin and development of the bushfires that spread into the ACT", which has been marked up to reflect both additions and deletions to that document from
10 October [DPP.DPP.0008.0051]. Are you familiar with that document?

A. Yes, I am.

Q. Are there any particular passages or parts of
15 that that you want to correct or amend at this stage?

A. Again it is the same. There are some minor typographical errors in that which we will come to.

20

Q. Finally, Mr Cheney, there is, if I can call it this, a supplementary set of Powerpoint slides which relate in particular to the development of McIntyre's Hut fire on 17 and 18 January which
25 both amend and add to the slides that were part of your presentation on 8 October; is that correct?

A. That's correct.

Q. All of those three reports, subject to the
30 minor matters that you have referred to, they are true and correct?

A. Yes, I believe so.

MR WOODWARD: Your Worship, what I propose to do,
35 certainly this afternoon and to the extent necessary tomorrow morning, is first take Mr Cheney to his report on fuel management and just ask him some questions about that, although to a large extent it does speak for itself.

40

I will then be asking Mr Cheney some preliminary questions about his new report on the origin and development of the fires. But what I would then request is that, after one or two preliminary
45 questions, Mr Cheney do more or less the same process he undertook back in October where he spoke to the Powerpoint presentation in respect of

the new slides that have been produced.

5 After that, subject to if there are matters that are amendments to his report that aren't picked up in the course of the presentation, I will then take him to those matters. That is how I propose to proceed.

10 So Mr Cheney, starting with the fuel management in the ACT report, you have set out there the various documents you considered for the purposes of producing that report. They comprise in particular the bushfire fuel management plans published for the periods 1998-2000, 2000-2002,
15 and 2002-2004; is that correct?

A. That's correct.

20 Q. You have listed a number of other documents and other material that you have referred to. Perhaps I will just mention one in particular which comes up a few times. That is your report in 2002 where you were asked to comment on what was then, as I understand it, a draft of the bushfire management plan that was being proposed
25 for the 2002-4 period; perhaps I should correct that. I am not clear was it a draft of the report you were asked to look at or was it the 2002 report itself?

A. It was a draft of the report.

30

Q. That is a document that I think was discussed extensively in phase 1 of the inquest. But you have made numerous references to comments that you made in that report in your current document,
35 haven't you; that is, you have referred to your earlier report in a few places?

A. I have listed it; I suppose so.

40 Q. You have in footnotes. For instance, Mr Cheney, the first one is footnote 23 where you have a reference to your 2002 review of the bushfire fuel management plan?

A. Yes.

45 Q. I just want to take you to some aspects of your report, Mr Cheney, because I indicated to her Worship much of it does speak for itself. The

third complete paragraph under the heading
"introduction" in the middle of the page you make
a point that I think you revisit in a number of
places throughout the report. I will just read
5 that:

"In the ACT responsibility for fire
management has been divided. The
responsibility for fire suppression is vested
10 in the Chief Fire Control Officer while the
responsibility for fuel management is vested
in the land management agencies. Despite
Acts to ensure that regular fuel management
planning is undertaken I believe this
15 division of responsibility is the fundamental
reason why effective fuel management was not
undertaken in the forest and park reserves of
the ACT."

20 Mr Cheney, that is a theme that is picked up again
elsewhere in your report and indeed is a theme
that you have repeated in many documents, I think,
going back to your comments on the Hannon report
in the early 1990s; is that correct?

25 A. That's correct.

Q. And perhaps if I could, and I appreciate you
do provide some amplification of that comment
elsewhere in your report, but in summary, why do
30 you say that that is the reason that there has not
been adequate fuel management planning in the
past?

A. I think it stems down to a will on the land
managers to take what is a somewhat costly and
35 difficult step to actually get in and develop an
organisation that is trained and has the systems
in place under which to do fuel management.

This is something that requires a knowledge of
40 fire behaviour. And unless there is the
stimulation of having responsibility for
suppressing the fires, then it seems that that
enthusiasm and will just isn't there. So it
becomes an issue of the whole organisation that --
45

MR WATTS: I object to this. This is being given
in very general terms about land managers. To

which organisation is he referring and can we have some specific incidences of what he is referring to? Because at the moment it is in general terms and it seems to encompass all land managers in the
5 ACT. There are different land managers with different programs, and it should be more specific, with respect, your Worship.

10 THE CORONER: That is probably a fair comment.

MR WOODWARD: Well, your Worship, perhaps one of the difficulties is that what I was seeking to get from Mr Cheney in relation to this was a broad explanation of a theme that appears in many of his
15 publications. As I understand it, he is not directing a criticism, for example, to any particular land management agency - perhaps he can clarify that - rather he is saying, as he has indicated there is a difficulty, it may be at a
20 hypothetical level, if a land management agency doesn't have responsibility for suppression then there may be difficulties. Perhaps I can ask this question to clarify.

25 Q. In your comments you are making at the moment, Mr Cheney, are you directing them at any particular land management agency or are you saying even perhaps Australia-wide there is a need for the entity that owns the land or controls the
30 land to also have responsibility for fire suppression?

A. In general terms, that's correct. I believe that even an individual who has a fire starting on his property has a responsibility to put it out.
35 Now, in practice, individuals band together into brigades to do that task because it is generally beyond the capability of the single person.

40 Here, because the problem of fuel reduction is largely on forest land, and that is primarily lands that are now owned either by a forestry organisation, be it government or private, or a parks organisation or other land manager such as the water board that is responsible for that land.
45

Q. But the essence of your concern, as I understand it, is that, and again at a theoretical

level, in order for a land management agency to have the incentive to focus on and to put resources and effort into fuel management, they need to be responsible for the consequences of, for example, failing in that area; namely, a more difficult suppression effort?

5
A. That's correct. Because the prime reason for doing fuel management is to make suppression easier. If the land manager is not responsible for suppression then he doesn't have that focus (a) to find out what fuels on his area are the most difficult and which would benefit most from treatment.

10
15 Q. Your report then goes on to deal over several pages from page 2 to I think about page 8 with some of the fundamentals of fire behaviour. Much of that was covered in your evidence in October, so I won't go over that. But I just wanted to pick up one matter that you refer to on page 7 under the table, which would be 0007. I think this is also picked up in your other report in the introductory material, and that is the distinction between - at least your use of the terms "back-burning" and "burning out".

20
25 Perhaps I will suggest this to you: the term "back-burning" tends to be used to describe a whole range of activity, when in fact at a technical level there is a distinction to be drawn between a "back-burn" in the strict sense and "burning out"; is that correct?

30
35 A. Well, yes. Back-burning has been used by the media to describe almost anything from a prescribed fire to burning out. Its correct definition is setting a fire downwind of a head fire in order to widen a break and to make it wide enough to stop an advancing head fire.

40 Q. The term, for instance, you deal with in your other report the warning that was being done along the Powerline Trail at least while the wind was from the west, that would fall within the description of burning out rather than back-burning?

45 A. Yes. I would put all of the operations that were generally carried out during these fires as

burning out from a secure line to burning out the fuels between the perimeter of the wildfire and the control line.

5 Q. You again perhaps at a theoretical level, and you did touch on this in your evidence in October, commencing at page 0008 deal with fire intensity and provide a definition or explanation as to how
10 fire intensity is measured by reference to kilowatts per metre. But you make the point in the second paragraph:

15 "Normally the fire intensity is quoted for the head fire unless otherwise specified and is the maximum for the whole perimeter".

Why is that important, Mr Cheney?

A. The fire intensity concept came out of a way to try and describe the heat output of the fire.
20 And the definition quotes that heat output is per lineal metre of the fire perimeter. So it varies all around the fire perimeter as the rate of spread around the perimeter changes.

25 For convenience basically we just quote the maximum fire intensity, which will be what is emitted at the fastest part of the fire or the head fire.

30 Q. That could vary considerably, could it not, from the intensity produced from the back of the fire?

A. Yes. Even with a high intensity fire the complete range from say a 100 kilowatts per metre
35 fire front at the back, where it is backing slowly into the wind, to 60,000 or more at the head fire where it is spreading very rapidly with the wind behind it.

40 Q. You then go on to point out that, while fire intensity doesn't tell you much necessarily about fire behaviour and rate of spread, it is used at least to assist in understanding the limits for suppression; is that where the concept of fire
45 intensity is perhaps most often used?

A. That and assessing thermal damage in forests which is related to the intensity figure. It

combines rate of spread with fuel consumed, which are the two key factors making up the rate of heat flux from the fire. To be able to quantify that in terms of those two variables, we have used fire
5 intensity to give people basically something to refer to.

Intensity is a concept where most people find it difficult to say or describe what is a 10,000 per
10 kilowatt fire. In many respects, it might be easier just to describe the height of the flames which is also related to intensity. The further difficulty comes because flames and its characteristics are also dependent on other
15 factors which are not necessarily calculated only by the fuel consumed; for example, the size of the fuel particles and the structure of the fuel.

For different fuel types the same intensity figure
20 describes a different fire. For example, a fast spreading grass fire may have a calculated intensity of 10,000 kilowatts per metre and only have flame heights of maybe 6 metres but it is travelling at a very high rate that gives the heat
25 output. That is very different from the intensity in a forest fire which is travelling slower but has flames which are probably consuming the whole crown in an average size force.

30 Q. You have set out in table 3 at the top of the following page generally understood, as I understand it, limits of suppression relative to fire intensity. Particularly in the comments section there, Mr Cheney, they arise from the
35 report that you have referenced in footnote 7; is that correct?

A. That's right.

40 Q. In your experience, are those suppression limits generally well known and understood by firefighting agencies?

A. I think they are pretty well accepted now. Those intensities apply to a stringy bark eucalypt forest. They might be a little higher in a smooth
45 bark forest that doesn't have a high spotting potential, because the research that was done at that point showed that the main factor which

determined at what intensity suppression failed or broke down was the amount of spot fires that were being produced by that particular fire.

5 For example, with hand tools if the fire is not spotting you can control a fire, you can stop with a hand tool line a fire of 1,000 kilowatts per metre. But the difficulty is the number of spot
10 firefighters to round up those spot fires, so they eventually lose it.

Q. So in that sense the actual heat generated, although it would be warm it is not so hot that
15 they can't get close to the fire to undertake work with the hand tools. The reason why that limit is set is often because of the spotting potential over the line that has been created?

A. Well, it is stretching them a bit if they get
20 too close. But by and large 1,000 kilowatts per metre has a flame height of between 1 and 2 metres, which if you create a barrier of a metre or so wide and it's not spotting, that will normally pull up a forest fire. But it is the
25 firebrands that are carried over that. Also if you get spot lines behind the line that continue to put people - so it is a general figure that relates to the difficulty of suppression, which is a little bit more than just the height of the
30 flames at the fire front.

Q. You say in the following paragraph:

35 "In most forests limits of suppression will be exceeded at high to very high fire danger and is the reason why initial attack needs to be fast and concentrated when the fire is small, and why firefighters need to take advantage of milder conditions at night when
40 the fire intensity is usually reduced."

That follows a comment that fire intensity in excess of 3500 kilowatts per metre is really the limit of effective suppression. Is that comment
45 in a sense a limit to suppression by direct attack?

A. Yes, it primarily is. That is what you can do

with direct attack. And unless you have established 3,000-3,500 kilowatts per metre, unless you have established a substantial width of fire break in front of it sufficient to absorb the spot fires that have generated from the front of that fire, you are going to lose it if it approaches a barrier of some sort as well.

Q. Now, on the particular subject of the benefits or the impact on intensity in particular of hazard reduction burning, at the first complete paragraph on page 10 you summarise what advantages can be provided through hazard reduction burning where you say:

"Hazard reduction burning will reduce the total load of fine fuel and is also effective in reducing the height and flammability of elevated fine fuels such as shrubs and suspended dead material. Burning is the only practical way of reducing the fibrous bark on trees, which is the prime source of firebrands that cause spotting. Hazard reduction reduces fire behaviour by --

And then you set out the four main ways in which it has that effect. You go on to make the point as I understand it, Mr Cheney, that "prescribed burning is not intended to stop forest fires."

That is to some extent a common misconception, is it, that prescribed burning is something of a panacea for fires in Australia?

A. Some people have interpreted that, if you do a prescribed burn, you will effectively be able to stop fires. That will occur depending on the fuel type usually in the first one or two years after the burn has been completed. Beyond that, even though a forest may be carrying a light fuel, the fire is not going to stop by itself but it will slow down and it does make it easier to suppress.

Q. And it is that ease of having the fire or the fuel in a state that makes it easier to suppress, is that really the key advantage from fuel reduction burning?

A. Well, it extends the range of weather

conditions over which you can undertake effective suppression.

5 Q. You have actually provided a chart which illustrates that very point, Mr Cheney which is unfortunately because it is in black and white a little difficult to read. Perhaps if you could just explain, if you can, in narrative form how that operates; in other words, how the range of
10 weather conditions under which suppression can occur in effect is broadened by hazards reduction burning.

A. Yes. For example, if you have a fuel load of 20 tonnes per hectare then the limit for
15 suppression with hand tools is limited to conditions of low fire danger. If the fuel is reduced to 5 tonnes per hectare, then you can be effective in suppression up into the high to very high range of fire weather or fire danger.

20 So it is simply just saying the lighter your fuels, the wider the range of weather conditions that you are likely to be successful in bringing the fire under control by direct attack.

25 Q. You say in the opening part of that paragraph it is the total load of fine fuel that is the key aspect of the fuel that is relevant in that context?

30 A. That's true. But heavy fuels do also become involved, and prescribed burning does have a small effect in removing some of those and more importantly tending to break them up so that they become easier to mop up and control.

35 MR WATTS: I keep interrupting, but do I take it that on this diagram because it is not in colour --

40 THE CORONER: It is difficult to interpret.

MR WATTS: There is load to the left then the bands show low, moderate high, very high and extreme?

45 THE WITNESS: That is correct. Low is to the left.

THE CORONER: It is a bit unfortunate that it is not in colour.

MR WOODWARD: Q. Over the page on page 12,
5 Mr Cheney, you have set out an approach to prescribed burning or at least how land managers should approach prescribed burning and then refer to the work done by the Western Australian
10 Department of Conservation and Land Management in prescribed burning work - I am sorry, being done by that department. Is that your experience, do they provide something of a benchmark for prescribed burning in Australia? I am talking
15 about the paragraph immediately above the heading "advances in fuel management" on page 12 of your report where, after setting out an approach, you refer to the work being done by the Department of Conservation and Land Management since the mid-'60s?

20 A. Yes. Because they are the one organisation in Australia that set out to undertake prescribed burning in the highly professional level and develop their own specific burning guides for different types and have followed it through with
25 concurrent field research both into tree damage and to ecological changes that might occur following the fires. In my opinion, they are certainly the most advanced in using prescribed fire and fire management generally.

30 Q. You then refer to some advances in fuel management and in particular the research that you have led known as Project Vesta, which has been referred to on a number of occasions during the
35 course of evidence. I appreciate this is a difficult question to answer in brief but, if you could just to assist the parties and her Worship, by explaining what the background to Project Vesta is, what it has involved and where it is at the
40 moment?

A. It was a project that came about because of the need to both better quantify fire behaviour in terms of the fuel load and the fuel structure, particularly as fuels aged subsequent to a
45 prescribed burning program. We tried to carry out these experiments at as high a level of fire danger as we possibly could and therefore it took

years to extend our knowledge of high intensity fires.

Q. When did it start? Sorry, go on?

5 A. I was just going to say, the question arose because the original fire behaviour guides, including the McArthur meter, the prescribed burning guides both in the eastern states and in
10 Western Australia used only fine fuel load as the major variable that described the effects of fuels on the fires. Now, a number of research projects, there was one we carried out in grasslands, and the results of that study was we found that fuel
15 load - that fire spread was independent of grass fuel load.

There was other work done by Neil Burrows in Western Australia who tried to measure and did a series of fires in what was a uniformly aged fuel.
20 And although his measurements of fuel load varied, he found that there was no relation between fuel load in his fires and the rate of spread figures that he achieved. So this was accumulating data for different fuel types, which was calling into
25 question the basic premise that prescribed burning based on that rate of spread was directly proportional to the amount of fine fuel consumed.

At the time that I was proposing this experiment,
30 I had both the dual purpose of improving our knowledge of the effect of different components of the fuel structure on fire behaviour plus also extending it to higher intensity fires. There was some difficulty in getting support for studying
35 higher intensity fires, because at the time there was a general consensus of opinion amongst a lot of people that that was not necessary as you could not do anything about them anyway because they had achieved a certain level.

40

But really the key factor was that fuel load is highly variable and difficult to measure. So it is an oft-used but a difficult variable for people to measure and apply in the field because of its
45 wide spatial variability.

In a lot of the original work there was a very

poor correlation between fuel load and fire spread which was not statistically explored, and I just felt it was clear from the scientific point of view that this had not been adequately explained.

5

I guess I started the preparations for Vesta in probably 1989 through negotiations with colleagues in the districts in Western Australia. I needed to set up areas of different fuel age which would come together at the same time so that I could have a range of fuel ages started in 1996. So there was about five or six years lead time just negotiating with the Western Australian Forest Service to adjust their prescribed burning programs so that when we got the project up and running we would have that arrangement in place. And then we burnt for three years in a row and then again in 2001 to carry out the full range of experiments.

20

We set out fuels in two quite distinct forest types. There was the forest type, which was largely litter dominated in fuel and similar in respects to the dry forest out in Cowen where there was only a small shrub component and the bulk of the fuel was leaf litter and bark. We wanted to compare that with another forest type, which was one which had a tall shrub component in it up to 2-3 metres high.

30

We had, in the two different sites, either four or five fuel ages ranging from two years to 16-20 years, which was the oldest fuel in that area and two or three intermediate fuel types. We set out to do 12 sets of simultaneous fires in each of these fuel types over a range of wind speeds, which ranged from something less than 10 kilometres an hour to something greater than 20 kilometres an hour. The highest wind speed that we could burn under was determined by the bringing on of a total ban of lighting of any fires in Western Australia. So that involved something like 100 fires in total done in simultaneous sets of four or five.

45

Q. At each of those fires they were test fires deliberately lit for that purpose and you were

there with all of the relevant measuring tools and so on?

5 A. The blocks were 2-hectare blocks and to establish the fire at something that we had assessed was close to its potential rate of spread. We attempted to initially get a simultaneous ignition of a line 120 metres long to start the fire. That ended up being impractical, so we settled on an ignition that lit the
10 120 metres in exactly 2 minutes to establish the fire.

We then monitored its spread over the next
15 200 metres, which for 2-hectare blocks were 200 x 200 metres. The wind in the forest was measured by a series of four monitors close to the back of the fire. We did a range of other meteorological measurements both inside and outside of the forest to try and get a complete set of fire spread data
20 that we could correlate with both the weather conditions and the fuel conditions.

With each block we went through and sampled very
25 intensely the fuel load by destructive methods and, because we knew that this had a wide variation into it and was difficult for people to apply practically, we also looked at a system of scoring the fuels by visually subdividing the fuels into what were recognisable layers and then
30 giving them a score based on the amount of dead material and the difficulty that you could get through it, plus the aerial continuity of the fuel and how much of the ground was covered by that particular fuel type. And that came into a hazard
35 scoring system that we were attempting to correlate with the fire spread.

Q. You have included in your report at pages 14
40 and 15 four charts which, as I understand it, depict the results and in effect demonstrate the effective fuel age - perhaps I should get you to explain it perhaps by reference to the second of the charts on that page, that is the lower one which you describe as "Near surface fuel hazard
45 score for two jarrah forest types as a function of age from Project Vesta experiments in Western Australia". If you could take us through what in

particular each of the hatched lines demonstrate?
A. The first one, figure 3a, is the surface
litter fuel loading. That is fine leaf twig and
bark material generally less than 6 mm in
5 diameter. The fine dotted line is for the load
shrub site, which is the northern jarrah which is
predominantly a litter based fuel. The dashed one
was the southern jarrah which had the tall shrubs
in it up to 2 metres high. And the dot or the
10 triangle in each case represents the mean for the
block. The error bars are the standard deviation
of the sample set around that mean. So that gives
you an indication of the variability of the fuels
within each block in terms of its standard
15 deviation, plus the mean value and its
accumulation over time. That's a pretty standard
accumulation curve for fine litter at the time.

The second one, figure 3b, was the near surface
20 hazard score. The near surface fuels are the
fuels that are suspended just above the litter
surface. If you look at a fuel, you can see there
is a layer of leaf litter which is on the ground
where the leaves are predominantly horizontal to
25 the ground. Above that you get litter and
material supported in the base of large shrubs, or
on smaller shrubs and grasses within the forest,
or on sticks and twigs that have fallen down with
time. And that gives you an aerated layer which
30 is identifiable and is sitting above the surface
fuel.

This graph shows in terms of the scoring system
that we were using that the tall shrub site
35 continued to increase and started to flatten off
seriously after about 15 years. On the area where
there was mostly litter fuels with low scattered
shrubs, this increased rapidly for six or seven
years and then flattened off and remained pretty
40 much level at that value.

Q. This is probably oversimplifying it but does
it follow from that, at least in respect to the
near surface fuel, that in the tall shrub site
45 even after 15 years you are still getting a
benefit, in effect, from having had a fuel load
down as low as zero?

A. So far in our analysis we have found that the near surface fuel hazard score multiplied by the height of that layer is the best variable for predicting fire spread. It combines - it can be applicable to both sites without being site specific; whereas if we use the fuel load which was indicated in the top graph where they are both similar, we find there is a separation in the fire spread for the two types. So that using just fuel load which is what people had been using before, you would have to make up a fuel specific guide to be able to predict the fire spread accurately, and near surface fuel hazard becomes a much better predictive variable for predicting fire spread.

Q. What do these results say, if anything, about the effects and advantages of fuel reduction burning over time?

A. Well, two things. No matter which variable we looked at - and we looked at a number more than these - they all continued increasing with time and didn't fall off up to 20 years. The major effect on each of these variables is that they increase rapidly in the first five years and then they start to stop accumulating rapidly. In the lower shrubs, it is more evident than the taller shrubs. They keep going up for longer. It really supports the rotation length that most forestry organisations are based on, that at 5 to 8 years you have accumulated sufficient fuels and that it requires retreatment to reduce the fire behaviour to a manageable level.

Q. Does it also show that, even after 15 years in some cases, you are still getting a very small but appreciable benefit from fuel reduction burning?

A. Yes. In some of them, and it was sort of illustrated a little in figure 3d, which was the bark hazard which was very variable but in this case the low shrub site, the difference was partially due to the previous fire history in the areas that you could get the hazard of the bark increasing for 20 years or longer.

The other factor in areas other than I've looked at where the fuels had accumulated for, I think, 35 to 40 years is that the shrub component had

become moribund and pretty much dried out. But the supporting mechanism was the collapse of dead shrub twigs or twig debris that had fallen from the canopy, which was also supporting the fine
5 fuels above the surface litter layer, and still giving you a very high near-surface fuel hazard which had continued to increase slowly in this forest for 35 to 40 years.

10 Q. You draw some parallels on page 16 of your report in relation to the Australian Capital Territory. In the third paragraph you say:

15 "Fuel accumulation curves for the Brindabella Ranges show a similar pattern with fuels increasing rapidly over the first 5 years, with dry forests and subalpine woodlands approaching equilibrium levels between 15 and
20 20 tonnes per hectare, while the ash forests approach equilibrium levels between 25 and 30 tonnes per hectare after 40 years."

You reference the New South Wales Parks submission in that regard. So that's at least in your
25 opinion, as I understand it, where you find a correlation between what you observed in your fires in Western Australia and what is found in this area?

30 A. The fuel accumulation curve is a very common one where they will follow very much the same shape and, for a great number of fuel types, the major accumulation is common in the first 5 years.

35 MR WOODWARD: Is that a convenient time your Worship?

THE CORONER: Yes, we will take the short break.

40 **SHORT ADJOURNMENT** [3.00pm]

RESUMED [3.10pm]

45 MR WOODWARD: Q. Commencing on page 17 and into page 18 of your report, Mr Cheney, you provide what you describe as a brief history of fuel management in the ACT. In particular in the second half of that page you deal with the period

post 1990. You say:

5 "Since 1990 fuel management has focused on
the urban interface and planned at the micro
scale."

You use that expression in a few other places,
what do you mean by "micro scale"?

10 A. Down to units of a few hundred metres rather
than looking at a broad-scale picture of tens or
hundreds or thousands of hectares.

Q. Then you say:

15 "The primary focus was fuel management to
protect assets of value."

In that sense, as I understand it you are
referring to assets of economic value as distinct
20 from perhaps a broader sense which would include
the environmental assets?

A. Primarily it was assets with a monetary value
that could be attached to them, yes.

25 Q. At the conclusion of that paragraph you say:

30 "In my opinion, the condition of fuels
adjacent to the urban areas of the ACT,
setback distances from forest vegetation and
the compact nature of ACT urban development
provided Canberra with the safest interface
of any city within equivalent or higher
rainfall zone anywhere in Australia. Other
fire experts agree."

35 You reference evidence before her Worship. The
next paragraph you say:

40 "The fact that bushfire burnt into the urban
area under extreme conditions did not reflect
a failure of fuel management on the urban
interface but rather a failure of fuel
management in the forest areas."

45 You then go on to perhaps explain that. If you
could perhaps elaborate on what you mean by
"failure of fuel management in the forest areas"?

A. Just going back to the first one, I think that when you travel around Australia and you look at the situation in towns and the fuels adjacent to them - for example, in Sydney where bush comes
5 right up to the edge of the suburbs in many areas - Canberra was by comparison relatively well serviced in terms of fuel management. The failure in the forest areas was that --

10 MR WATTS: I don't wish to interrupt again but can I just seek a clarification because it is confusing to me. Both in this paragraph and on page 16 this witness in his report has used the word "forest" that seems to be interchangeably
15 used in the ACT. ACT Forests refer to pine forests. As I understand what he is saying, perhaps it could be clarified - I did invite my learned friend to do so, and he hasn't done so for reasons best known to himself - that when the term
20 "forest" is used both in this paragraph and the previous one on page 16 what is referred to as eucalypt forest and not the pine forests.

MR WOODWARD: Your Worship, sorry for that. I
25 flipped the page and overlooked my note and forgot.

Q. Perhaps I should deal with this in two parts. Dealing with the reference that my learned friend referred to on page 16, if you could flip back to that page of your report, you will see just above the words "effectiveness of fuel reduction over
30 time" there is a paragraph that reads:

35 "Excluding relatively small areas burnt by wildfires and very small fuel reduction burns most areas of forest in the ACT."

In that reference to "forest", are you there
40 referring to just native forest or both native and plantation forests?

A. It is primarily the native forests I am referring to but it would also refer to the plantation forest because there haven't been much
45 specific fuel management undertaken beneath the pine forests for quite a long time.

47

Q. Dealing with the reference that prompted my friend's interruption on page 18, where you say in that final paragraph:

5 "The fact that bushfire burnt into the urban area under extreme conditions did not reflect a failure of fuel management on the urban interface but rather a failure of fuel management in the forest areas."

10

Again, can you be a little bit more specific about what forests you are referring to?

A. It is primarily the native forests but, again, the evidence that there have been very limited fuel management in the pine forests, particularly those which were close to Canberra.

Q. In that regard you are referring, as I understand it, to the period since 1990, so over that 13-year period in effect; is that right?

A. Probably goes back considerably earlier than that, somewhere towards 1975 or 1979.

Q. Perhaps I should come back a step. Fuel management is obviously a process that is implemented over many years, indeed decades; is that correct?

A. Yes. It is an ongoing process that all land management agencies have to consider.

30

Q. Had you observed, particularly as a result of the work that you did around 2002 and the work that you have done for the purposes of this inquest, any change in the way in which the pine forests fuel has been managed in the last few years?

A. I think that the changes had basically been put in place much earlier. Early attempts at fuel management did involve pruning of all trees originally for fire management purposes in part and there were some attempts to establish conditions for prescribed burning under pines, which were attempted and the conditions were identified. But they weren't followed through because it was difficult to achieve effective fuel reduction beneath the pine forest, particularly when they weren't pruned.

45

Then closer in, I believe the possible fuel management say in Stromlo Forest was limited to a very small strip along the Duffy pines in the area of Eucumbene Drive. That was about the only fuel management apart from what was termed in the report "broad strategic grazing" that had been carried out.

But from my review earlier whether or not the forest areas - the pine forest areas in this case - were grazed was purely coincidental and there really wasn't a program of specifically very heavily grazing forests for the purpose of fuel reduction.

Q. You, I think, hadn't completed your answer in response to my question about explaining the background to your comment that, despite the interface area being one of the safest interfaces of any city, the fire still caused so much damage on the interface. Your explanation for that, as I understand it, is because of a failure of fuel management in forest areas; is that correct?

A. I guess the totality of the fire event was hindered very much in my opinion in the early days because firefighters confronted fires in heavy fuels, which after the first day, even though the conditions were relatively mild, the intensity and spread of those fires and those fuels defeated the firefighters' best efforts to bring them under control.

Once they got to a size of more than 10 or 15 hectares, then the possibility of direct attack was removed and they had to go back to indirect attack. Again the heavy fuels, particularly in the mountain forest, a lot of it was suspended bark on the trees which made indirect attack difficult for them too because they were being confronted with continual breakaways through spotting on roads that they had set up to try and hold the fire and set burning out procedures from.

Q. You go on towards the end of your report to deal with a department-by-department analysis of fuel reduction. but more broadly dealing with the future for fuel management, you deal with that

commencing on page 19, and again largely speaks for itself. But I just wanted to ask you in the fourth paragraph under that heading "future fuel management" commencing "in my opinion", you again refer to the differences in responsibility but you say:

10 "The role of other parties including urban residents, rural lessees, the Commonwealth government, other ACT government agencies and the ANU who had significant land and assets under management was largely ignored in the hazard assessment process."

15 Now you are there referring, as I understand it, to the hazard assessment process undertaken for the purposes of the fuel management plans?

A. Yes.

20 Q. When you say, "The role of those other parties", what role would you have expect them to have had in that hazard assessment process?

A. The hazard assessment process seemed to be restricted to lands managed by the Department of Urban Services and they did not look at a wider picture. And Mt Stromlo was a good example. The Stromlo Observatory and the treatment works on Mt Stromlo were excluded from those maps as an asset that required protection. So the condition of the fuels adjacent and even within the grounds of Stromlo Observatory were hazardous and should have been taken into consideration.

35 Q. When you say "those maps" you are referring to the hazards assessment maps in the bushfire fuel management plans?

A. Yes.

40 Q. In the following paragraph you refer to the conditions that were experienced on the 18th of January as being conditions that should be expected under the level of fire danger that existed. You point out that in this particular case fires built up over 10 days providing an opportunity to marshal resources. But you make the point that in the circumstances of the Ash Wednesday fires in 1983 you can have a similar

kind of impact within a few hours of ignition. As I understand the following paragraph, Mr Cheney, it is suggesting that those sorts of conditions could be replicated in the ACT; is that correct?

5 A. That's right. I think it is a salutary warning that you have to face this problem of extreme weather. Under extreme weather there will be very fast fire development before fire
10 suppression resources can be mustered to attack it in an early phase. So long as those conditions persist, then the potential is there for the fires to burn into the city, even if we are only dealing with grass running up to the edge of the urban
15 perimeter.

And it relates to the need for residents to themselves be aware of this potential and be advised that, under these conditions, their protection cannot be provided by an emergency
20 service or anybody else. A lot of it will boil down to what preparations they have made themselves and their ability to take actions on an individual basis if they need to protect assets of value to them.

25 Q. You make, I think, that point in the section under "residents" on pages 20-21 where as I understand it you do some ballpark calculations of the potential number of houses under threat, where
30 a fire starts, as these fires did, to the west of Canberra, you say:

"If we assume that only the house adjacent to the fire perimeter is under threat when it is
35 located other than directly downwind of the fire, we can estimate that over the total perimeter something like 6,000 houses were under threat and there was a real probability of them being damaged or burnt down if they
40 were unattended."

I appreciate that is a very ballpark figure but can you explain how you arrived at it?

45 A. By taking some samples around the edge and looking at the number of houses within 500 metres and multiplying it by the length of perimeter in the categories that I had set out. So it involved

where the penetration of the fire went several rows back and it was doing an extension around those areas just to estimate the number of houses within those criteria, if two houses back from a house which had caught fire.

The reason for it was that, despite the best weather predictions that the fire authority is going to get, they are going to have difficulty knowing exactly where the wind is going to be or whether there is going to be a wind change. In the situation we had, it relates to potential for evacuation of places under threat. You really don't know which places are under the greatest threat before it actually happens.

In this case it tended to be Duffy and Chapman, but there was also this 45 kilometres of residential interface that fires burnt up to. In most of those areas residents were not faced with a difficult fire suppression problem. But if they had been evacuated from those areas, then there was a good chance that a small ember would burn into their house and burn the house down.

A lot of this relates to why I believe we should try and get residents involved in their own protection, because we can't be terribly precise about where a fire is going to hit when we are faced with these extreme conditions. You know, people I believe have a strong determination to protect their own properties and should be encouraged to do so.

Q. You go to a more specific level in relation to future fuel management options commencing on page 22 and following. You start by dealing with what you put under the heading "planning fuel management priorities", which as I understand it is a reference to the process of hazard assessment and identifying what areas or what assets are under threat or potential threat. Is that essentially what that section deals with?

A. Yes.

Q. You refer in particular to the hazard assessment that was undertaken and included in the

1998 bushfire fuel management plan. You say at the bottom of page 23:

5 "Hazard is defined by McRae as 'a measure of
the potential for fuel to support fire
behaviour, its probability of ignition, and
the risk posed thereby to identified values'.
The 1998 bushfire fuel management plan goes
10 on to say, 'One of the key points following
from this definition of hazard is there can
be no hazard without a value at risk'. In my
opinion the flaw in this approach is that the
identified value depends upon the scale that
the modeller is using, and if the focus is on
15 the micro-scale the broad picture is
overlooked."

Just pausing there, could you explain that sentence?

20 A. I believe the approach didn't look at the
possibility that was borne out in January 2003
where fires started a long way away from assets of
great monetary value and yet under the extreme
conditions burnt into those areas. So the focus
25 was on the city and the suburban areas and even to
small areas of suburban parks.

But the problem where fire suppression was, I
believed significantly greater was out in the
30 native forest areas of the Cotter Catchment and in
the pine plantations, where it seemed to be
assumed in the native forest areas in particular
because there was a few identifiable structures of
value and structures such as old huts and picnic
35 tables and things what I would consider of
relatively minor significance were identified, and
the fuel management plan focused on doing fuel
reduction around these to protect them. But
really didn't address the problem if we get fires
40 in there how difficult are they going to be to put
out. The potential was there under extreme
conditions, well documented I believe, and well
pointed out that fire starting up in those areas,
if we got extreme conditions, had the potential to
45 run through and destroy assets and threaten lives
many kilometres away.

47

Q. I think you provide as an example a map in the
1998 fuel management plan. I will perhaps get
that brought up. The document number is
[AFP.AFP.0033.0001]. I will read the paragraph
5 that is coming up. You say:

"The fuel management planning process did not
clearly explain the models that were used and
the output was confusing and misleading. For
10 example, the 1998 bushfire fuel management
plan illustrates examples of fire exposure.
The illustration of medium fire exposure is
apparently based on the fire frequency on
adjacent lands. This rates the exposure of
15 the eastern side of Weston Creek suburbs as
extreme even though this is a narrow piece of
parkland, which is generally well maintained,
between the houses and the Tuggeranong
Parkway. I am not aware of any significant
20 fires in this strip until 2003. In this
case, extreme exposure does not mean extreme
threat as otherwise might be expected.

The illustration of 'exposure to large
25 fires', apparently based on terrain and
defence, rates the interface along Eucumbene
and Warragamba Drives as not exposed."

That is figure 3.2g. So if we could go to 0042.
30 Perhaps if we could enlarge the top half of that
and go down a little bit. Mr Cheney, although I
can't see it, I think that is figure 3.2g that you
were referring to; is that right?

A. That looks like 3.2g.

35 Q. As I understand it, the point you make there
is that in that area that is indicated towards the
middle of the screen where you have got the
abbreviations DUF, HOL, WES and so on, the hash
40 line there shows "as not being exposed". Is that
the comment you make where you say:

"The illustration of 'exposure to large
45 fires', apparently based on terrain and
defence, rates the interface along Eucumbene
and Warragamba Drives as not exposed."

A. The problem was that the definition of

"exposure" wasn't set out clearly in the fuel management report, and a simple and practical look at what extreme exposure might mean was: where is your extreme fire behaviour going to come from?
5 In this part of the world it is the western side of the city ranging from north down to south-eastern boundaries.

10 So here we have an area alongside Duffy and Holder which is defined as "not exposed", yet that is adjacent to pine forest with a clear and substantial run to the west or to the north-west. And if you get a large fire burning under extreme conditions and coming in that direction, that is
15 going to suffer a much higher exposure level than, for example, areas which are embedded deeper within the suburban area where there is a greater chance of fires being broken up before they get there.

20 Why that section was classified as "not exposed", I don't know. It's not made clear in the report. Other areas of north-western boundary are classified as "exposed". But throughout the fuel
25 management report there was no reference to the fuels which were adjacent to the particular set of suburbs. So in here we have got areas which are adjacent to nature parks which were predominantly grassland or even open paddocks which are in many
30 cases graziers' grassland that receive a rating of "exposed". To me it didn't make a lot of sense.

Q. You say after that comment that:

35 "The department needs a much simpler model on which to base their fuelling management priorities."

40 As I understand what you are saying, one that takes into account in particular the exposure that has been demonstrated by the 2003 fires?

A. Yes. I think there was sufficient information available to say that that was where the major threat to the city would come from. As in most
45 other places of Australia, it doesn't require a micro-scale investigation of every section of back fence along the area but rather a broad-scale

picture of what would happen if you get extreme fires coming in and impacting on many kilometres of the fire perimeter at close to the same time.

5 Q. Perhaps on a similar topic if we could first go back to your report at page 31 where again you are referring to the hazard assessment process. You say:

10 "The hazard assessment process developed by
ESB is flawed, as discussed above, in that it
considered hazard only relevant to assets of
tangible value and focused on the micro
15 scale. Even after the 2001 fires and my
evaluation (referred to above), they pointed
out that the plan had no consideration of
broad scale strategic planning, the models
used in the 2002-2004 bushfire fuel
20 management plan did not realistically predict
the path of the wildfire starting at
different points in the ACT."

You go on:

25 "The illustration in the plan showed that
fire starting in native forest did not spread
over a significant area unless it somehow
spread into pine plantation. The model
30 suggests that any fire running into pine
plantation would become large and continue to
spread until the entire pine plantation and a
considerable area around it was burnt out."

35 Then you refer to figure 8.1 of the fuel
management plan as at that stage.

I think we have that particular plan. It is in
black and white but as a Powerpoint slide. What I
40 might get you to do, Mr Cheney, if you would - it
is probably enough for the moment in terms of
amplification - is by reference to that paragraph
explain what you mean. If necessary you can
approach the screen. I have a copy of the plan as
it appears in the management plan as well, if that
45 assists.

But your point that the fire starting in native

forest did not spread. Could you indicate on the plan how that is shown?

A. We have a number of fires which are located here (pointing to the map). It is not clear on
5 this map but there are some located near the Cotter River and here, which the fires had started under unspecified conditions but only travelled a small distance.

10 If we look at this fire, the way the map illustrates it, this fire came into and burnt into this pine plantation and then as far as one can go, the whole plantation is then burnt out. Not
15 only the plantation but roughly a kilometre of forest around it. And quite frankly that doesn't make any sense.

Q. Sorry, just particularly referring to those small fire ignitions in the area below the large
20 fire shown there, as you understand the plan, it is showing that a fire would start in an area that is inaccessible but not burn over any distance. Is that what it seems to be showing?

A. Well, for some reason fires outside the
25 plantation didn't spread, and I don't know what that was. It is not clearly enunciated in the report.

30 And we have fires which are starting on the dry western aspects on the eastern side of the Cotter River which appear to be placed at the bottom of the slope. And realistically if the fire started there, without any suppression action the only
35 place it would end up would be at the top of the ridge and a considerable distance beyond it. No fires burn upslope with increasing severity.

40 So the map of potential fire paths gives the impression that your fire paths are only going to pass through plantation but are not going to pass through native forests.

Q. If you could perhaps return to your seat, Mr Cheney. Does the plan, as you recall it, have
45 any explanation as to how the model arrived at that result?

A. Not that I recall.

Q. I don't want to go to this in detail,
Mr Cheney, because it is all there in the report,
but you provide a number of suggestions about ways
in which the entire process of fuel management can
5 be improved in all areas, obviously with
particular focus on prescribed burning.

I take it you would accept, would you, that the
sorts of proposals you are suggesting or have in
10 your report are all going to be very costly?

A. Yes.

Q. That does provide some limitation, does it, to
what is achievable?

15 A. Provision of money?

Q. Well, perhaps I can put it this way: how would
you respond to the suggestion that this is all
very well in a perfect world, but budgets have to
20 be met and this sort of expenditure is in excess
of what is reasonable?

A. Again, I believe that this is the reason why
the land management agency of government land
should be responsible for fire suppression, and
25 they should argue a case because of that
responsibility to get money to spend both on
suppression and budget. And they are financed to
do that because they are in the best position, I
believe, to weigh up where it is needed most and
30 where they can apply it most effectively to assist
suppression of fires which are going to start in
their areas.

It is a cost to government of managing lands
35 properly in the ACT, be they nature parks or the
broader national park or indeed the plantation
forestry assets that have been set up in the ACT.

Q. As I understand that, if a land management
40 agency has a particular budget in theory for fire
suppression and prescribed burning program, they
are in the best position to decide the best way to
divide that cake between those two priorities
rather than dividing those two?

45 A. Yes. I think to carry out an effective fuel
management program does take a lot of money. In
most cases in most years it will probably exceed

their suppression budget for that year. It is something that has to be seen to gain a long-term advantage of managing the fuels to be able to be effective in a year like 2003, when you get fires starting in remote areas which have to be suppressed. The outlay of expenditure has to be outweighed against the potential damage that lack of action will do. We have had that adequately demonstrated.

10

I think there has been a tendency to say, "Well, if we declare an area as park areas and leave the responsibility for suppression to Emergency Services and more to the volunteers that will save the government money in proper fire management". I don't think that is acceptable because it is government land which is managed for a specific purpose. Fire is the greatest threat to the values that are going to be in those areas.

20

Q. You refer in your report - I don't want to go back to it because I just want to raise it in general terms - to the process of prescribed burning and a more intensive prescribed burning program needing to be done in consultation with and as part of an education program of residents. You refer to evidence that has been given by Mr Bartlett and others of some difficulty that has been encountered by ACT Forests, for instance, in explaining to residents the importance of prescribed burning and the sort of conflict that can give rise to.

As I understand it, your proposal would necessitate a reasonably intensive education program so that residents understand the importance of prescribed burning?

A. I think what happens over a number of years where fire agencies are effective in suppressing small fires. That lulls the rest of the community into a false sense of security that the fire agency can do the whole job for them, which they should admit under extreme conditions they are not going to be able to handle.

45

One of the problems that we face with the urban communities all around Australia is that they are

not taking responsibilities for their own life styles in how they choose to live and how they choose to locate their homes and the types of gardens that they maintain around their houses
5 without any reference to the possibility of fire, because by and large fire has been removed from their consciousness. It only crops up under extreme conditions.

10 I believe one of the virtues of prescribed burning close to the city is that it maintains and should be followed with an aggressive education campaign that fire is part and parcel of this environment that we live in and we have to use fire
15 effectively to maintain protection of not only suburban assets but protection of our natural assets as well, including things like our catchment values and certain ecological values.

20 There has been, I am sure, going through the evidence, land managers met at times considerable resistance to carrying out practical fire mitigation measures on the perimeter of the suburban area, because people didn't like what
25 they had fancied as a nice environment to live in, and often extending their gardens beyond their fence into the nature reserves and across constructed breaks that had been intended to protect them; and objected very strongly to
30 agencies doing prescribed burning close into the city for a variety of reasons, largely due to aesthetic and often a complaint about smoke.

This is a problem that I think the land managers
35 have to address, that part of educating people about fire and maintaining fire in their consciousness is that they have to use fire so that they don't face the situation that we ran into this year, where lots of people had
40 absolutely no idea that fires could penetrate into the suburban area or that they were even under threat from fires. When it was patently obvious to many observers with large fires sitting out to the west of Canberra that, come extreme weather,
45 there was a very real and present threat.

Q. At a much more prosaic level, Mr Cheney,

towards the end of your report you raise the question of trails and the importance of maintaining trails. You dealt with some specific concerns you had about linking the Stockyard Spur through to the Corin Dam, which is an area of particular concern that you have had over some years. Have I got that right?

A. Yes, that is pretty right.

10 Q. You make the point on page 35 of your report:

15 "Broad-scale fuel reduction burning cannot be carried out without an adequate network of trails to confine the burns if changes from the forecast weather increase the intensity and spread of the fire beyond the prescription."

20 So in that sense at least prescribed burning requires proper maintenance of fire trails. So that is a very important part of the overall fuel management process as you see it?

A. Yes. If you are going to break up the areas into any sort of distribution of burnt area or age distribution, then you are going to have to confine the area that has burnt at any one time. The aim of the fuel management plan should be to build up a range of fuel ages, many of which are contiguous so that firefighters have an advantage, if it gets out of an area that is reserved as heavy fuel and burnt into a lighter fuel, and they have the ability to suppress it.

35 But the reality about prescribed burning is that you are not going to be effective unless you treat the burn exactly as you would treat a wildfire. You would set prescribed boundaries to which you are going to keep it in and then you would put the resources in place to keep it within those boundaries. And unless you have established fire trails or a network of fire trails that give you sensible fuel management units, then you are not going to be able to do it.

45 In general, doing a prescribed burn you have an optimum window under which you can predict when the weather conditions were going to be stable.

The objective should be to burn that area out within that period of stable weather, which normally is not extended beyond about two days, because that is about as far as I would recommend you should rely on the forecast of advance weather.

By definition really, a prescribed burn is the application and confinement of the fire to a prescribed area. In areas where it is untracked, it becomes very difficult, because if in places you want to rely on natural features such as streamlines and natural wet areas you will come undone because you won't be able to confine the fire and ensure that it is confined within the area that you have set out to burn.

So a sensible fire trail program must associate any prescribed burning program.

20

Q. There are two spin-offs I suggest, Mr Cheney, as well. One is obviously the training benefits of that process that you described are self-evident?

25 A. Yes, I believe so.

Q. And, secondly, the fact that trails are being put in and maintained for the purposes of a prescribed burn presumably also means that, if a wildfire does begin, those trails will then be available for controlling that wildfire?

A. Well, if you were doing prescribed burning of trails which are not properly maintained, even though the conditions are very mild, you get a rapid lesson on what is needed to contain the fire. Prescribed burning is only a fraction, in terms of intensity, of what you could be faced with with a wildfire. Yet even relatively mild fires, because of the spotting out of heavy fuels, if they have been allowed to accumulate, can make suppression of the prescribed fire quite difficult. So, again, it is the continual training effect of what is actually needed to control the fire is demonstrated by your prescribed burning process.

40
45

MR WOODWARD: Your Worship, that is all I wanted

to cover on the fuel management report. If I could perhaps have a few moments just to draw in the background to Mr Cheney's latest report so that tomorrow, all other things being equal, we
5 could launch straight into the Powerpoint presentation, if that is acceptable.

THE CORONER: Yes.

10 MR WOODWARD: Q. Mr Cheney, I have asked you about your other report - this is the marked up version of your earlier one [DPP.DPP.0008.0051]. When you made that report you referred in the body of it and as part of the introduction to the fact
15 that, when you prepared it, your information was to some extent incomplete?

A. That's correct.

Q. As I understand it, what you have done in this
20 report is taken the information that has now become available through the course of the evidence and updated your earlier report by both deleting things that are no longer relevant and, more importantly, adding things that have arisen
25 out of the evidence.

A. That's correct. I listened to most of the evidence that was presented. At the time I wrote the first one, I didn't have the advantage of
30 taped record of conversations and quite a lot of statements. So they were reviewed in the light of the report to things that might have contradicted my report.

In the first place I set it up as something that
35 people could comment on and I expected that there would be comment and there would be areas that I hadn't covered. I attempted to correct and change those to match the evidence as I heard it presented in this court.

40

Q. That is represented by those marked-up sections that I have referred to?

A. Yes.

45 Q. In addition to that you have prepared a number of additional slides showing fire spread, and that particularly relates to the fire spread of the

McIntyre's fire from about 0900 hours on
17 January; is that correct?

A. That's correct.

5 Q. Just in broad terms, and we may go to the
specifics later, what additional information do
you now have that you didn't have when you did
your original presentation that has enabled you to
provide more accurate maps of fire spread on those
10 two days?

A. It was basically evidence and photographs that
were given in court or brought to my notice
subsequently to my writing the report of break
away on the western side of the McIntyre's fire
15 and also in the north-eastern corner of McIntyre's
fire.

I interviewed a couple of additional people that
have either presented statements to the Court or
20 have given evidence to the Court to improve my
interpretation of fire behaviour, particularly in
that area, and how it influenced the subsequent
run of fires into Canberra.

25 Another small area on the south-eastern side --

Q. Sorry, that is of the McIntyre's fire?

A. That's of the McIntyre's fire.

30 Q. That's the section up near Doctor's Flat Road;
is that right?

A. That's right. There has been lesser changes.
I haven't changed the maps at all because I didn't
have access to any improved data of the areas that
35 were marked in the original map as "under
construction" and, as far as I am concerned are
still under construction. Although I know there
is other evidence out there, I didn't have access
to it at this time.

40

Q. That generally affects part of the spread of
the Stockyard Fire and the lower part of the
Bendora fire and the northern part of the
McIntyre's fire?

45 A. Yes. People have told me that the fire in the
northern part, for example, made a run up the
Molonglo corridor as a separate head. I haven't

been able to confirm that so I've left that as
"under construction".

5 MR WOODWARD: Well, perhaps first thing tomorrow
we will go to each of those slides. Thank you,
Mr Cheney.

10 THE CORONER: We will adjourn until tomorrow
morning at 10 o'clock.

**MATTER ADJOURNED AT 4.02PM UNTIL FRIDAY
27 AUGUST 2004.**

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TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 73

Friday, 27 August 2004

MR WATTS: Your Worship, as was foreshadowed
yesterday, there have been applications made for
5 ex parte orders, orders nisi in the Supreme Court.
There are in fact three applications. One has
been filed by the ACT and Messrs Collins, Newell
Bennett and Graham; one has been filed by Messrs
Graham and McRae; and a third by Messrs Castle and
10 Lucas-Smith.

When the matter was ventilated yesterday, my
learned friend counsel assisting adverted to the
problem that might arise, and that is that my
15 colleagues who appear in the matter can't be in
two places at once. On behalf of myself and my
colleagues, the matter is presently before the
Court. It is not actually in front of a judge at
this very moment, but it is simply waiting. I
20 anticipate it will get on very shortly.

My application is this: because of those
difficulties created about counsel not being
available to actually attend here today at the
25 present time, that your Worship not take further
evidence of Mr Cheney, at least until 11.30 or
before, if it becomes apparent what is happening
in the Supreme Court. It is simply for the
convenience of counsel that that application is
30 made, your Worship. It is of course not possible
to be in two places at one time.

If, of course, they do become available earlier
than that, I would undertake to advise
35 your Worship and the sitting could resume
immediately.

THE CORONER: I don't imagine the proceeding would
be too lengthy this morning.
40

MR WATTS: I wouldn't think so. It is just that
it has not got reached. I understand there is
another application ahead of it in the list. A
criminal matter has been dealt with and his Honour
45 is about to start another, of what I understand to
be a short matter, then there will be this
application. It may well be prior to 11.30, but

that is the application that I make, your Worship.

MR WOODWARD: Your Worship, I did advert yesterday
to the practical problem. In the circumstances, I
5 don't oppose what is being sought.

THE CORONER: We will give you some time.

MR WOODWARD: I would ask, however, that we do
10 restart, regardless of what has occurred in the
meantime, and that the message be taken back to
those members of counsel who are otherwise
occupied at the present that, unless there was
some significant development in the meantime, you
15 would be minded to commence the evidence --

THE CORONER: Continue as soon as counsel is
available.

MR WOODWARD: Well, the matter would need to be
20 reconsidered as at 11.30 to see where matters are
at. I expect the evidence-in-chief of Mr Cheney
would take another hour and a half. I think it
would be useful if we could do that today. In
25 those circumstances, I would urge your Worship to
indicate that, subject to what you hear at 11.30,
you would be minded to commence to hear that
evidence at that time. That seems, in my
submission, to be an appropriate allowance for the
30 circumstances that have arisen. That would be my
application, your Worship.

I can mention just one other matter. I received
literally as I was walking out of the door to come
35 here this morning a letter from Hill and Rummery
on behalf of both Messrs Castle and Lucas-Smith
requesting access to the contracts or appointments
pursuant to section 59 of Messrs Roche and Cheney.
I had spoken to Mr Walker the previous evening and
40 indicated to him I didn't consider it within my
authority to provide those documents. They are
your documents, your Worship. I certainly don't
have the instruments. I have a copy of the form
of them in my possession.

45

In the circumstances, it seemed to me the
appropriate thing to do with this letter was to

drawn it to your Worship's attention, provide it
to your Worship. I would at this stage be
proposing to respond, as I did last night, to say
it is really not a matter that I can address. It
5 has to be an application made directly to
your Worship for that material.

THE CORONER: Yes. That would have been the
proper way for that application to have been made.
10 If I could have a copy of that.

MR WOODWARD: I am happy to hand over the actual
letter, your Worship.

15 THE CORONER: Thank you, Mr Woodward.

MR WATTS: I have nothing to say about that
matter. I don't know about that.

20 Just to make clear, I am not suggesting, of
course, that counsel necessarily be in a position
to commence as soon as that issue is clarified.
It depends of course on what happens there, I
suppose, your Worship.

25 THE CORONER: No. Over and above the convenience
of counsel, there is also the convenience of
Mr Cheney that has to be taken into account as
well.

30 MR WATTS: I understand.

THE CORONER: There are more than one interest in
this whole proceeding. Unless you tell me that
35 counsel are available sooner, I do intend to
resume at 11.30.

MR WATTS: I am indicating that, subject to any
order made elsewhere, there may be another
40 application in relation to Mr Cheney's evidence.
But I can't --

THE CORONER: I suppose we will wait and see what
happens.

45 MR ERSKINE: May I just note that there would be
probably myself and Mr Archer who are in a

somewhat unfortunate position in that those for whom we act will have to be of necessity parties to the matter across the lawn. We are also parties with an interest in what is happening
5 here. Even though we are making no contribution to the fact that there are two cases running simultaneously, we too are caught by not being in two places at once.

10 So that it would certainly be our submission that, if it is necessary for us to be in two places at once post 11.30, it would be, with great respect, appropriate for your Worship to continue not to sit until at least the matter is finished before
15 whichever his Honour it is.

THE CORONER: I understand that that may be well the result of what is happening this morning, if there is nobody here to hear the evidence.

20 Having said that, I think I have probably said enough on the way that this whole proceeding has been conducted by counsel.

25 I will wait and hear what develops. I suppose that is all I can do.

MR WATTS: I understand and will certainly be in contact if anything develops.

30 **SHORT ADJOURNMENT** [10.12am]

LUNCHEON ADJOURNMENT

35 **RESUMED** [2.03pm]

MR JOHNSON: If I could thank your Worship for taking some time this morning. The position is that there was an application made before Justice
40 Gray this morning for an order nisi with respect to the foreshadowed proceedings seeking a review of the ruling made yesterday with respect to documents.

45 After some submissions, Justice Gray indicated a willingness to grant orders nisi. The process of getting a sealed form of them is occurring now.

Mr Bayliss is attending to that.

I have just given Mr Woodward a copy of them in a form in which I understand they will be sealed,
5 but it is not actually sealed at the present. Unfortunately, I have only got one other copy which is in fact not in the final form here. If I could invite that the copy Mr Woodward had be handed up so it can be seen by your Worship.

10

THE CORONER: We have to trust you on this, do we, Mr Johnson, that this will be the ultimate order issued by his Honour?

15 MR JOHNSON: Yes. The position is that Justice Gray made orders nisi in terms of the document. That, I should add, is in relation to this application which was made on behalf of the five prosecutors named on this document. There were
20 other applications made by Mr Walker, Mr Whybrow and Mr Craddock.

The only difference is that the order nisi made by his Honour with respect to paragraph 1 was not
25 confined to the classes of documents concerning Mr Cheney as appear in this paragraph. As your Worship will remember, the application made on behalf of the territory and supported by Mr Watts, and Mr Watts indicated Mr Pike's
30 support, was for a confined class of documents as appears in paragraph 1. The other applicants had a broader claim.

His Honour ordered that the orders nisi be
35 returnable on 6 September on the basis that a hearing would proceed at that time. There was some discussion as to who the contradictor would be. There were inquiries made and the Director of Public Prosecutions indicated he would act as the
40 contradictor. Direction was made that grounds be filed by 4pm next Monday.

In bringing this to the Court's attention at this stage in this informal form, it is essentially to
45 indicate what has happened this morning. My submission is that what should flow in the circumstances is that clearly the

evidence-in-chief of Mr Cheney continue, as has been indicated. But that at the end of that evidence, Mr Cheney be stood down upon the basis that the Supreme Court will proceed on 6 September
5 to deal with the issues, including the relief sought in paragraph 1 in its various forms amongst the orders nisi, and in those circumstances the calling upon anyone to cross-examine Mr Cheney would be deferred certainly until 6 September.

10

One possibility I would suggest is if your Worship completed the evidence-in-chief of Mr Cheney and adjourned perhaps for mention at least on
15 7 September really to see what has happened in the light of what has happened the day before. So I report that is what has happened this morning.

THE CORONER: Thank you.

20 MR JOHNSON: I put that submission as a way forward. It would seem clear that, given there is an issue in paragraph 1 of the orders nisi here and the other orders nisi which effectively has as
25 an issue for consideration the cross-examination of Mr Cheney, without these documents to preserve the subject matter of the litigation the proper course would be to effectively adjourn at the end of the evidence-in-chief of Mr Cheney pending what is certainly quite a speedy hearing and hopefully
30 thereafter a fairly speedy resolution of the issues.

I report those matters to your Worship. I suggest that is a way forward in the circumstances, given
35 the circumstances. As soon as there is a sealed copy of this, we will of course make it available to your Worship. That is what I wanted to say at this stage, thank you, your Worship.

40 THE CORONER: Yes, thank you, Mr Johnson. I will hand this back to you, Mr Woodward. I will arrange for a copy of that to be made.

45 So we will continue with the evidence of Mr Cheney at this stage?

MR WOODWARD: Yes, your Worship.

THE CORONER: Yes, thank you, Mr Cheney.

<PHIL CHENEY, RESWORN

5 <EXAMINATION-IN-CHIEF BY MR WOODWARD CONTINUING
5

MR WOODWARD: Q. I ask you, Mr Cheney, to get out
your marked-up copy of your report "Origin and
development of the bushfires that spread in the
ACT" being [DPP.DPP.0008.0051] and turn to what I
10 hope is page 12 of that report.

Starting down at the foot of that page commencing:

15 "The decision to take indirect action."

Those words and following over to the top of the
next page, that paragraph, sets out or summarises
evidence that has been given to her Worship on the
information that was available to the New South
20 Wales fire controllers at the time of the meeting
on the evening of 8 January 2003. Then over the
page in the first complete paragraph, having set
out or summarised that information, you say:

25 "Two longstanding axioms of firefighting are
that 'fires always look worse from a
distance' and that 'fires always look worse
at night'. The point of these is that the
fire must be inspected on the ground to plan
30 the most appropriate suppression strategy.
Another general principle is to treat spot
fires as separate fires and, wherever
possible, suppress them while they are small,
even if it is possible that they will be
35 overrun by subsequent events.

"Ms Crawford said in evidence that gale force
winds could have brought down trees blocked
roads and made it unsafe for the
40 firefighters. However, by 2030 hours - this
is on 8 January - the area was under the
influence of light variable winds and the
research team going to the fire did not feel
under any threat and were not obstructed by
45 fallen timber on the way in along Two Sticks
Road and Dingi-Dingi trail."

47

Just to clarify that, is the substance of what you are saying there that those responsible for the fires - namely, the fire controllers at Queanbeyan - should have either themselves or a team directly reporting to them gone out and inspected the area of the McIntyre's fire that night?

A. Yes, I think they should have.

Q. Because, as I understand it, you say that that's the only way to get an accurate picture of what you are facing and what suppression strategies are appropriate?

A. Yes, because just looking at the axioms that fires always look worse at distances, that you are looking at a convection column that can at times look very impressive and may well be. But until you get out there to see what the fire is actually doing and where it is located and how it is burning within the topography, you really don't know what the problem is that you are facing.

Q. As we know, that inspection didn't occur that night. Would it equally have been open or would you say that, having not inspected it that night, there should have been an inspection at first light on the 9th?

A. Oh, I believe they should have immediately had some resources out there to attempt initial attack on parts of the fire - some attack. It would be wise to do an on-ground assessment as soon as possible.

Q. So does it follow from that that, having not done it that evening, at least you would expect that it would be done first thing the next morning?

A. Yes.

Q. Further down you have made a further addition in relation to the choice of control lines for the McIntyre's fire that night on the 8th. You say:

"Direct access to the back of the fire was available via Lowells fire trail. This track and the McIntyre's trail are not listed in the draft Brindabella National Park fire

management plan, although both are listed in the table of trail works for 2001/02 and 2002/03 and the Lowell fire trail is marked as trafficable on the vehicle access map" --

5

I think that should read "in the incident controller's report" --

10 "The McIntyre's Hut trail is marked as "no tanker access" in the vicinity of the origin of the fire although the only section that was untrafficable to the tankers was the section between the junction with Lowells trail and the Goodradigbee river and access
15 to this section was not needed."

Could you just explain the basis for those comments in that section, Mr Cheney? I understand it relates, as you have footnoted it, to
20 Mr Smith's evidence and your own observations in more recent times.

A. Yes. Initially I thought that it was the whole of the Lowells fire track that was not accessible but, on looking at the incident
25 management plan, it was clearly marked that it was accessible up to the junction of McIntyre's Hut trail, which goes from the Goodradigbee north up to the McIntyre's Hut trail.

30 That is the way that I would understand firefighters from Brindabella, if they were directed to access the fire, that's the route that they would have taken.

35 Q. They would have come down from the north?

A. They would have come from the south.

Q. I'm sorry.

A. Into Lowell's trail and then drive up to the
40 junction of McIntyre's Hut trail. And at that point the track was marked as "inaccessible" on the incident controller's map. In fact, the condition of the trail was suitable for a category 7 tanker and I believe to be suitable for a larger
45 tanker up to the point where you could get access across the creek to the back of the fire.

47

Q. Your observation that it was suitable at least for a category 7 tanker, what is that based on?

A. Based on Mr Smith's driving a category 7 tanker up there.

5

Q. To your knowledge, had there been any significant or substantial work done on the trail between the time of the fires and that visit?

A. There had been substantial work done on the trail. But seeing it was listed for maintenance, I don't know when that was done. I don't know whether that was done - I drove up in the 4-wheel drive probably about three or four weeks after the fire, and it was accessible to a four-wheel drive. I assessed it at that stage. It wasn't overly steep to take a larger tanker or a larger 4-wheel drive tanker.

Q. Did you observe between that visit in the 4-wheel drive and the one more recently with Mr Smith that there had been any material change --

A. Not in that time. I think it was done during the fire or before the fire. Subsequent to the fire on other trails there has been a considerable amount of work done through Brindabella National Park, widening and clearing up the trails.

Q. As you understood it or as you observed it when you were out there, the difficulty for the tanker access was just the steepness of the trail; is that correct?

A. Certainly the section that goes down into McIntyre's Hut is very steep and I can understand that being marked as "non-trafficable", but it certainly appeared the only problem there would be the steepness of the track.

A little further on north of where the fire had burnt across, there may have been a question about the width of the trail at that point. But the lower section up to the base of the fire at the position where that video was taken by the AFP and Mr Smith walking around the back of the fire, that was perfectly accessible.

Q. As far as you know, at least in those

respects - namely, the steepness and general accessibility - it was the same at the time of the fire?

A. I believe so.

5

Q. We have had a lot of evidence and questions have been put to witnesses in relation to that broad question of the use of Lowells fire trail as the western boundary of the McIntyre's fire control line. Were you present when Ms Crawford gave her evidence in relation to that?

10

A. Yes, I was.

Q. I hope I get this right, but in broad terms her response to that suggestion was - there were two aspects to it: firstly, she was concerned to use that would have required additional manpower which at that stage wasn't available and by letting the fire go down to the Goodradigbee River there was no need at least at that stage to patrol it; and also there was the option of using helicopters to deal with any spotover across the river and, if necessary, to winch crews in to the extent that the river was not accessible to crews. What is your response to that, Mr Cheney?

15

20

25

A. On the first one as to whether resources were available, I don't know whether there were resources or not. In my opinion, resources should have been gathered to do that task.

30

As I said earlier in the report, if they had been able to cut that bit off, Mr Lasry's kink, then that would have helped. And for some time the fire which was spreading above both Lowell's trail and McIntyre's trail proceeded in advance of the fire below it. And so the fire actually was not crossing that trail in those sections unassisted.

35

So in looking at that in retrospect you might say, well, it really wouldn't have taken much manpower at all. Perhaps a light unit once the lower part had been contained could work along there and keep pace with the fire and watch for any spots or rolling debris coming down across the road.

40

45

And although the wind had switched to the south on subsequent days and later around to the east, that

area was under the influence of an eddy wind. So most of the local wind was upslope. The progress of the fire was it burning along the dry fuels lower down and, when it crossed creeks, made a number of subsequent short uphill runs against the direction of the prevailing wind and expanded in that way.

So in terms of the actual wind blowing fire across that trail, that didn't happen because of the nature of the wind in that position. And again, that is an assessment, as to what you can do under those situations, which can only be made by someone being out there on the spot and seeing what the local wind conditions and the local fire behaviour.

Q. And the second matter, the use of helicopters to deal with spotovers?

A. The problem there is that if you allow a fire to burn down into a river and there is a spotover across the river, there is only one direction for the spot to go and that is upslope - and it will do it pretty rapidly as happened subsequently on the 17th.

It is far easier if you are, as the McIntyre's trail was, located partially on the slope, that any spotover is going to burn upslope and burn back into the trail. So the suppression problem of controlling it just below the trail is far easier than an independent spot fire which goes across the river and then makes a run of 500 or 600 metres upslope; and it will do that very rapidly.

The problem that the firefighters faced in the river was considerable because they were wandering along in quite dense blackberries, up to 2 metres, falling in the river which was boulder strewn and very unstable underfoot. In fact, that was an extremely dangerous place to put volunteers or any firefighters into that point.

While it would have been possible to winch firefighters in, I don't think a prudent fire controller would have done that because of the

dangers of winching someone in in a fire and then having the potential to run upslope very rapidly. And that's when people get killed, when they get put in a position where there is a fire underneath them.

That was the situation that faced people that had the difficulty of trying to hold the fire on the western side of the river, that any escape was going to move quickly upslope, and it did in a couple of places later on.

Q. Just jumping forward a couple of pages to page 15. At the bottom of that page you comment on the decisions concerning burning out along the Powerline Trail. Over the page at the top of page 16 you say:

"In my opinion, burning out could have commenced and proceeded aggressively with fire line construction but it would have required sector commanders who were experienced in burning out in steep topography and support by bulldozers to round up hop-overs. However the southerly wind would have made burning out much easier on the evening of 9 January than it was when the wind swung to the east and later north-east on subsequent days."

Then you say:

"There was at least 5 kilometres of easy burning out from the junction of Two Sticks Road and Baldy fire trail west along Two Sticks Road and the eastern end of the Powerline Trail."

You make that comment - I should have mentioned - having referred to Mr Arthur's evidence and his concern about the serpentine nature of the Powerline Trail and the potential death trap, as he described it, for firefighters commencing a burning out operation along there until the control line had been properly established.

Just dealing with the last part of that section

that I read, there was at least 5 kilometres of
easy burning out, if I could get you to indicate -
I think probably the best way to do it is by
reference to slide number 46 in your first slide
5 show, [AFP.AFP.0099.0007], which is the map that
provides a general geographic picture of that
area.

Perhaps while we are searching for that what I
10 might also draw your attention to, Mr Cheney - so
you don't have to get up and down twice - is that
you also refer in your report at page 17 to the
general approach to the Baldy Range spot fire.
You point out on page 17 that 30 people were
15 dispatched to control the eastern side of the spot
fire with a wet line and rake hoes on the morning
of the 10th of January. But you say:

20 "The fire had now burnt further away from the
trail into steeper country making suppression
and patrol more difficult than if it had been
attacked on the first night."

25 Could a similar comment be made about an attack on
at first light on the 9th? In other words, was
there a significant movement in the fire as you
have assessed it between first light on the
morning of the 9th and the morning of the 10th?

30 A. I suspect that parts of that fire would have
burnt at about half a metre a minute overnight so,
yes, you would have lost some advantage. The
thing wouldn't have stopped overnight. It would
have continued to expand, although if you had of
got crews there at first light the fire edge would
35 have been somewhat broken up because it would have
gone out in parts. The video that we saw showed
that that spot fire in parts was going out,
particularly in grassy fuels which took up
moisture more quickly.

40 There still would have been some expansion to the
fire as of course these fires just keep on growing
if they are not attacked and no action is taken to
try and suppress them. In that case, the fire was
45 backing relatively slowly downhill against firstly
the southerly and then the easterly wind, but it
was getting into terrain which was steeper and

more broken and more difficult to do hand tool work in.

5 Q. Just finishing that point, before I get you to point out what you are referring to on the Powerline Trail, so there would have been some expansion overnight on the night of the 8th into the morning of the 9th. The crews didn't get in there until the morning of the 10th. That is a whole another day and night before the control of that spot fire commenced.

10 A. Yes.

15 Q. If perhaps, say, the crews hadn't gone in late on the 8th but had managed to get in early on the 9th as distinct from early on the 10th, would that have made a difference do you think?

A. The job would have been easier, yes, because the fire would have been smaller.

20

Q. What sort of spread would you have been expecting during the day on the 9th?

25 A. Most of it going downslope. I probably wouldn't have expected much more than a metre a minute or 60 metres an hour, perhaps a bit less once it got into the very steep rocky country. You start multiplying even 30 metres an hour by several hours and you get a substantial spread of the fire.

30

Q. And significant in the context of potential control by hand tools, presumably?

35 A. Yes, moving further away from the access trail where initially on the first night you may well have been able to do a hose lay to go around the fire. Subsequently, that probably became too difficult to do. While I couldn't find in my inspection of the perimeter of that spot fire on the boundary of where the mild fire stopped and the severe burning started any evidence of a substantial constructed hand line trail, I can only surmise the action that was taken was to control it directly by water, either delivered from hoses or from a wet line. But there

40

45 certainly didn't appear to be, to me, any evidence of substantial fire line construction.

47

Q. Sorry, fire line construction?

A. Yes. It is actually a built line where the litter has been cleared away to mineral earth up to a metre or so in width.

5

Q. It is something that, had that work been done, you would expect it to still be apparent for some weeks after the fire?

A. Yes, it would have. I mean, in that country it is a substantial effort to do it. It wasn't particularly easy raking country but it can be done. I wasn't able to find any evidence of a hand line construction. The area that had been burnt by the mild fire was relatively undisturbed. The fire had been particularly mild. In many cases it hadn't completely burnt the shrubs but had burnt underneath them. To construct a hand line there would have been evidence of clearing the shrub and the construction of the bare earth line.

Q. Going back to your report about the 5 kilometres of easy burning out from the junction of Two Sticks Road and Baldy fire trail. Could you indicate on the map there where that 5 kilometres is?

A. Mark it?

Q. Yes.

A. Basically the junction of the Baldy Range fire trail is there. This track down through to about this point (shown) is relatively easy access. This part is pretty much level ground, slightly sloping away towards the north-west. And if you come down here, as you can see by the trail, the initial run on this slope is not all that steep.

Q. So that's the section where, in your view, some burning could have been done without the risks created by the more serpentine part of the track that is referred to further west?

A. Yes, although it would have required once you started that you committed resources to it and kept them there because as soon as you start an extra fire there is a chance of a spotover. So the decision would have involved that once you started you had the resources to keep people

there.

5 Q. What I might get you to do - and I am sorry you sat down, Mr Cheney - is if you could go back to slide 44, that is two slides back from that point, and if you could illustrate the evidence you were giving a moment ago about the Baldy Range spot fire and the difficulties created by leaving it for that period?

10 A. At the time the CSIRO staff were there it had just crossed at that point (shown). It was under the influence of an easterly wind which was coming in, which was restricting the spread of this part of the fire during the night (shown). The video
15 is not all that clear -- (checking that the microphone is on).

20 Q. Going to the next slide, we understand from the evidence that that is actually part of the Webbs Ridge - one of the spots just to the east of the main fire?

25 A. That's correct. That's between Webbs Ridge Trail and the Dingi-Dingi trail. But here you can see in parts where the fuel is light - where it runs into patches of green grass, it is breaking up - the fire is going out, and most activity is in heavy accumulations in bark at the base of the gum bark trees.

30 Q. If we can jump forward four slides. That is the Baldy Range spot on the afternoon of the 9th?

35 A. Yes, it is. That is the area taken from linescan data. The fire has progressed from its origin point under the influence of this other leg, a bit upslope. The top of the range is about at that height. It has burnt off around. It is backing slowly down into this section, which is shaded. Once you fall away from the ridge it is really quite steep. It is also in places quite
40 rocky.

45 Q. Going forward two slides to midnight on 10 January to the east of Baldy Range trail, is that some indication of the work that has started there, the fact that it is spreading more to the west of the trail than it is to the east?

A. I think from this point on there is no change

in the dimension of this part of the spot fire on the eastern side of the road. The fire is still progressing on the western side and being held by the firefighters that are on that trail.

5

Q. Thank you Mr Cheney. If we can just go back to the report, page 27 of your report where you are dealing with the McIntyre's fire on the 17th and 18th - 18th in particular. You have added quite a bit of information there concerning work that was being done on Doctors Flat Road. That is on the northern boundary of the fire; is that correct? It is just above the heading "Bendora fire".

10
15 A. What page are we on?

Q. I am on page 27.

A. Yes.

20 Q. Mr Cheney, having drawn that to your attention, would it be easier to explain what is set out there by reference to the slides that we are about to go to - would that deal with the McIntyre's fire on the 17th and 18th?

25 A. Well, that's part of it. I think a little bit earlier on the 17th, on my copy it is page 24, I discuss an additional investigation of the breakaway on the 17th across the river.

30 Q. That is picked up in your slides?

A. That is picked up in the slides as well as a response to a submission by Mr Parker from Wee Jasper.

35 Q. We may - sorry, go on.

A. In the initial slides I had indicated that had broken away perhaps on the morning of the 189th. Mr Parker's evidence, which was supported by an interpretation of aerial photographs indicated the extent of that breakaway on the 17th.

40
45 Q. We may come back to that when we get to your slides. Just one further matter before we do move to that, Mr Cheney: at my page 30 of the report, this is the Bendora fire for Wednesday the 8th of January, you have added a section dealing with the decision on the night of the 8th to withdraw

crews. It is the middle of the page beginning "in my opinion"?

A. Yes. There appears to be a word left out after "in my opinion" - it might have been Odile Arman.

Q. Or "she" perhaps?

A. Or "she".

10 Q. I will just read that:

"In my experience she did not have the experience to control a fire in this type of forest."

15

And you have referenced her taped record of conversation:

20 "It is the responsibility of the Service Management Team to know level of training, experience level of firefighting proficiency of all firefighters under their command and be able to assign the person appropriate to the task at hand. They should have been able to assess the seriousness of the situation and recognise that a more experienced person should replace the incident controller."

25

30 In that remark, Mr Cheney, are you critical of the incident controller who was there?

A. If her decision was based on her later comment that she felt not competent to tackle that fire, no, I would support that decision. Because that is the whole basis of the AIIMS system, if someone is not competent or capable of handling a particular situation, then you replace them with someone who is. Firefighting is more than just a matter of training, passing training modules. It is also having the experience and the competence to handle different types of fuels.

40

This is really something that can only be - it isn't a subject; it is an expert decision that is made by the organisation. It is usually a sort of peer assessment by more experienced firefighters to rate people on their capability of what they can handle. In some organisations they have

45

everybody from the district forester down to the typist rated at what they can do and what class of fire they are capable of managing.

5 I believe in this case, because I believe there were more experienced firefighters available that night, the decision should have been made by the incident control team to put them in place of Ms Arman, it is certainly not a criticism of
10 Ms Arman herself. If she felt she couldn't handle it she made the right decision and said, "No, I can't handle it".

15 Q. When you say the seriousness of the situation, the particular fire that was being addressed at that time, at that stage at least the flame heights were relatively low and it was not spreading rapidly. What situation are you referring to there?

20 A. I am referring to the whole situation they were facing. They had four fires going to the west of the ACT. Three of them were areas of their direct responsibility and a fourth one which, if not brought under control, was going to
25 have a serious impact on ACT Forests and ACT itself.

The condition of the fire season was known. The drought index was such that the fires weren't
30 going to go out overnight and in fact weren't going to slow down much more overnight, as subsequently turned out. I think those conditions were known or should have been known.

35 Q. So when you say "the seriousness of the situation", you are not referring to the particular fire in particular circumstances in perhaps that shift but rather the potential --
40 A. That's right. It is the potential of not getting those fires under control as fast as possible.

45 Q. We have referred briefly to the matters that are the subject of your more recent slides so perhaps if we could now go to the shorter 29-slide slideshow. If I could hand over to you, Mr Cheney, and largely take my seat so you can

take us through.

For the record, that slide is, it appears, the same as slide 61 in your original slide show. If
5 you could then walk us through the balance of those slides.

A. What has been added to that the areas of fire line construction here and here and here (pointing). It should have been here but we
10 missed that out.

MR CRADDOCK: Could I also make a request: from my attempt to read the transcript of Mr Cheney's evidence in October last year, it was probably
15 absolutely scintillating to those present but I regret utterly unintelligible for those who had to read it after the event, for the simple reason that it was very difficult to connect Mr Cheney's oral evidence with the physical product that he
20 was dealing with.

I suspect I will not only have to pay close attention to what Mr Cheney says this afternoon but go over it at least once or 10 times.
25

THE CORONER: You should have been here in October, Mr Craddock. I think what you really mean is where Mr Cheney says "here and here", what you should be doing, Mr Cheney, is perhaps saying,
30 "On the southern portion of the slide between" - it might make it a bit clearer for people who are reading the transcript.

MR CRADDOCK: That would certainly help. But even before that simply beginning with an
35 identification of the particular slide that he is dealing with so that one can follow in the sequence. It wasn't apparent from the transcript which of the slides was being spoken about at any
40 one particular time.

We had the same sort of difficulty when Mr Bartlett was trying to grapple with the same problem when he was giving his little Powerpoint
45 exercise. I think a method was developed there of whenever he was referring to the slide identifying the slide by a number. That certainly assisted us

a great deal.

5 THE CORONER: As I understand it, this is the first of the slides in the new set which is [DPP.DPP.0008.0109]. This slide in fact is 0109 in the new set. You have those I think, Mr Craddock.

10 MR CRADDOCK: I do.

THE CORONER: But it might be just as well to refer to it as 0109, 0110 and so on.

15 MR WOODWARD: Each of the slides has a date and time in the top right-hand corner, and they are all different. Perhaps the way to deal with the issue is for Mr Cheney or me to indicate that the slide that he is referring to is "McIntyre's Hut fire 17 January at 0900 hours".

20 MR CRADDOCK: That is a much better idea because not only do my copies not have the numbers but one doesn't want to ask Mr Cheney to speak in terms of 0109, et cetera.

25 THE WITNESS: Referring to the slide of the spread of the McIntyre hut fire on 17 January at 0900 hours, the additions on this slide from the second series which differ from the same slide on the original map series is that, by a dotted black line, an indication that trails have been put in to contain the fire on the eastern side between Doctors Flat Road and Two Sticks Road; on the southern section connecting a small length from the extension of the Powerline Trail westward to the Goodradigbee River; and a section which runs from the junction of McIntyre's Hut trail; and one on - certainly the northern section - I think it is the Folly trail there is a dotted line which extends westward down to the Goodradigbee River containing the northern part of the fire west of the McIntyre's Hut fire.

45 The section which should have had a dotted line marked around it is a red section north of the Folly Trail, which is a breakaway which occurred during the burning off.

MR WOODWARD: Q. The next slide is McIntyre's Hut fire, 17 January at 2400 hours.

A. This refers to page 24 of my report and illustrated by McIntyre's Hut fire slide
5 17 January 2400 hours. Some time around 12 o'clock a fire broke its way across the Goodradigbee. There is a grid reference given. That location is this area up here (pointing).

10 MR ERSKINE: Could that be shown as just above the word "Goodradigbee River"?

THE CORONER: Yes.

15 THE WITNESS: Just above the words "Goodradigbee River" there is a dotted section of trail which is above the original mapped trail, and that dotted section is the actual location of the road today. The original trail has been reconstructed but not
20 corrected on the maps.

According to Mr Parker's evidence and in discussions I had with him, they controlled this breakaway by this trail which comes in to the
25 Goodradigbee River from the west of the slide by the road on the northern edge by a combination of hand tool work and the bulldozer line pushed down into the river.

30 The second breakaway, according to Mr Parker's evidence, broke away at some time around 2130 hours. Mr Parker couldn't actually see this. But from the bottom of the trail at that time he could see a substantial glow to his south which he
35 presumed to be a breakaway fire.

Looking at the spread pattern on aerial photographs, my interpretation is that it broke away across the river south of McIntyre's Hut,
40 which is at the base of this line which comes from McIntyre's Hut trail down to the river. I think I said in the notes in the vicinity of Tommy's Flat, towards the northern end of Tommy's Flat which is a flat on the river on the northern side in the
45 vicinity of that pencil mark, if it stays there, which it won't.

47

The second spot fire started at the base of the steep slope and burnt rapidly upslope until it reached basically the immediate crest of the ridge line and then pulled up.

5

MR WOODWARD: Q. I think the next is a photograph of spot fires into grassland at approximately 2000 hours.

A. That was on the eastern side of the fire.

10

MR ERSKINE: Q. Which fire?

A. Of McIntyre's Hut fire.

MR WOODWARD: Q. If you go to the next slide you might be able to indicate broadly where that was.

15

A. On the slide marked 18 January 0800 hours, there is an area indicating burnt area under the words "Two Sticks Road" and just above "road" you will see a number of red dots which is the vicinity of that photograph.

20

On this slide, along Doctors Flat Road there is a small indication indicating two things: some burning out had been commenced during the night along Doctors Flat Road which started about midnight and was completed.

25

Q. While you are finding the next section, that is the small red area under the word "flat" on that slide?

30

A. Yes. From the eastern edge of that red area there is a dotted line which is a newly constructed fire trail which came from Doctors Flat Road down to a creek line, which was also the junction of the timber and the grassland as was illustrated in the previous slide, where the fire is starting to burn out onto grassland.

35

I think the original intention seemed to be that, because the northern side of the breakaway above Two Sticks Road was uncontained, there was an attempt to contain this fire and connect up down that trail. The radio transcripts indicate that at the time the crew had completed there, there was a decision that it was decided not to complete the section down the trail because things were at that stage were already being to rise.

40

45

Q. Is there anything about the slide to the west?

A. Just that that has started to expand a little.

MR ERSKINE: Q. Sorry, what has started to
5 expand?

A. Sorry, the fire west of the Goodradigbee River
which started in the vicinity of Tommy's Flat.

The slide for 18 January 0800 hours is just a
10 scale up of the previous slide.

At 1200 hours, 18 January, the fire to the west of
the Goodradigbee River is now progressing both to
the north and south of McIntyre's Hut, still
15 burning in heavily timbered country.

(Breakaway west of Goodradigbee River
approximately 1200 hours) - the next slide is a
photograph which illustrates the fire taken from
20 Blackfellows Flat looking towards the north and
looking at the fire on the western side of the
Goodradigbee River.

The next slide is McIntyre's Hut fire 18 January,
25 1300 hours. At this time of this fire, I am able
to interpret the data that the fire started at the
far west of the river. It started to burn a
little further south and is approaching the limit
of the burnt country. To the east of Lowell's
30 track the country had been all burnt out there was
very little activity in it at all.

The fire to the west was progressing relatively
slowly in a southerly direction, being under the
35 influence of an eddy wind from the west which was
turbulent in the river valley.

On the eastern side, both the northern section of
the breakaway east of Dingo Dell - you have to
40 refer to a previous map for Dingo Dell - is
burning in the forested country both north and
south of an area of fairly heavily grazed pasture
where at this point it was mostly still being
held.

45

As far as I can gather, at 1300 hours it was still
within timbered country and its activity was both

north and east across Doctors Flat Road and approaching Mountain Creek Road.

5 The southern arm was burning into the hills behind Uriarra Station and also had entered the northern part of ACT Forests' pine plantation.

(Breakaway northern flank approximately 1315 hours) - this is the photograph that was taken by
10 Mr Hoare at his property at Tingaringa, which is on Mountain Creek Road, looking south and looking at the northern section of that breakaway just a little way south or just coming across Doctors Flat Road at that time. At this time, looking at
15 Mr Hoare's series of photographs of which I have only included one, there was a rapid escalation of the fire behaviour at this time.

The slide marked 18 January 1400 hours, McIntyre's
20 Hut fire, the fire west of the Murrumbidgee had now started to make a fairly rapid run towards the south, which was at right angles basically to the prevailing wind direction --

25 MR WOODWARD: Q. When you said west of the Murrumbidgee, did you mean the Goodradigbee?
A. Sorry, I did mean the Goodradigbee. Thank you. And had burnt past, in my interpretation, the fire line trail - or the fire line on the
30 southern edge of the fire where the Powerline Trail track is - down to the Goodradigbee River. This is purely interpretation on my part. Just indicative at this time it appeared that rapid fire spread to the south had started and also, as
35 soon as it had got past the area that had been controlled, I have assumed that it would have made a rapid upslope easterly run with the wind behind it.

40 At 1400 hours (McIntyre's Hut fire 18 January), the breakaway on the eastern side of McIntyre's fire was now burning in two tongues in a south-easterly direction and had pretty much reached the Murrumbidgee River on the northern run
45 and it had made a run across fairly heavily grazed pastures. To the south at this time one tongue had run towards an area of pine plantation just

immediately west of the Murrumbidgee River, and a spot fire had started on the slopes of Mt McDonald between Uriarra and the Murrumbidgee River. That was burning in pine plantation under Mt McDonald.
5 It was one that was photographed by CSIRO from Mt Stromlo that was presented in evidence.

The next slide at 1430 hours (McIntyre's Hut fire, 18 January) - the fire to the west and now south
10 of the main area contained by the McIntyre's Hut fire is now burning up to Webb Spur and down into Flea Creek. On the eastern side the spot fire on Mt McDonald east of the river had now burnt
15 through the pine plantation and into the grassy fields and other woodland fuels in the Murrumbidgee corridor. And to the further north the two arms of the fire spreading towards the south-east had linked up but were still somewhat
20 fragmented in fairly eaten out pastures in the vicinity of Uriarra Crossing road and in the area of Huntley, which I hazard a guess is about the "U" in Murrumbidgee on Uriarra Crossing road.

Just one other point on the previous slide, it is
25 not clear on this slide but at about this time there was a spot fire in the western-most extension of the Mt Stromlo pine plantation which shows up as a dot on the linescan imagery and hasn't come out on that map (referring to 1430
30 hours).

At 1445 hours (McIntyre's Hut fire 18 January) the fire to the west, it might be missing here, was
35 burning but still progressing south and burning over Webbs Ridge. The fire was burning through the plantation west of Mt Stromlo and was about to set off and make a major run up the western slopes of Mt Stromlo to the observatory.

40 MR ERSKINE: Your Worship, before we leave 1430 and 1445, apart from the changes referred to in relation to the western part of McIntyre's, it appears to be exactly the same in both of them.

45 THE WITNESS: I think now looking at it there is. I think there is an interpretation that I haven't made in there.

By 1500 hours (McIntyre's Hut fire, 18 January), that western section had burnt south in the river as far as the junction of Flea Creek and the Goodradigbee River. It also crossed Flea Creek and crossed the Brindabella Range just to the south of Mt Coree and now was burning into the pines in an area called Blundells Flat and close to Blundells arboretum.

On the eastern side, the fire had crested Mt Stromlo and was now burning through a mixture of pine plantation of different ages and some recently regenerated areas that were quite small and subsequently into areas of grassland alongside the Cotter Road.

Slide taken by Mr Millgate in the vicinity of Mt Painter looking south towards the fire running up the north-western slopes of Mt Stromlo.

McIntyre's Hut fire 18 January 1515 hours, the fire had now burnt into Duffy and was spreading laterally eastward along Warragamba Drive and south heading down Eucumbene Drive. The tongue of fire to the west had now burnt through the pines in Blundells Flat and at this point was burning in an area of eucalypt forest and back into the pines again, which is illustrated by the close network of roads east of the point of the fire moving south.

MR WOODWARD: Q. I think, Mr Cheney, I might just perhaps interrupt there: as I understand it, slides from here-on are largely consistent or there haven't been material changes between these slides and those of your previous presentation as far as the fire spread is concerned; is that correct? Have I read that right?

A. They are just a repeat of the changes that we have already gone through up to this point on the McIntyre's Hut fire. The subsequent spread is the same as I illustrated in the first series, yes.

Q. Are there any other aspects - perhaps if you just quickly go through them: without repeating the evidence you gave in October if you could just take us through those last few slides.

A. It is the last of this series I think at 1545 (McIntyre's Hut fire, 18 January), the fire continued to spread both eastward along Warragamba Drive and south through Duffy and the fire that
5 was burning from the Brindabella Range progressed very rapidly. At this point I assessed that it had crossed the Murrumbidgee River.

It then progressed and at 1600 hours, which is not
10 illustrated, it had crossed Namatjira Drive behind Mt Arrawang which is the shaded area on the slide between the two suburban areas south of Duffy.

These are essentially the same except for the
15 changes that have been made that we have discussed already, illustrating the separate activity of this spot fire which in more detailed analysis of the video from Mt Stromlo I was able to reconstruct (McIntyre's Hut fire 18 January 1430).

20

Q. These are again just the same series but at a closer scale; is that correct?

A. Yes. It was just to highlight the point of
25 impact onto Duffy and how once it had hit at about the corner of Eucumbene Drive and Warragamba Drive subsequent spread was really a flank fire - flank head fire which was expanding less slowly than the main fire was spreading.

30 Q. These slides again are largely a repeat of your earlier presentation; is that correct?

A. That's correct. They were put in to
illustrate the relativity between the fire moving through the centre and the flanks of both the
35 Bendora fire to the south and the escape from the McIntyre's fire to the north.

Q. Just one final thing while that slide is on
(McIntyre's Hut and Bendora fires
40 18 January 1545), although that last slide in the series doesn't actually show the Bendora fire crossing into Kambah - is that the Murrumbidgee shown there - that's what on your assessment occurred; is that right?

A. In the next 15 minutes I do have photographic
45 evidence of the whirlwind that had set up at the point of this fire that was running through

between the Bendora fire and the Uriarra fire.
This whirlwind started about 15 minutes earlier
just to the south of the settlement of Pierces
Creek and left a very defined trail which came
5 across and ducked into somebody's circuit in
Chapman.

THE CORONER: Q. Chauvel?

A. No, it was the next one further along above
10 Doyle Terrace. I think it is Lincoln Close. And
the video taken by Mr Bates, who took some very
good video of the whirlwind appearing between
Namatjira Drive and Tuggeranong Parkway was
supported by timed video that Sean Cheney took
15 also from Fisher and placed the whirlwind at the
point of the fire at 1600 between Namatjira Drive
and the Tuggeranong Parkway. And from quite a lot
of reports, the rest of this area from Gordon
through to Duffy and Chapman filled out in that 15
20 minutes between 1545 and 1600 hours.

MR WOODWARD: Q. So the fire that hit into those
areas was what was originally the Bendora fire?

A. I would say from the Gleneagles golf club
25 south to Gordon was the area impacted by the
Bendora fire.

Q. You can perhaps go back to your seat,
Mr Cheney. As I recall your evidence, Mr Cheney,
30 on the previous occasion, the phenomenon both of
the vortice and of the extremely rapid movement of
that fire that came between the Bendora and what
had been the McIntyre's fire was caused, in your
opinion, by the fact that it was coming in between
35 those two fires. The flanks of those two fires
drew it through; is that correct?

A. Yes. My opinion was in looking at the rates
of spread of the flanks of the fire, both the
northern flank between Piccadilly Circus, which is
40 at the border and the Bullen Range, which is the
timbered country just to the west of the
Murrumbidgee River, that flank expansion was
really relatively slow; and likewise it was
relatively slow flank expansion on the southern
45 side or the south-western side, the break-away of
the McIntyre's fire.

47

This fire ran very quickly. Really, for the intermediate stages, my interpretation of where it got to, there is very little supporting data - I have one observation at Pierces Creek at 1530
5 which seemed to fit and then a final observation of the fire at Namatjira Drive at around 1600 hours. There may have been some variation in there, but it appeared to be pretty consistent and maintaining a rate of spread of 20 kilometres an
10 hour, which is the fastest documented rate of spread of a forest fire anywhere to my knowledge.

Q. The phenomenon that you have described and the tornado, in your opinion, is it likely or could
15 that have occurred if the Bendora fire in effect had not been there? In other words, to what extent did the Bendora fire, if at all, contribute to the event, in your view?

A. I guess really the only response I could give
20 to that is that experimentally, on looking back on some of my large fire experiments that I carried out in 1982 and 1983, we did get a similar phenomena where we had a firing burning between two established flanks such that when it was lit
25 up, the path that was lit up between these two fires went at about four times the rate of spread of the individual fires that had been burning prior to joining up.

30 A line of fire outside of the area between the two junctions didn't spread at all, as you might have expected if it was driven by a general wind. So one can't be categorical about it, but in my opinion it required the interaction of the two convection
35 columns to create that really quite remarkable rate of spread between two fires - between two existing fires.

Q. Just finally to return to your report at
40 page 54 where you have added in the inclusion of your report some information about fire spread, I will read the first paragraph:

45 "The spread of these fires illustrate the variability of fire behaviour that can be exhibited during conditions of extreme fire danger. The most difficult weather element

to predict is the wind speed and agencies should allow for a possible error of at least plus or minus 20 per cent or plus or minus 10 kilometres per hour for forecast wind speeds above 30 kilometres per hour. Also the prediction is made for the local observation point in this case Canberra Airport. Over the region there can be considerable variation of wind speed that can occur at different times."

You then set out details of the actual observations at the time. Those wind speeds of course don't deal with the tornado event they are just the general wind speeds in the area of McIntyre's and Bendora fire; is that correct?

A. Yes, it is a problem that all forecasters and predictors face that the prediction of wind speed in Canberra is made for Canberra Airport. Looking at all the anemometer sites that were around - there was an anemometer at Goulburn, one at the Tidbinbilla Tracking Station, another one at Tuggeranong, and another one was a private citizen who had an interest in meteorology at Gilmore - I made a visual observation of the wind speed near Michelago at about 3 o'clock. And looking at all that data, there was quite a substantial drop in wind speed between Goulburn and Michelago. It seemed that the highest wind speed was probably just to the north of the ACT between Canberra and Goulburn, and then the speed fell off quite rapidly as you went south.

To a degree this explains the differences in the rates of spread of the McIntyre's Hut fire coming out of Uriarra towards Stromlo and into Duffy; the Bendora fire, perhaps; but certainly further south when you got to the extension of the Stockyard fire which was the first to breakaway and at 3 o'clock it had just crossed the Murrumbidgee River and was not spreading actively towards the east at all.

At first I thought this was a blocking effect of the convection to the west, which is why I drove to Michelago to sample the wind beyond the effect of the smoke columns. When I got there it was

quite light and I would say less than 20 kilometres an hour.

As well as varying spatially, it varies in time.
5 So strong winds which were recorded at Tidbinbilla - and I said there I think between 1450 and 1510 the Tidbinbilla Tracking Station recorded an average wind speed of 55 kilometres an hour over that 20-minute period. That wind speed
10 was not reflected at all at any time at the Canberra anemometer.

Q. You then go on to refer to, as I understand it, the actual fire spread that you both observed
15 and subsequently determined or predicted from your work for the purposes of the report. That appears at the top of the next page of the report. That table is your estimates of the actual rate of spread during that period from 1300 to 1508; is
20 that correct?

A. That's correct, yes. That is basically simply scaled off those mapped spread patterns and assigned to the various fuel types that that section of the fire was burning through.
25

Q. Under the table you have got a heading "Prediction of rate of spread for 18 January 2003 using the recommended systems i.e. McArthur forest fire danger meter MK5 with x 3 correction and the
30 CSIRO grassland firespread meter."

Just to be clear about what each of those elements is: the McArthur forest fire danger meter mark 5 is the one we have all seen before, the green
35 slide rule?

A. Yes.

Q. The 3 times correction is, as we have previously discussed, is the recommendation that
40 has come out of some of the Vesta work which was generally published in about 1999 of underprediction of the McArthur meter under certain conditions; is that correct?

A. That's correct. There is also a warning on
45 that meter printed in 1992 that it may underestimate at high wind speeds on the back of the meter.

Q. There is already evidence of some publicity in relation to the Vesta warnings, but there was also a pamphlet issued in 1999 in relation to that; is that correct?

5 A. That's correct.

Q. Could I ask you to have a look at this document (shown). Is that the pamphlet?

A. Yes.

10

Q. Does that have attached to it a pro forma letter that was sent to fire agencies around Australia accompanying copies of the pamphlet for distribution to people within each of those agencies?

15

A. Yes.

Q. Without going to it in detail, the essence of that pamphlet, Mr Cheney, is that it explains where it is appropriate to make that correction?

20

A. It was indicated on the meter that it may under-predict at high wind speeds, which is on the back of the meter in the footnotes just above the top of the table, I think. The initial work that prompted Vesta was the fact that under certain conditions we knew that McArthur was underestimating. As indicated on the meter we thought that was primarily for high wind speeds only.

25

30

In the Vesta work where we started the fire at a size that reflected its potential rate of spread for the prevailing conditions, we found that this was being borne out on wind speeds which were lower than the 20 kilometres an hour or so that is indicated on that meter. So we felt, particularly for firefighters that were involved in direct attack, it was important to get a warning out to them indicating also that if they were faced with a sudden wind change and a fire moved away from a line it didn't go through a period of restricted growth - sort of accelerated growth and would reach its potential rate of spread almost immediately. That was really the basis for that warning.

35

40

45

Q. Just the warning you refer to on the meter

itself says, as you say on the back of the slide rule, in bold type "warning":

5 "The fire behaviour information provided in
this table is a guide only. No warranties,
guarantees or representations are made that
it is 100 per cent accurate. Current
research indicates that this table may
10 under-estimate rates of spread at high wind
speeds."

That is the warning that you are referring to?
A. Yes.

15 Q. You refer in your report, by way of
introduction, to the calculations that you made:

20 "During Project Vesta CSIRO recognised that
the forest fire danger meter underestimated
fire spread on large fires at wind speeds
above 20 kilometres an hour and a warning was
sent to all fire agencies to multiply the
value calculated by the meter by 3."

25 In essence what that warning was doing, Mr Cheney,
was providing a little bit more detail to the
warning that already appeared on the meter and
giving an actual multiplier that could be used?
A. Yes.

30 Q. You say then:

35 "The ESB planning officer did not accept that
this recommendation applied to the ACT and
suggested that in fact the meter would
over-predict."

You provide a reference to the ESB web page and
the response on that to your Vesta research. If I
40 can hand this document to you (shown). Is that
the document that is referenced at footnote 141?
A. Yes.

45 Q. There is a copy for your Worship. Indeed in
his evidence at transcript 3094 Mr McRae refers to
some evidence by, as I understand it, Mr Kessell
which suggested that the McArthur meter may

overpredict. Are you familiar with Mr Kessell's research?

5 A. I know a little of it, but Mr McRae doesn't identify the paper. The only paper that I can find that might relate to that is a reference to an unpublished paper in a personal collection by Kessell Gellie and McRae entitled "the Blue Mountains region fire potential assessment and land management planning system". I haven't read that paper and I can't find it in any of the science reference systems or within any of the fire bibliographies or within any citation index.

10 Q. Are you at all familiar with the work done by Mr Kessell which apparently has led to a comment at least that the McArthur meter may in fact under-predict?

15 A. I am aware of the work that Mr Kessell and Mr McRae did on the program called PREPLAN, and within that planning system there are a number of fire models embedded in it, including the McArthur model and an American fire spread model called the Rothermel model. In testing the Rothermel model in Australia on actual going fires and experimental fires it always grossly underpredicted the rate of spread.

20 We couldn't make a sensible interpretation of the fuel parameters that the Rothermel model had used because that had been developed from laboratory studies in a wind tunnel and had concentrated on very detailed fuel physics including the density, orientation and the diameter of the fuel particle.

25 Some of these measurements were either impossible or quite impractical to measure in the field. One of them being the surface area to volume of the fuel particle, which is a mean value of the particle diameter. The problem with measuring it is that, if you take even a simple fuel like a blade of grass, it starts off at a diameter of about 6 mm and finishes up at the tip at a diameter or thickness of something less than half a millimetre. To apply a sensible figure to measure that is just very difficult.

30 So what tends to happen - and the Americans did

this, they built a fuel model which adjusted the fuel parameters that were needed to run the mathematical model to something that more or less fitted what the observed observations were in the field. But the problem - I mean, it was a sort of a backwards adjustment or fudge, to use a crude term, of the equation; so you could make the equations fit to any particular rate of spread that you wanted to. All you had to do was adjust the numbers up and down until they fitted. The problem was that they didn't have good field data. So this fitting was really basically a guess on something that would appear to fit.

When Mr Kessell applied the model - well, one of the very sensitive fuel variables in the model, which again just is for fire spreading through a fuel bed in a wind tunnel, is the height of that fuel bed - he referred to a three-strata model at the time which was basically as your fires got faster to accommodate for that increase in speed you could accommodate it by increasing the height of the fuel bed that you nominally set. But this height of the fuel bed became quite unrealistic in terms of it relating to an actual fuel height.

For example, and I am only quoting an approximate figure, for a fuel bed that is a couple of centimetres wide, to make the Rothermel model work to give a prediction of even a relatively slow rate of spread in the field, you had to say that that fuel bed was 30 or 50 centimetres high. So we were never terribly impressed with it. Besides, we couldn't even make it work for the simplest fuel bed which was grassland. We carried out an extensive test of this model to see if it would work in grasslands and we couldn't make it fit.

I am just interested in that, because the only reference that I can find that relates perhaps to that paper is a comment written by Mr Gellie at about the same time in 1990. This is a paper that was published in Mathematical Computing Modelling in 1990. He discusses in this paper the testing of the pre-plan model and using the Rothermel model. He says:

"Comparison of observed predicted fire
behaviour suggests that the predictions of
the three strata model are substantially
lower and in some cases unrealistic.
5 Likewise the McArthur forest fire danger
meter mark 4 significantly overestimates the
rate of spread of a fire such as on steep
slopes; at the lower end of the fire danger
spectrum; and in the coastal woodlands and
10 forests of New South Wales."

I find it a bit surprising that Mr Gellie, who is
writing at that same time, wouldn't refer to this
other paper if it was significant.
15

Q. You have referred to the research, at least as
far as you know, being based on theoretical
research using a wind tunnel. As far as you know,
is there any other research of the kind done on
20 this sort of topic involving the actual lighting
of test fires as was done in Vesta?

A. An Australian, Rick Sneeuwjagt, who is now the
fire officer in Western Australia, did an MSc to
compare the predictions of the Rothermel model
25 with some test fires in grasslands. Again, he
found that he had to make adjustments to the
figures used for the height and the bulk density
of the fuel bed to make the model fit his data.

30 MR WATTS: Q. Might I inquire what an "MFC" might
be?

A. MSc - Master of Science.

MR WOODWARD: Q. Perhaps if I could concentrate
35 the question particularly on the forest fire
danger McArthur model. Are you aware of any other
research apart from Vesta that has been assessing
the accuracy of that model to the same degree as
the project Vesta has been lighting, I think you
40 described, up to 100 test fires.

A. No. There had been other research done by
ourselves in Western Australia prior to Vesta
which basically led up to setting up the project,
because on a limited database, yes, we came to the
45 conclusion that it was underpredicting when fires
were large, at wind speeds which were probably
higher than 10-15 kilometres an hour. Not

related, but research that we had carried out in
grasslands indicated that the reasons that
McArthur model under-predicted was that his test
fires were fires that started from a point
5 ignition and usually burnt for about 30 minutes or
so. Although they had reached a steady rate of
spread, which was in balance with the measured
wind speed, fuel moisture content in the fuel, the
fires were spreading at considerably less than
10 their potential rate of spread.

Because at the time he did that work, or up until
about 1990, the fact that the width of the fire
was a variable that must be accounted for in
15 making the prediction of the spread hadn't been
accepted, hadn't been even known about.

One of the reasons why McArthur's meter has
remained so good for so long in terms of being
20 able to predict spread, is because for certain
fires which are developing and appear to reach a
steady rate of spread it predicts pretty well.
Some people say, "It predicts spot on why do you
need anything else?" But it does under-predict
25 when fires are large and when wind speeds are
high.

Q. Just finally, Mr Cheney, you then in your
report - again I am paraphrasing - put yourself in
30 the position that existed on the evening of the
17th of January 2003 when clear warnings were then
available concerning the weather conditions for
the 18th, the following day, and have done a
variety of different calculations of what fire
35 spread might have been predicted for the following
day. That appears on page 56 of your report; is
that correct?

A. Yes - sorry, 57 on the one I have.

40 Q. I think the pagination might differ. In any
event, what tools did you use to make each of
those predictions?

A. Well, in the previous page, my first
assumption of receiving a forecast of extreme fire
45 danger would be to say: what's the worst we could
get? We know by historical precedent that, at the
top end of extreme, we can get rates of spread of

10 kilometres an hour in forests and 20 kilometres an hour in standing pastures.

5 So, in terms of being concerned about the fires, that was certainly the first thing that would go through my mind. If it is at the top end of the range, these fires could be here in an hour. As you get better weather forecasts you can then apply the forest fire danger meter, which you
10 have, and the other one we use is the grassland fire spread meter, which was produced in 1997.

Q. That is a similar slide rule?

15 A. It is again a circular slide rule. It approximates the calculations sufficiently accurately for this purpose.

So you can take various options. If you don't like to predict "what is worst possible" then say:
20 all right we have got a good chance of getting a fire danger index of 80 in extreme weather, what is it going to do under an index of 80? These are simple examples of the results you get from putting that data in using either the forest fire
25 danger meter or the grassland fire spread meter.

Q. To take the first of those which is on the screen, at FDI 80 using the meter marked 5, you have got the 5.5-kilometre per hour spread. After
30 including the 3 times correction and in the grassland you have got for eaten out pasture 5.4 kilometres per hour and ungrazed pasture 12.5 kilometres per hour?

35 A. That's correct.

Q. Then it is a matter of identifying what you have got between the fire and where you are looking, in this case urban Canberra, and multiplying it out on a calculator. Is it as
40 simple as that?

A. It is even simpler than that. They are both around 5 kilometres an hour. If you have got 15 kilometres to go, it is going to cover that
45 distance in three hours.

Q. You have done that exercise on a variety of different bases, including the last one you do is

with the actual weather at Tidbinbilla which gave an FDI of 119. You then say:

5 "It is not necessary to have highly detailed information about the fuel in the path of the fire but rather make a broad assessment of the fuel types along the predicted path of the fire. A general classification of the fuel types between the ACT border and Duffy
10 along the path of the McIntyre's fire is:
2 kilometres forest; 3 kilometres grass
2 kilometres pine; 4 kilometres grass and
4 kilometres pine: total 15 kilometres."

15 I take it that is very ballpark - it just gives a very general indication of the sort of fuel that exists in that 15-kilometre --

A. It is strictly taken off a map such as that one (pointing) and looking at the classifications
20 plus knowing that at that time of the year, apart from the Murrumbidgee corridor, most of the rural leases were pretty heavy grazed and approaching a condition that you would call "eaten out".

25 Q. One thing we perhaps passed over is that you also have to get a starting point. You say in your report on the Friday evening you would work on the assumption that the extreme weather would be there by 10 o'clock that morning; is that
30 right?

A. Yes, up and running by 10 o'clock. Yes.

Q. In fact it was a little later on the 18th as things turned out; is that correct?

35 A. That's right. It didn't really start to move until after 12 o'clock, really. This very high weather recorded at Tidbinbilla of 119 probably only lasted for 20 minutes and then collapsed down again.

40 Yes, if you are making a prediction on extreme weather you expect the wind speed to get up early and saying, "Well it is probably going to be in the extreme classification by 10 o'clock." There
45 is no point in being terribly fancy about it. You have got fairly severe conditions. You need to say, "Well, you know, what can happen?" This is

simply saying, "Well these meters will assist you if you know how far the fire is away from you and what the expected rates of spread could be at those indexes."

5

Q. You say in conclusion:

10 "On receiving a warning on Friday 17 January of extreme fire danger the following day the planning unit should have assumed a fire danger index was 80 was possible and that extreme weather would occur after 1000 hours. Applying the rates of spread calculated above - that is for the FDI of 80 - they
15 could predict that it was possible for the fire to reach the suburban area on 18 January between 1300 and 1400 hours."

20 That is in fact an hour or so before it actually did reach. Is that because the start time was a little later in your view?

A. I think the start time was a little later, plus I think in what these fires did demonstrate, the wind speed to cause or maintain continuous
25 spread through an eaten out pasture was probably higher than what we had published in our grass fires book. Just taking a pretty much informed guess, I would say probably 20K, because people were holding the fires in the eaten-out pastures
30 relatively easily up until 1300 when the wind speed increased above 25 and the fire started moving out of the forest through the heavily grazed pastures.

35 Q. Of course, the fire even in the eaten-out grasslands is not going to stop if there is no-one there attempting to control it.

A. Because it has mostly been driven by continuity of blown embers, which is what
40 overcomes the gaps in the eaten-out pasture, even though the fire may not in places present much of a flame front, you just simply can't stop the blown embers because they just kept being blown ahead and reigniting and forming a new flame
45 front.

Once you are dealing with those high wind speeds -

and this was part of the problem of the graph that I had in the fuel management report, while theoretically you might be able to put it out because the intensity is low, practically you
5 can't get around all the embers or keep up with all of the embers that have been blown. This will cause the fires to burn across quite substantial bare areas or fire breaks which, under lesser wind conditions, would quite easily stop the fire in
10 those light pastures.

MR WOODWARD: I have nothing further, thank you Mr Cheney.

15 THE CORONER: Yes, thank you, Mr Cheney. Do you wish to tender these two reports?

MR WOODWARD: Yes, I do. I had given a copy to all my colleagues yesterday. It may already be on
20 the system. Perhaps we should take that paper, given that Mr Cheney quoted from it and get that onto the system as well. I tender that.

25 THE CORONER: Is there a need to mark these as exhibits?

MR WOODWARD: If they are not on the system, they are not far away.

30 THE CORONER: If not we can mark them as exhibits on the next occasion.

MR WOODWARD: Perhaps we should mark them as exhibits. If you could perhaps start with the
35 Vesta pamphlet.

THE CORONER: The pamphlet titled "Important warnings for this summer Project Vesta" will become exhibit 0077.
40

EXHIBIT #0077 - PAMPHLET ENTITLED "IMPORTANT WARNINGS FOR THIS SUMMER PROJECT VESTA"

THE CORONER: The other document is an undated
45 document titled "Warning to bushfire fighters 2" under the hand of Mr Rick McRae will become exhibit 0078.

EXHIBIT #0078 - UNDATED DOCUMENT TITLED "WARNING TO BUSHFIRE FIGHTERS [2]"

5 THE CORONER: The document titled "Improving models within PREPLAN - a description of the current system and what is needed", NJH Gellie, will become exhibit 0079.

10 **EXHIBIT #0079 - "IMPROVING MODELS WITHIN PREPLAN - A DESCRIPTION OF THE CURRENT SYSTEM AND WHAT IS NEEDED", NJH GELLIE**

15 THE CORONER: Thank you. Do we have a sealed copy of the order, Mr Johnson?

MR JOHNSON: Could I hand up to your Worship a copy of the sealed order made in proceedings SC567 of 2004, which are the proceedings in relation to which I handed up the earlier order. I understand 20 some other counsel have copies of orders made in their own proceedings and they may wish to hand them up so your Worship has them.

<WITNESS STOOD DOWN

25 MR PHILIP WALKER: I have orders in SC566 of 2004 and, in Mr Craddock's absence, there is a sealed order in SC568 of 2004, which I provide as well.

30 THE CORONER: Thank you.

MR PHILIP WALKER: There is one other matter, if it is convenient to deal with it now.

35 THE CORONER: What is it?

MR PHILIP WALKER: This morning I think my instructing solicitors wrote to counsel assisting as a result of something your Worship said in the decision that you handed down on the document 40 application yesterday. That was to request a copy of the instruments under section 59 appointing Messrs Cheney and Roche as investigators as contemplated by that section, as your Worship referred to in your decision yesterday.

45 Mr Woodward said that he thought it was a matter for application to you. I make that application

directly.

THE CORONER: Those documents are available on the
ACT government website. You are not aware of
5 that?

MR PHILIP WALKER: I was not aware of that.

THE CORONER: Well, they are. I have made
10 arrangements for my associate to get in touch with
Ms Bird and give you a reference to those
documents. If she hasn't done that already, she
will do that either this afternoon or on Monday.

15 MR PHILIP WALKER: I am grateful.

THE CORONER: Mr Woodward brought it to my
attention this morning. You weren't here so you
probably weren't aware of that. They are on the
20 website. I have made arrangements for
Ms Papanicolaou to get in touch with Ms Bird and
give her reference to those documents for easy
finding.

25 MR JOHNSON: Having raised the question at
2 o'clock as to the future progress from here and
having proposed a certain course and the sealed
orders now being with your Worship, I would ask
your Worship just to indicate what your Worship
30 does have in mind in that regard, given the
developments that have occurred in the last 24
hours.

THE CORONER: I think your suggestion was that we
35 adjourn until 7 September --

MR JOHNSON: Essentially on the basis that there
is, in comparative terms, an early hearing of the
matter, that the subject matter of the litigation
40 essentially should be preserved for the time
being. If you adjourn to the 7th, well, at least
we will all know what has happened on the 6th, and
the question of what happens from there may be the
subject of some further consideration, and I would
45 ask your Worship to take that course.

THE CORONER: Do you wish to be heard on that,

Mr Woodward?

MR WOODWARD: No, your Worship, except at a very
fundamental practical level. I am not sure about
5 Mr Lasry's availability. I am sure he will be
back from Guantanamo Bay.

10 Could I ask, because it would seem likely that by
presumably 4pm at the latest on the 6th, for those
of us who will be interstate at that time, will
know whether there is likely to be a start on the
morning of the 7th. I just indicate to
your Worship that that would provide us with an
15 opportunity to get up here well and truly in time,
as long as there is not a problem. In those
circumstances, with your Worship's consent, we
would get a flight out on the morning of the 7th
rather than on the evening of the 6th.

20 THE CORONER: Would it be better if I said not
before 11.30 on the 7th?

MR JOHNSON: What I was suggesting was this - it
is a matter for the Supreme Court - if the Supreme
25 Court did make some order that involved document
production, then a prospect of Mr Cheney resuming
immediately is unrealistic. If, on the other
hand, the Court had reserved and one simply didn't
know what was happening, then the position may be
30 essentially a mention.

Now, it may be, and what I would ask the Court to
consider is this: is to adjourn until perhaps
11.30am on the 7th essentially for mention on the
35 basis that there is uncertainty as to what may
happen. It is probably ultimately unproductive to
have a whole lot of people getting ready for the
resumption of evidence if the position is
essentially unresolved.

40 A mention allows an assessment of where things are
up to, and whether that means that everyone must
assemble or perhaps a limited number of persons
could be considered with perhaps some element of
45 flexibility in that regard.

THE CORONER: I am content with that. That does

make a lot of sense.

MR WOODWARD: The only qualification to that,
your Worship, is that one possible result of
5 course is that the application is unsuccessful; in
which case, we would certainly be very anxious to
start with Mr Cheney's cross-examination at the
earliest opportunity after the 6th. We wouldn't
want to be found in a position where, because
10 there is some expectation that nothing may happen
after the 7th, that we suddenly have a lot of
people unavailable that week, for instance, and
are otherwise held up. As long as it doesn't give
rise to an expectation that there will be nothing
15 much happening on the 7th and 8th, then I would be
content with that.

I think it would have to be understood that there
is at least a prospect that, perhaps at 2pm on the
20 7th, we could be back into hearing
cross-examination of Mr Cheney.

THE CORONER: It certainly has to be contemplated,
that if the application in relation to Mr Cheney's
25 documents is unsuccessful, then he is available
for cross-examination starting at let's say
2 o'clock on the 7th. I would like counsel to be
alerted to that fact and be ready to proceed on
that basis.

30 MR JOHNSON: Certainly everyone will need to be
ready to deal with the contingencies that occur.
None of us have foresight, and it is necessary to
have regard to the possibilities. But for our
35 part, and I would think everyone in this
courtroom, they know that the desire is to proceed
at the earliest opportunity. What has been said
by your Worship has been heard by all.

40 THE CORONER: It is a matter of waiting and seeing
what happens.

Mr Erskine do you wish to be heard?

45 MR ERSKINE: Only this, the 6th and 7th - the 6th
has been chosen by the Supreme Court without
hearing any party.

THE CORONER: I have no control over that,
Mr Erskine.

MR ERSKINE: I am not suggesting that your Worship
5 had any control over this. The 7th had been
chosen, with great respect to Mr Johnson, without
having consulted any party. While I accept that
some flexibility is required, nevertheless, all of
10 us have been making understandable arrangements
for the rest of our practices based upon, in good
faith, the dates that your Worship had set.

There was some extensive email debate with
Mr Woodward about resuming in the last four or
15 five days. We have managed to accommodate all of
that. I would say, your Worship, with great
respect, it is not quite as simple as sticking a
pin in a diary and saying, "All right we will
start then".

20

THE CORONER: I understand Mr Erskine. It is
becoming extremely difficult for me to try to
accommodate all the extraneous matters that are
occurring in this case, including attempting to
25 accommodate every counsels' availability. I am
afraid, as best as I try and as best as we all try
to accommodate one another, the time has now come
that if dates are set then counsel will just have
to make whatever arrangements they can to be
30 present to deal with that.

MR ERSKINE: Perhaps I could deal with it in this
way: there was some success I think in liaising
with Mr Woodward about dates. It may be that we
35 can attempt to do the same thing between now and
the 7th.

THE CORONER: I am happy for all of you to talk to
one another and try to come up with something that
40 is reasonable.

I think at this stage what I will do is adjourn
these proceedings until Tuesday the 7th of
September - I will say not before 11.30am - for
45 mention on that day.

I want counsel to be on notice that if the

applications in relation to Mr Cheney in particular are unsuccessful then Mr Cheney - well certainly my intention is that Mr Cheney proceed with his evidence or be ready for cross-examination at 2 o'clock that afternoon on the 7th of September.

MR WOODWARD: If your Worship please.

10 THE CORONER: We will adjourn.

**MATTER ADJOURNED AT 4.19PM UNTIL TUESDAY
7 SEPTEMBER 2004 NOT BEFORE 11.30AM.**

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TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 74

Friday, 10 September 2004

[11.30am]

THE CORONER: I understand that his Honour made an order this morning.

5

MR JOHNSON: Yes. That is so. The formal order is presently being taken out. I can hand up what I think is an accurate note but in an informal form as to what his Honour ordered.

10

THE CORONER: Yes. I was told of this, Mr Johnson.

MR JOHNSON: The question is: where does the matter go from here, essentially. I did have a proposal; I think other people at the Bar table will no doubt put different matters to you. I am conscious that his Honour hasn't delivered reasons yet. His Honour did indicate that reasons would be delivered in Sydney next week, not on Monday. When precisely was not --

20

THE CORONER: He didn't say when?

MR JOHNSON: No, "during the course of the week".

25

This is what I would --

THE CORONER: My understanding of this order, Mr Johnson, is that I am prohibited from taking further evidence of Mr Noel Phillip Cheney in accordance with my decision on 26 August 2004 and likewise in relation to Mr Roche.

30

The order I made on 26 August 2004 was - I am quoting from the transcript page 6742:

35

"I am satisfied that the requirements of procedural fairness in compliance with the relevant legislative provisions do not require me to exercise my discretion to direct the documents and records sought by counsel in relation to Mr Cheney and Mr Roche's reports be produced and I do not direct that those documents be produced."

40

45

But in view of the order of his Honour, I now

direct that the documents relating to Mr Cheney be produced. I just ask Mr Lasry when that can happen? Are they ready to be delivered?

5 MR LASRY: Yes, your Worship. On Tuesday his Honour indicated, and indeed he indicated that you could be informed that it was likely that his Honour would make some orders. Your Worship was informed about that by us.

10

THE CORONER: Yes, I was.

MR LASRY: In anticipation of his Honour's orders, on the 9th of September a letter signed by Ms Drew on behalf of myself and Mr Woodward, was sent to the ACT Government Solicitor's Office. The effect of the letter is to inform the parties that the documents, which can be described as that group of documents over and above Mr Cheney's original source material, would be available for collection. And, in fact, those documents which are the additional of the source material in Mr Craddock's original request of 17 August, were assembled into I think three volumes of material. As I understand, there were three sets of those documents. They have now all been collected.

20

25

30

THE CORONER: Those three sets of documents have been delivered?

MR LASRY: Yes. This letter informs Ms Prosser and through her the other parties that the documents were available for collection at the ACT DPP's office. Advantage has been taken of that.

35

THE CORONER: When was that?

MR LASRY: The letter was dated 9 September. In fairness to the parties, I think by the time they got the letter and were made aware the documents were available, except in the case of those instructing Mr Johnson, today is really the first opportunity that the parties have had to collect the documents. But they have done it, as I understand.

40

45

That leaves what might be described as the more

voluminous documents; that is the original source material from Mr Cheney's original report. Your Worship will recall now, better than I perhaps, because I wasn't here through the debate, 5 that a list of that material was provided to the parties in June, I think on the 9th of June this year. I think from memory Mr Watts is one member of counsel representing parties who has taken advantage of the opportunity to inspect those 10 documents.

Bearing in mind the way events have developed, we have arranged, as this letter informs, that those documents would be assembled at a room at the ACT 15 DPP's office for inspection by those parties who have not yet taken advantage of the original offer that was made to look at them. They are there now. They are available for inspection. They represent in volume about four boxes of material, 20 including folders, some maps. There is also some electronically stored data on disk, which can be viewed on a computer that has been provided with those documents in that room.

25 It seemed to us it was appropriate to keep the documents at a central point and have some supervision over the inspection of the documents because they are not ours - they belong to the CSIRO and/or Mr Cheney. They are now available 30 for inspection by anyone who wants to look at them.

It seemed to us that the order that his Honour made this morning was clearly hinged to your 35 ruling of the 26th of August. And your Worship having now reversed that ruling in accordance with his Honour's order, at least in relation to the witness Cheney, there is now no reason why his evidence can't proceed - of course subject to a 40 reasonable opportunity to look at the documents.

I should add, your Worship - I am sure Mr Johnson will agree with this - that in the course of his Honour's what I might say economical remarks this 45 morning, in effect he said that it may be that counsel assisting can satisfy the request of the prosecutors, being the parties to the proceedings.

If that is done then, referring to you, "She can do what she likes" in effect. It was words to that effect. I took that to mean, I must say, and I think it is open on what his Honour said, that
5 as long as the documents are provided, as they now are being provided or have been, that will be the end of the prohibition which currently stands. We invite your Worship to act in accordance with that.

10

In relation to Mr Roche, of course his evidence is not due to be commenced until 5 October. In order to ensure that the provision of documents in relation to him is appropriate, we can await the
15 reasons. There is plenty of time for that to occur and for Mr Roche's documents to be produced and for the parties to see them.

We would propose in the earlier part of next week,
20 as we have indicated to your Worship and as your Worship has indicated to us in private, that 2 o'clock on Tuesday is an appropriate time to commence. That would give the balance of the day and the weekend, because some of the documents
25 have been taken away. They are portable to that extent. The parties have access, and a day and a half next week also to look at them.

We remind your Worship that, in relation to the
30 material which is currently sitting in the ACT DPP's office, that is material which has been available since June of this year. And Mr Watts, as far as we know, is the only person who has taken advantage of the original offer. It is not
35 as though this is material that has just become available. It has been there for some months, and there has been plenty of opportunity to examine it.

We also make the point in anticipation of a debate
40 about this, and I have communicated this to parties with whom I have been corresponding by email, that Mr Cheney has been involved in this case since the fires and has been a witness in
45 this inquest since October last year. He is now giving in effect his second round of evidence. He is not only a part-heard witness but his second

round of evidence is part-heard. He is an important witness in this case. He is entitled, we would submit, to be dealt with as expeditiously as possible. Therefore the early part of next week we think is reasonable in the circumstances and we make that submission accordingly.

5
10 THE CORONER: You say there are three volumes? How large are the volumes that have been handed over?

MR LASRY: They are folders of this size. Perhaps they contain a few more pages than that (indicating). This is a process by which the documents can be fairly efficiently skimmed through to establish the nature of them. It remains to be seen, of course, how many of the documents need more careful and close scrutiny with a view to cross-examining Mr Cheney.

20
25 It is something that we would submit could be done efficiently enough by next Tuesday. Presumably Mr Cheney will be in the witness box for some days after next Tuesday, if that is when your Worship starts. Of course those documents will be there and will be available to be referred to during the course of his evidence.

30 THE CORONER: Thank you, Mr Lasry. Yes, Mr Johnson, what do you say to that?

MR JOHNSON: Yes, thank you, your Worship. It is correct that counsel assisting has caused three lever arch folders of material, containing some 259 documents to be provided - a letter of 4pm yesterday afternoon indicated that that had happened. We are grateful for the fact that those documents have been made available in copy form.

40 I would submit that whether those documents satisfy the requirements of procedural fairness in this case as identified, which is the relevant consideration, can only be determined firstly when his Honour's reasons have been examined to identify the requirements of procedural fairness in this case, relevantly. I will come back to that because the question is exactly what portions

of Mr Cheney would need to be produced pursuant to the order that your Worship has made this morning.

5 Secondly, when those documents have been inspected together with such other documents as counsel assisting may make available, it now being indicated there are other documents concerning Mr Cheney, we clearly indicate that the process of inspection can be undertaken and would continue
10 into early next week. We note that his Honour's reasons will follow at some stage next week. His Honour made that clear. But we would submit that it is important that there be an opportunity to see what his Honour's reasons are.

15 I would be asking this, subject to any application which is made by any other party: the cross-examination of Mr Cheney, certainly in the interest I represent, be fixed for not before 20th
20 September, which is Monday week. I understand there will be others who will indicate a preparedness to undertake cross-examination before that time. I would submit that if cross-examination commences at some stage next
25 week and continues into the week of the 20th, one must note firstly that there are 10 sitting days between 20 September and 1 October. One would think that, if Mr Cheney commences at some stage next week, he would conclude one would think
30 realistically well and truly within that period.

The documents which have been produced require some issues to be raised by us. A schedule accompanied the documents that turned up late
35 yesterday afternoon. If I could hand up this schedule to your Worship. We have paginated in handwriting on the top right-hand corner - it may be that I will seek the assistance of counsel assisting through your Worship as to undertake
40 what the position is having regard to your Worship's direction pursuant to his Honour's orders of earlier today.

There are a number of documents identified on the
45 list. At page 5 in the top right-hand corner under the heading "all draft reports" in the middle, it says "at CSIRO Yarralumla". We do note

at pages 11 and 12 of this list there is what is described as "drafts of reports". Are we to understand - I am conscious I am putting this in the term of a question but it is really directed
5 at counsel assisting - part 3 now contains all of the draft reports or are there some of these documents that are still at the CSIRO Yarralumla or are they in the DPP's rooms over the road?

10 MR LASRY: They are in the folders.

MR JOHNSON: Thank you. And "the folders" means the three folders delivered last night?

15 MR WOODWARD: Yes.

MR JOHNSON: Thank you. Secondly, at page 9 at the top there is a class of documents. There are two dot points saying, "The majority of these
20 documents are in the possession of the CSIRO Yarralumla. Currently in the possession of the DPP are the following documents prepared by Mr Cheney", and there is then a schedule. Are we to understand that the documents which were in the
25 possession of the CSIRO, which is said to the majority of the documents in category 4, are not in the three volumes; and, if so, are they in the room or are they still somewhere to be provided? I am conscious I am putting this in the form of a
30 question. It is really one directed to my right rather than straight ahead. Your Worship would understand that.

MR LASRY: They are in the room.
35

THE CORONER: I can't answer the questions, Mr Johnson.

MR LASRY: Can I just say so that my learned
40 friend knows that, as I understand it - Mr Woodward will correct me if I am wrong about this - any documents which can be described as documents used or referred to by Mr Cheney for the purpose of his report in this inquest are either
45 in the folders that have been handed over or in the room at the DPP. There are no other documents, for example at CSIRO, which are

relevant to this inquest which form any third category. They are either in the room or in the folders.

5 MR JOHNSON: Insofar as --

MR LASRY: Sorry, there is some electronic GIS material which was used in the creation of the electronic maps which are still being prepared.
10 Apart from that, that is the only possible exception.

MR JOHNSON: On page 10 under heading 5 there is a description of "material" and what is then listed
15 thereunder is "currently in possess of the DPP are the following". Are we to understand that there has been a complete production of all material under paragraph 5? I would take it that
20 your Worship's direction this morning is directed towards the production of all documents described in these various categories; is that the way in which the parties are entitled to interpret your Worship's order this morning? Just so there is some clarity, your Worship.

25 THE CORONER: Mr Lasry indicated that all the documents that were requested by counsel used by Mr Cheney have now either been provided or are in the office of the DPP. That is the order that I
30 make, all the requests that were made by counsel to all the documents, that I give directions that all those documents be provided.

MR JOHNSON: In paragraph 5 there is a reference
35 to those that are currently in the possession of the DPP. I again ask counsel assisting through your Worship whether there has been a further and complete production in relation to that description.

40

MR LASRY: They are in the folders.

MR JOHNSON: The three folders last night?

45 MR LASRY: Yes.

MR JOHNSON: Being documents that are going beyond

what is in the possession of the DPP. What is in the folders is what is in the possession of the DPP, as I understand the schedule.

5 MR LASRY: I think I need to give another explanation. A subpoena had to be issued for this material to be produced for the purpose of the proceedings. As I follow it, this schedule has been compiled on the basis of the categories set
10 out in that subpoena. To an extent it perhaps hasn't caught up with events. The schedule is accurate enough, but the category 5 to which my learned friend now refers, as I am instructed, are all documents that are now in the folders which
15 have been available for collection.

MR JOHNSON: Does that go beyond the items listed in paragraph 5 there, which clearly only come from the possession of the DPP and not elsewhere?

20 MR LASRY: All I can say is all documents that are in existence that fall within category 5 are in the folders or in the room - there weren't any other documents.

25 MR JOHNSON: As to paragraph 6, your Worship, "N/A" I don't know what that means, whether it means "not applicable" there are none. They do call for:

30 "dates, correspondence and documents brought into existence by counsel and solicitors assisting the Coroner relating to all meetings and telephone conversations with
35 Mr Cheney which relate to his assistance to the inquiry inquest in relation to the preparation of his reports."

40 It would be very surprising if there are none. I just raise that for clarification.

MR LASRY: "NA stands for "not any".

45 THE CORONER: Over and above the documents in category 5 presumably.

MR JOHNSON: Could I then return to the submission

I was putting. Could I hand up a written submission which was intended, if the issue arose this morning in relation to time for inspection. I have given a copy to counsel assisting. Parts
5 of the submission are, of course, now irrelevant because it is not before his Honour. I do apologise for the fact insofar as it is a reference to your Worship the term "respondent" is used, but that is just because of the limitations
10 of time.

THE CORONER: I understand.

MR JOHNSON: The steps in paragraph 2 are clearly
15 being undertaken so far as entry and order for service. We are told that all of the material has been provided.

I would move then to paragraph 3. We would submit
20 there should be a reasonable opportunity to inspect. That, of course, depends upon the volume of the material. Three lever arch folders is the starting point. A room full of documents not copied is the balance.

25 I would submit that a reasonable period would certainly incorporate a period of five working days - I will come to that - before cross-examination of Mr Cheney is to be
30 undertaken, certainly by those who were in the Supreme Court proceedings.

Paragraph 4 refers to Mr Roche. We apprehend that
35 there should be documents being prepared to comply with that part of the case. I will leave that to one side for the moment.

Paragraph 5 anticipated what is happening; namely,
40 that following the Supreme Court orders this morning, an application may be made to your Worship pursuant to the production of some documents for an early resumption of the hearing. In that context we would submit that a number of propositions are important. It is a matter for
45 your Worship's discretion but a discretion to be exercised judicially and in accordance with the law.

As to paragraph 6, we would submit firstly that the inquest does not presently stand adjourned to a fixed date. The question is: when should it resume? This is not an application to vacate a
5 hearing date. It is an application by counsel assisting that your Worship resume in what are some rather unusual circumstances that have affected this case in the last few weeks.

10 Secondly, it is not a case where the completion of the evidence of Mr Cheney may be followed immediately by the taking of the evidence of Mr Roche and such other witnesses as may be called after him to complete the taking of evidence at
15 the inquest. Following Mr Cheney's evidence, whether it is next week or the week after, it will be necessary for counsel assisting to apply to you to adjourn the inquest part-heard to 5 October to take the evidence of Mr Roche. That is an
20 important consideration.

Thirdly, and I just touch upon this, to the extent that issues of delay are raised, and I don't tarry on this, clearly it has been necessary to go to
25 the Supreme Court in relation to those matters. That has now occurred and we are now at the point which we are now at.

As to paragraph 7, there is ample authority for
30 the proposition that a refusal of an adjournment may constitute a denial of procedural fairness. Case management is not an end in itself. The ultimate aim of a Court is the attainment of justice and no principle of case management can be
35 allowed to supplant that aim. The cases that are annexed to the submission that your Worship has are the Central Sydney Area Health Service v Cooper, Kearns v Fair Trading Tribunal of NSW and the State of Queensland v. JL Holdings, which of
40 course was a case dealing with an application to amend pleadings and whether that should be allowed given the particular state of the case. Those propositions, I would submit, are entirely relevant to where we stand now.

45 I would submit that a reasonable opportunity extending insofar as the interest I represent

until next Thursday to inspect the documents,
three volumes of which we have copies of, a room
full of which we don't, and importantly, an
opportunity for your Worship to consider the terms
5 of Justice Whitlam's decision setting out the
requirements of procedural fairness ought to occur
before the interests that I represent is called
upon to cross-examine.

10 Does that mean that the inquest lies fallow in the
meantime? We would submit not. There may be
others who may wish to cross-examine Mr Cheney
next week. In addition, if there is any
non-sitting time, presumably counsel assisting
15 will be wishing in a most expeditious fashion to
ensure that the documents are provided at the
earliest opportunity with respect to Mr Roche and
that some work could be done to ensure that that
happens so that it doesn't happen at the 11th hour
20 before he comes to give evidence. Time could be
well spent next week in those circumstances.

We would submit there is no pressing reason that
is put for the application that is being put by
25 counsel assisting. It is essentially a case
management proposition. That is not irrelevant,
nor is the fact that Mr Cheney has been waiting
for a period. But, as submitted, it has been
necessary - at least in the last few weeks - for
30 that issue to be resolved by recourse to Supreme
Court proceedings.

I would submit what is proposed is an orderly way
for the matter to go forward. Precisely what
35 orders may be made ultimately by your Worship
clearly must await the making of submissions by
other persons who may wish to put their particular
positions. But I would submit that the position
that I am putting is consistent with principle,
40 with fairness, and with the orderly disposition of
this matter.

If it is assumed that Mr Cheney is pressed through
and cross-examination ended at the end of next
45 week, where would counsel assisting go from there?
They would ask you to adjourn to 5 October. It is
not a situation where your Worship can complete

the taking of evidence to finality. Therefore I would submit, in the unusual circumstances that affect this case where the Supreme Court has intervened and in circumstances where counsel
5 assisting assert all documents have been produced but opportunity for inspection of the three volumes has been limited, let alone the documents which we are now told are sitting in a room, there ought to be a proper opportunity for that to
10 occur. I would submit effectively allowing a period which would see my interest not being called upon to cross-examine until the 20th of September.

15 Again, I am conscious that other people may have other positions. I would submit that is the position for the interest that I represent, once again, in the unusual circumstances of this case.

20 THE CORONER: You are saying, Mr Johnson, that you, representing the territory, will not be in a position to cross-examine until the 20th?

MR JOHNSON: That is effectively what I am
25 saying - in circumstances where the Supreme Court, having held in effect that there has been a denial of procedural fairness with respect to the production of documents, there ought to be a proper and reasonable opportunity to inspect the
30 documents before being called upon to cross-examine. It is the other side of the coin. The mere production of the documents and pointing us in the direction of a room is a starting point, not a finishing point. I would submit that in
35 those circumstances the provision of the time I have indicated is what I would seek.

THE CORONER: Are you saying you need five days to look through three folders? You have a team of
40 people working with you, Mr Johnson.

MR JOHNSON: We are told there is a room full of documents.

45 THE CORONER: It is boxes, I think. I didn't understand it to be a room full

47

MR LASRY: I am sorry to interrupt but I can't let Mr Johnson keep saying, "A room full of documents". It is four boxes of documents. I might say in relation to Mr Johnson on that point,
5 these are documents that have been available since June. Mr Johnson is the one member at the Bar table who was here in October of last year when Mr Cheney first gave his evidence and he has not taken advantage of the opportunity since June to
10 look at these documents. This submission coming from - of all people - Mr Johnson really significantly overstates the degree of difficulty he is in, in my submission. But it is not a room full of documents.

15 MR JOHNSON: I accept four folders said to be more voluminous than what we have, some electronically stored. The proposition I would ultimately put is that as a matter of fairness there ought to be an
20 opportunity to inspect. I put my submissions to the Court.

THE CORONER: I understand. Do any other counsel wish to be heard? Yes, Mr Whybrow.

25 MR WHYBROW: Can I say at the outset that I don't have a team of people to assist me to go through these three folders of documents.

30 THE CORONER: How long do you need to go through three folders, Mr Whybrow?

MR WHYBROW: The rhetorical answer is: how long is a piece of string, because we have not seen them.

35 THE CORONER: No, I am asking you a question. You have the folders there. When did you pick up the documents?

40 MR WHYBROW: 10 o'clock. I have had a look over the last hour - probably the only person who has had an opportunity to have a look. I can indicate it involves hundreds of pages of handwritten notes, some not photocopied in a way that makes it
45 easy to skim through. It is scientific matters which need to be referred back to original reports and then cross-checked with other reports.

THE CORONER: How long do you need?

MR WHYBROW: I support the proposition of
Mr Johnson that a reasonable opportunity for the
5 interests that I represent to properly go through
this material in order to cross-examine Mr Cheney
would be the five days that Mr Johnson has asked
for. That is only having had an hour to just skim
the surface of these documents, your Worship.

10
There is, as I have indicated, handwriting that
refers to lots of different matters, no doubt
instructions need to be taken. It could be - I
don't know because I haven't looked at them - that
15 it involves scientific issues, matters of
expertise that need to take more detailed
instructions from.

Your Worship, in relation to at least one small
20 portion of the documents, it appears that there is
notes produced which have excisions from them. I
don't know whether they are - that is a matter
which I would seek to pursue with counsel
assisting just as an explanation as if there are
25 matters deleted and what is the nature of those
documents.

I don't know the document that Mr Johnson was
quoting paragraphs from. The index that I have on
30 volume 1 refers to "all working notes and
documents prepared or used by Mr Cheney both as to
the preparation of his various reports to the
coroner and in relation to his assistance to the
AFP and DPP and counsel assisting." That is two
35 documents.

It may be that the balance overlap in some
respects. It is indicated that two documents form
the set which are "all working notes and documents
40 prepared or used by Mr Cheney in the preparation
of his report".

One thing that has not been submitted yet and that
has been the subject of expressions by at least
45 Mr Pike to counsel assisting, and Mr Johnson
raised it in passing, is the fact that this is an
application to set a new starting time. Whether

it be next Monday, Tuesday or the following Monday, these are dates which had not been previously set aside in the timetabling for the inquest to sit.

5

These documents which are now being produced were asked for in various forms from July.

THE CORONER: They were made available in June.

10

MR WHYBROW: No, your Worship.

THE CORONER: The list of Mr Cheney's documents was requested in April and it was made available in June.

15

MR WHYBROW: Your Worship, with respect, that is not correct. A list of sources of information was provided in June. These materials in these three folders were never offered to be made available. Indeed, that's what we went to the Supreme Court to fight over.

20

THE CORONER: They were requested in August.

25

MR WHYBROW: They were requested in relation to --

THE CORONER: What date in August?

30

MR WATTS: The 17th.

THE CORONER: The 17 August. The 17th of August, that is when they were requested, Mr Whybrow. How long have you been involved in this inquiry?

35

MR WHYBROW: Since late March, your Worship. Which is another point, the reference to "Mr Cheney has been in existence since October of last year," that is a meaningless statement in the context, and many of the parties who are represented here, until the various reports are provided one is not in a position to be able to know what it is that one asks for.

40

45 The point I am making is that this has not been a timetable to which any here have been working towards. We, the various prosecutors in the

Supreme Court have, subject to not even knowing what the reasons are, it would appear, succeeded in the applications. As a result of that documents are being provided. Dates are being set
5 or proposed to be set now which involve setting dates at very short notice for numerous people whom, before these applications were needed, were never envisaged as being necessary.

10 Mr Pike has already indicated through correspondence with counsel assisting that there seems to have been no attempt to make any inquiries of the various counsel as to what their availabilities are. He, I understand it, has
15 significant difficulties next week.

My application is there should be a hastening slowly in this inquest. At this stage, after so many days of evidence, there appears to be no
20 argument put up by counsel assisting for the need for this evidence to be taken very quickly, in light of objection by various parties, other than it will get Mr Cheney finished.

25 Now if Mr Cheney is finished in time to get to AFAC and we could continue with Mr Roche, then I ask rhetorically: what is the loss? By hastening slowly, by allowing the parties the opportunity to properly look at these documents, then the only
30 countervailing argument is: Mr Cheney has been hanging around for 18 months, let's finish him next week rather than the week after.

THE CORONER: You don't believe that is a
35 compelling argument of itself; the fact that Mr Cheney has been available and has been giving evidence and will be giving evidence for a period of 12 months. You seem to be forgetting Mr Cheney's availability and his convenience as
40 well. Why do you dismiss that as something that is not of any consequence?

MR WHYBROW: I don't dismiss it. I am asking your
45 Worship not to dismiss the other side of the scales, which is the procedural fairness aspects which involve us having a reasonable opportunity to look at these documents before Mr Cheney is

cross-examined. All I am asking is that it is not a one-way street. I am not dismissing it.

5 THE CORONER: Documents that you requested on the 17th August and other documents that have been available to you, or to those who are in this inquiry, since October last year.

10 MR WHYBROW: Your Worship keeps raising the fact that it wasn't asked for before the 17th of August. Orders were made this morning prohibiting your Worship proceeding unless and until - well prohibiting --

15 THE CORONER: Until the documents have been provided.

20 MR WHYBROW: We don't know what the reasons behind those orders are at this stage. That alone - and in order to perhaps eliminate any possibility of what happens in the interim being inconsistent with the reasoning of Justice Whitlam - would be another factor that your Worship should consider in the submissions put by Mr Johnson and adopted
25 by myself --

30 THE CORONER: You might be taking a risk, the way that you are pressing me to proceed as well, Mr Whybrow. What if the reasons that his Honour gives, what if somehow the documents are limited; if his Honour does not allow you access to all the documents? What I am doing now is giving a direction that everything that you asked for be
35 delivered. What if somehow his Honour says you can have this category of documents but not that category of documents in his ultimate reasons? How is that going to assist you?

40 MR WHYBROW: I wouldn't expect your Worship to be asking for the others back.

45 THE CORONER: I am not. That is why I am giving you all the documents now. Everything you asked for you are getting.

MR WHYBROW: All I am asking for is a reasonable opportunity to examine them, which in my

submission is going to take a week.

THE CORONER: I will give you that, Mr Whybrow.

5 MR WHYBROW: Thank you, your Worship.

MR WATTS: There seems to be broad agreement at
the Bar table that a reasonable opportunity should
be allowed for documents to be inspected. The
10 issue seems to be what is that reasonable time.
Can I ask your Worship to look at it in terms of
say the balance - if this was an application for
an injunction what the balance of convenience
might be. It would be my respectful submission
15 that, whilst there is a compelling reason to have
Mr Cheney's evidence given as soon as possible, I
haven't heard from learned counsel assisting a
compelling reason why the matter must start on
Tuesday next week.

20

I am conscious of Mr Cheney's convenience, but
what hasn't been put by counsel assisting is the
nature of any inconvenience that Mr Cheney might
suffer if the matter were delayed for a limited
25 time after Tuesday. True it is he has been around
and involved in these proceedings for some time,
but nothing has been put that would require him to
start on Tuesday rather than, say, later in the
week.

30

The request for the documents was made three and a
half weeks ago. They have been supplied this
morning. Personally, I have not yet received a
bundle of documents. I have not received them. I
35 have not seen them. A number of counsel in this
matter, including myself, Mr Pike and Mr Craddock,
are in Sydney. They remain in Sydney today. So
they, I know, have not seen the documents yet.

40

There are over 250 documents. It is not simply a
case of skimming through them. To do a proper job
on behalf of our respective clients, they must be
read, absorbed and perhaps instructions sought on
some aspects of them. Now, until we have had an
45 opportunity to see them, we can't say whether
instructions will be needed.

47

I am somewhere in between Mr Johnson and counsel assisting. Your Worship, I would be in a position to proceed if I had an opportunity to cross-examine, say, next Thursday or Friday. That
5 would give me an opportunity. I would have to come to Canberra earlier in the week. Like others, this date has been thrust upon us. It is not a date we have planned for. Certainly from my own point of view I have commitments for next week
10 which I now am going to have to change. I accept that is the nature of being a part of this inquiry. No-one is seeking an adjournment. It is a matter, as has been put, of fixing a new date. I would ask your Worship, for a number of reasons,
15 including the time to absorb the documents, if personally I could be not required to cross-examine Mr Cheney until Thursday of next week.

20 Mr Pike has asked me to mention his position this morning. He has a long-standing inquest listed for the whole of the week. He would be in a position to cross-examine on the following Monday, the 20th. As I understand Mr Craddock's position,
25 he also has some significant personal diary difficulties but would also be available on the 20th.

I adopt what Mr Johnson says that, if a little
30 flexibility is allowed in terms of seeking to meet the convenience of counsel and in giving them appropriate time, the matter will still finish in a timely manner. In my submission, there is adequate time between now and when Mr Roche is to
35 give evidence for Mr Cheney to be completed if some flexibility is allowed. That would serve the interests of the parties and provide appropriate procedural fairness in my submission. From my point of view, later next week rather than
40 earlier. May it please your Worship.

MR LASRY: I know Mr Walker wants to make a submission. I wonder if I might make a suggestion that may or may not be of assistance. If it
45 isn't, then I regret the time wasted.

In view of the submissions that have been made it

seems to me it might be useful to do this: to perhaps relist this matter for mention at, say, 11.30am on Tuesday morning, by which time presumably the parties will have had an
5 opportunity, particularly people in the position of Mr Watts, to look at the documents and to be perhaps better informed as to the impact of those documents on the preparation of Mr Cheney's
10 cross-examination and rather than having to guess be in a position to give an informed submission to your Worship as to how much further time they need.

15 It may be by then that some of them, perhaps all of them, will have assessed the documents and be in a position, for example, to proceed that afternoon. It may be that another day or so is legitimately required once they have had a chance to examine the documents.

20 It may be that the assessment of the situation is able to be made more accurately then, than to go on with a debate now when most of the counsel making the submissions haven't had the opportunity
25 to look at the documents which have just been produced. I say that with the caveat that the boxes of documents of course have been available now for four months. I make that suggestion before Mr Walker makes his submission to see
30 whether that mightn't be a better way to proceed.

MR PHILIP WALKER: Your Worship, may I stress the submission from Mr Lasry satisfies in part my position. I have been in court since 9.30. I
35 haven't seen the folder of documents. I was personally going to suggest Wednesday, because it might just be possible that we would have the benefit of his Honour's reasons which might be available on Tuesday. I am not going to die in a
40 ditch over Tuesday or Wednesday, your Worship.

Otherwise, had Mr Lasry not have said that, I broadly would have said my best estimate would have been five days. That is without seeing any
45 of the documents.

THE CORONER: What do you say, Mr Johnson, about

having an opportunity to have a look at the documents and then mention it again on Tuesday?

5 MR JOHNSON: I think certainly the opportunity to inspect is a sensible course because what I am putting really is based on the fact that there is material which includes handwritten notes et cetera, and knowing from experience in many other cases that it is simply not a matter of
10 flicking through them and one needs to make sure there is a reasonable period. One would be better informed having had an opportunity to undertake that task to some extent.

15 I would ask this personally: that if it is for mention on Tuesday it be on the basis if there was any cross-examination to proceed, it should not be before next Wednesday at least. Mr Watts has expressed --

20

THE CORONER: Thursday.

MR JOHNSON: Yes.

25 THE CORONER: I am sure that could be accommodated.

MR JOHNSON: There are people who weren't in the Supreme Court proceedings - Mr Erskine,
30 Mr Archer - I am not sure if they are in a position to cross-examine in such a way that if they go up the list some of these issues may not be such a difficulty. The issue is perhaps of the most pointed type of those who were in the Supreme
35 Court proceedings. I don't know if Mr Erskine is here - yes, I see he is here. Perhaps I couldn't miss him. Perhaps he could indicate his position as he wasn't involved in the Supreme Court hearing.

40

THE CORONER: You mean go first?

MR JOHNSON: I thought part of the answer to this may be through an identification of an order of
45 questioning. I raise that as a possibility perhaps in the same spirit as Mr Lasry has to see if there is a practical compromise position.

THE CORONER: That does make a lot of sense.
Mr Whybrow, would you be agreeable to that? If
the matter was mentioned again on Tuesday, that
would give you an opportunity to have a quick
5 flick and have a more detailed look at the
documents.

MR WHYBROW: Yes.

10 THE CORONER: It may be that a lot of that
information might deserve a quick flick, but some
of it might require more detailed examination.

MR LASRY: I agree on the basis we would inform
15 Mr Cheney he wouldn't be required before
10 o'clock on Wednesday.

THE CORONER: Yes. If there was to be any
cross-examination then it would start at
20 10 o'clock on Wednesday, and Mr Watts - not for
you, though, until perhaps the Thursday.

MR WATTS: Thank you.

25 MR ERSKINE: I don't think I could seriously argue
anything against changing the order. It wasn't
what we were hopping to happen.

THE CORONER: None of us were.
30

MR ERSKINE: I can't venture a serious reason as
to why Mr Archer and I couldn't take a different
position in the order of cross-examination of
Mr Cheney for the reasons that have been advanced.
35 It probably goes with the turf not having taken
part in the application in the Supreme Court.

May I please throw into the mix of what my friend
Mr Watts has called "balance of convenience"
40 issues: there is a great deal of collateral damage
going on at the moment to people who have nothing
to do with the inquest by the fact that we
continue to play with great respect, fast and
loose with dates.

45

In June your Worship set August and October
broadly speaking as being the periods when the

inquest would sit. I, along with probably every other counsel of the private bar, has accepted briefs or listed existing matters for hearing in September, in good faith based on the assumption
5 that we would proceed in that way.

I hasten to say I accept everything that has occurred has been largely outside of your Worship's control as to what has happened.
10 It is having a great deal of collateral damage. I can just by way of anecdote say that on Wednesday this week I had to say to a client, who I have been acting for for 3 and a half years that I could not appear for him in all probability on
15 Monday, Tuesday and Wednesday of next week for a matter set down in the Federal Court. That matter cannot be adjourned. He is now having to deal with new counsel.

I am sure that my friends Mr Watts, Mr Craddock and Mr Pike can present your Worship with similar stories. This is sometimes called the convenience of counsel. With great respect, that is nonsense. It is the convenience of other people for whom we
20 act in other matters. At the very least, I need to put on the transcript on their behalf a concern that their interests in this allocation of dates are simply not being considered by the submissions you have heard so far.
25

30 While I accept it will not be a decisive matter, in my submission, it is something that needs to be borne in mind and that we can't simply wave a hand and say, "Let's make it Wednesday rather than
35 Tuesday" or whatever it may be. There are a lot of other considerations that have to take place. In due course all of us are going to have to explain to clients of different types and degree the consternation that they have with what they
40 thought was settled dates with settled counsel now have to be upset. Having said that, next week I have abandoned those three days. We can do next week.

45 May I just add one other matter to the mix, which is that the focus has been upon when people can cross-examine. There is also another issue, and I

make it as a hypothetical involving my friend Mr Johnson, that some of the questions he may ask would be on issues that we would want to object to. I am not saying that he will. I am saying
5 that our interest, the interests of the people that I represent extends beyond cross-examination on our part to include taking careful note of the evidence that is led or cross-examined on by other parties.

10

The solution to that may have to be that if, for example, Mr Johnson cross-examines on a day on which I am not available, that if on examining the transcript there is some matter to which we would
15 have wanted to object had we been there, then it would all have to be subject to a hypothetical later objection, which is not terribly satisfactory. But it may be the only practical solution if we are going to keep going in
20 attempting to find hearing dates in September, which we will obviously not be able to find hearing dates in September that will suit all of the requirements that counsel have. It is going to be an impossibility, particularly listening to
25 the last 15 minutes of the debate because at times when I am not available other counsel are and vice versa.

If your Worship were prepared to accept that, if
30 counsel weren't available and on examination of the transcript they wanted to make some objection, we have some procedure to put it at some stage or other after the event and have your Worship consider it then. That may be the only way to
35 deal with that issue. I don't know whether I have explained that terribly well.

THE CORONER: I think I have understood what you have said, Mr Erskine. It has been difficult for
40 me to try to run this inquest. My preferred position was always to start and to just keep on going until we finished. I am sure that would have been the preferred position of everybody involved in this. That way everybody knew we were
45 sitting from Monday to Friday on this. As you say, it hasn't been possible. It will be impossible to try to accommodate every counsel's

availability.

I can only be directed or guided by those principles so far. If it ultimately means that
5 this coronial is going to be constantly adjourned because counsel is not available, then that is not a practical situation either. I cannot possibly operate like that either. I know that is not what you are proposing anyway.

10

I think what Mr Johnson did suggest is reasonable. If somehow counsel can, between themselves, decide on an order that takes into account your own availabilities, then that seems to be the most
15 sensible way to proceed. I don't have any preference as to who goes first or who goes last. I understand the difficulty you have.

MR ERSKINE: May I in that context ask if
20 your Worship was amenable to the rather badly expressed suggestion that, if counsel on a particular day don't happen to be available because of prior commitments they can't get out of, your Worship would entertain any objections
25 post facto?

THE CORONER: That causes difficulty, though, if you say we have to bring Mr Cheney back at the end of October because the only date you were
30 available is at the end of October.

MR ERSKINE: It wasn't so much bringing him back; it was a question of at some convenient point we had a half hour - it may never arise at all. If
35 it was necessary to take objection to a question and answer that hypothetically Mr Johnson asks that we would have wanted to object to at the time, it would simply be on the basis that, if your Worship found some substance in our
40 objection, that question and answer might be disregarded.

I wasn't suggesting we have to bring Mr Cheney back to deal with it. It was simply a question -
45 perhaps more precisely your Worship is accepting all of the evidence subject to any objection that might have to be taken after the event - which may

never arise. It may be an entirely theoretical problem that may never see the light of day.

5 THE CORONER: I don't know how practical that is. It does have some merit, I suppose.

10 MR LASRY: In a sense, as I follow it, it is intended to be on Mr Erskine's behalf the opportunity, in effect, to reserve a right to subsequently make an objection on the basis for some reason the evidence is of a category that you shouldn't consider, or there would be some other reason why the evidence can be impugned. We don't see any problem with it. I suspect those kinds of arguments, perhaps not quite like that, but similar to that, will occur in the final submissions.

20 THE CORONER: That is so.

25 MR LASRY: I might say, not that we are going to adopt Mr Erskine's position, but we will be listening for the sort of evidence that might fall into that category so at least we will have some idea that it might be evidence in which he and Mr Bret Walker, if he is still his leading counsel, will be interested in.

30 THE CORONER: I will allow you to do that then, Mr Erskine. As I keep saying, this is a proceeding where the rules of evidence and procedure do not apply. I will allow you to take that course should the need arise for you to do that.

35 MR ERSKINE: Thank you, your Worship.

40 MR HARVEY: Could I rise from the counsel interchange bench?

THE CORONER: The second stringers, I think.

45 MR HARVEY: I seek your Worship's leave to appear in the stead of Mr Craddock. I don't appear for him, but for the clients who he represents.

THE CORONER: Is this for Mr Craddock or for

Mr Petty?

MR HARVEY: Indeed, I understand a number of
counsel have risen from the interchange bench.
5 Perhaps that is a difficulty in itself.

My name is Harvey, anyway.

10 THE CORONER: Yes, Mr Harvey.

MR HARVEY: I seek your leave just for the limited
purpose to appear today to continue the
representation of Mr McRae and Ms Arman.

15 THE CORONER: You have that leave, Mr Harvey.

MR HARVEY: Could I simply say, we would adopt the
submissions of my learned friend Mr Johnson
essentially to what he has put to you this morning
20 and basically make three short points perhaps in
amplification or elaboration of some aspects of
what Mr Johnson has said.

The first is, there is plainly a need to see his
25 Honour's reasons. His Honour's orders, as you
will have noted from the document Mr Johnson
handed up, are expressed with an economy of words
that may leave some uncertainty as to exactly what
his Honour intended to convey to the parties as
30 being the real operational ramifications of his
Honour's orders. I don't wish to engage in a
debate on that, but plainly in my submission there
is a need to see his Honour's reasons to see how,
for example, his Honour has treated submissions
35 that have been made in the course of that
proceeding going beyond access to documents but
into questions such as "what is a reasonable time
to be accorded" and whether principles of
procedural fairness impact on those matters.

40 The second point is again that question of leave
for further time to identify the documents to see
what they cover and what needs to be taken by way
of instructions from one's clients.

45 We are indebted to counsel assisting for the list
that they have provided. I have seen it for the

first time today; others have seen it perhaps
earlier than that. It appears to be a
comprehensive list of Mr Cheney's documents. It
is, of course, not a verified list of documents.
5 One doesn't suggest for one moment that that is a
defect to compliance. What it does mean is that
there needs to be some communication with counsel
assisting perhaps directed towards the
instructions or inquiries that were made both of
10 Mr Cheney and of the CSIRO to determine what
searches were in fact made to locate and identify
particular documents.

Plainly it is not appropriate to try and turn what
15 has helpfully provided to us by counsel assisting
into a process of electronic discovery.
Nonetheless one notes that Mr Cheney was engaged
through the consultancy arrangements with the
CSIRO and must have - and it appears from this
20 list did have access to electronic recording
devices and perhaps indeed the network system of
the CSIRO. All I am foreshadowing is that there
may be time saved by raising with Mr Lasry exactly
what searches or inquiries were made in order to
25 produce this particular list of documents.

In respect of another aspect of the taking of
instructions - the taking of instructions may
involve a need to consult with other experts to as
30 to the material produced. In this respect, I note
that your Worship has indeed dealt to some extent
with that potential. The matter was raised with
your Worship by I think Mr Petty on 9 August.
Your Worship noted at page 6656 of the transcript
35 that there may be a need for parties and their
counsel to have access to experts and to be able
to obtain a second opinion from experts in respect
of Mr Cheney's material.

40 Again, that simply means that there must be an
adequate opportunity, in my submission, to take
instructions about the documents and to determine
whether there is a need to seek further advice or
further assistance from experts who may be
45 involved ultimately in producing evidence on
behalf of the parties that we represent.

47

The final point is really a point that was covered by Mr Watts on Mr Craddock's behalf because, as I advised, Mr Craddock is not in a position to inspect the documents immediately. He would not
5 be available next week. That is just a consideration to be taken into account with all of the other considerations that your Worship has to take into account in determining matters of timetabling, the order of appearances and so
10 forth.

Mr Craddock would take strips off me, I am sure, if I didn't point out to your Worship that he is not available until the 20th. Other than that,
15 those are our submissions.

THE CORONER: Thank you, Mr Harvey. Mr Archer?

MR ARCHER: I should indicate that I am happy to go first. I would like to say I can go for three days but I will more likely go three minutes.
20

THE CORONER: On that basis I think we are probably agreed that we will adjourn until Tuesday
25 at 11.30 for mention --

MR LASRY: Mr Woodward has some matters to raise in relation to the list because he was more involved in it.
30

MR WOODWARD: Just for the information of parties and to avoid any later requisitions, it might be useful to briefly explain as I understand it how the list first came to be developed. It was
35 developed for the purpose of providing a list of documents that were produced in response to the subpoena that was delivered to the DPP as part of the Supreme Court proceedings.

Part 1 of the list, which is pages 1-4, is essentially the documents that were pulled together for the purposes of responding to that subpoena, that being a subpoena only on the DPP and not on the CSIRO and Mr Cheney.
40

Essentially under the heading "part 1", as disclosed there, is the following: "List of
45

documents relating to Phil Cheney in the possession of the DPP and counsel assisting the coroner". Those were the documents that were in possession of the DPP and counsel assisting.

5

It is divided into each of the four categories - sorry six categories - that appear in Mr Craddock's letter. It is notable in that respect that there are some documents under category or paragraph 6, for instance, which aren't under category 6 in the second part which, as the heading discloses, is the following: "List of documents from CSIRO Yarralumla relating to Phil Cheney". That second list identifies documents that respond to the six paragraphs that were, at the time the subpoena was responded to, at CSIRO.

Just briefly going back to part 1, as I understand it, all of the documents that appear on pages 1-4 are in the three folders. Perhaps by way of slightly further explanation, that includes some of Mr Cheney's field notes because Mr Watts had requested extracts of Mr Cheney's field notes. By the time the subpoena was issued there were some of those in the possession of the DPP, and they made it as part of the bundle that went to the CSIRO. The balance of his field notes are in the original field notebooks which are in the room.

30

The second set of documents are those that start on page 5, and these have been sourced out of CSIRO in Yarralumla. Category 2 "draft reports" I will return to in a moment. Category 3 lists "Correspondence including emails". Those had been collected by the time the subpoena was responded to and in any event are in the folders. That deals with pages 6-9.

40

The documents noted on page 9 are the source materials and are in the room. That goes through to page 10. They are the category 4 documents.

45

The category 5 documents on page 10 - again, those had been collected, as I understand it, by the time the subpoena was responded to and are in the folders. Mr Cheney, of course, wouldn't have had

any documents that fitted into section 6 because they are our documents, not his documents.

5 And, finally, part 3 is a detailed listing of the draft reports which are the draft reports that are referred to on page 5 as "at CSIRO Yarralumla". So part 3 constitutes a detailed listing of that single bullet point under heading 2.

10 That's as I understand it, your Worship, what that list explains. I am not able to say whether the documents are held precisely in an order that is consistent with this list or not. I suspect that certainly those in the folders probably are, but
15 those in the room are just in the boxes they were in when they were brought from CSIRO.

Finally, just to clarify: the only documents that aren't yet in the room are some very large - large
20 in a sense - computer files of geographic information system data and maps that were the source materials for Mr Cheney's slide presentation, satellite images and so on. They take up an enormous amount of space on a computer.
25 They are currently in the process of being burnt onto a DVD because they are too big for a CD. One of them is sitting in the room ready to be looked at. The other two are being done as we speak and should be in the room progressively, probably
30 partly today and possibly the rest on Monday.

I suspect these are the sorts of documents that won't be of great interest because they are highly technical GIS data. They will be available for
35 inspection, but I am not sure what use they will be to those who requested them. That's as I understand the position.

40 THE CORONER: Thank you, Mr Woodward.

MR WATTS: In the response to the request I made for documents - there was a letter dated
2 September with the documents that were sent to Mrs Prosser for me to collect in which it was
45 mentioned that some were missing. They were some research team notes for 12, 15 and 16 January and there was reference to another notebook. The

letter indicated that Ms Drew was checking for these documents and presumably she would report back. I have not heard anything further. I am inquiring through you, your Worship, and counsel assisting, whether those documents are in -
5 presumably they are. I would ask that I can have copies of them.

MR WOODWARD: To some extent, Mr Watts' request was overtaken by the events of last week and those documents, I suspect, although I don't know this for certain, are in the room. They will be field notes in little booklets that these scientists carry around with them. Those little books are in
10 the room. Whether they actually are the ones being sought I don't know. I can make some inquiries of Ms Drew and speak to Mr Watts separately.

20 However I should say it is not intended, depending on the way in which the requests come in, that the DPP will be undertaking large copying exercises on behalf of parties. Requests will have to be made and dealt with on a case-by-case basis depending
25 on how much is required and how much is sought out of that material that is in the room.

THE CORONER: And that information can be accessed now in the offices of the DPP?

30 MR WOODWARD: It can.

THE CORONER: So after we adjourn, if counsel wish to follow you over to the offices of the DPP, they
35 are welcome to do so?

MR WOODWARD: Yes.

THE CORONER: And the computer is available and
40 ready to go?

MR WOODWARD: Yes, I believe it is.

THE CORONER: And the boxes are available?

45 MR WOODWARD: And the boxes are there.
47

THE CORONER: Counsel should take that opportunity and that invitation to inspect the documents at the DPP.

5 On that basis we will adjourn for mention to Tuesday, the 14th of September at 11.30. Depending on what counsel wish to submit at that time, the intention is that, if the documents have
10 Mr Cheney at 10 o'clock on Wednesday. Mr Cheney is not required to attend on Tuesday. And for Mr Watts, your cross-examination will be not before Thursday.

15 MR WATTS: Thank you, your Worship.

THE CORONER: Yes, thank you, gentlemen. The Court will adjourn.

20 **MATTER ADJOURNED AT 12.42PM UNTIL TUESDAY,
14 SEPTEMBER AT 11.30AM.**

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TRANSCRIPT OF PROCEEDINGS

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CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

10

MRS M. DOOGAN, CORONER

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CF No 154 of 2003

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CANBERRA

25

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
30 ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

35

DAY 75

40

Tuesday, 14 September 2004

45

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[11.30am]

THE CORONER: Anything to report, Mr Lasry? Have you had any contact with counsel or Mr Johnson?

5

MR LASRY: No. We have had some brief discussions in the last minute or so, so I will let my learned friends explain that to you.

10 MR JOHNSON: Perhaps if I could lead off. I think where things stood last Friday was the possibility that Mr Archer and Mr Erskine might lead off tomorrow morning. If that could in fact occur - Mr Erskine is here, I see - Mr Watts and I have
15 had some discussions. Mr Watts would be in a position to commence at 2pm tomorrow, and I would be in a position to follow him.

I think that is where our discussions have ended.
20 As to Mr Walker and Mr Whybrow, I haven't talked to them in any detail.

I understand Mr Pike and Mr Craddock are both in the situation that they would not be available
25 this week. I think Mr Pike may have made some contact with your Worship.

THE CORONER: I have had some correspondence from Mr Pike to that effect, that he is not available
30 until Monday.

MR JOHNSON: Certainly so far as a number of us, leading up to Mr Watts and myself, will certainly be in a position to proceed tomorrow and Thursday.
35 If that takes us into Friday as well, then perhaps I will leave it with Mr Walker and Mr Whybrow to indicate to you their position.

THE CORONER: Thank you, Mr Johnson. Yes,
40 Mr Whybrow?

MR WHYBROW: Your Worship, I am not going to be in a position to cross-examine, I would not think, before Friday. There are a number of issues that
45 I would like to agitate at this stage. Firstly, the documents in the room, I personally have not had a chance to look at those. My client gained

access this morning, attempted yesterday but there were difficulties. He has had a chance to go through two of the five boxes. Just from what I have been instructed this morning, the contents of some of that material is quite significant not only to Mr Cheney but to the inquiry, including all of the field notes Mr Cutting took, for example.

10 Your Worship might remember Mr Cutting's relevance to date has been of a particular photo on the 8th at Bendora. His field notes apparently contain references to falling timber and reasons why people were pulled out on 8 January, which are obviously central to part of the inquiries that have been made. There is Mr Cheney's field notebook for 18 January, which doesn't seem to be replicated in the three folders but is in the room of the DPP. Obviously have not had the opportunity to go through a lot of that, which is of course crucial to the events of the 18th.

25 There seems to be much more footage taken by Channel 9 available going back to 11 o'clock on the 18th, observations from Uriarra forest and things of that nature. The footage that has been made available so far starts at Duffy as the firestorm is about to hit.

30 THE CORONER: In the afternoon.

MR WHYBROW: Yes. That sort of video footage of the fire spread from earlier in the morning obviously could be very relevant to Mr Cheney's evidence as to what he has already given evidence on the fire spread but also his predicted fire spread and perhaps beyond.

40 That is in relation to the time to have a look through all of the material. So in that sense we haven't had an opportunity to do that. But the bits that we have seen would appear to be both crucial to Mr Cheney's evidence and indeed to your inquiry in general.

45 In relation to the documents in at least folder 1 that I have had a chance to go through with some

better clarity, there is a document which is document number 2 of item 6 of part 1 which are some notes apparently taken by Ms Drew of meetings involving Mr Cheney; one meeting involving
5 yourself; and another involving other members of the investigation team. It would appear that there are reasonably large sections of those notes that have been, for whatever reason, excised or covered up. Now, it may be that it is thought
10 that those parts of the discussion didn't relate specifically to Mr Cheney. Given that he is a witness in these proceedings, any presence and discussions involving your Worship and counsel assisting, I would submit, is prima facie within
15 the call and material that I would like the opportunity to look at.

I may be corrected, because as I have said I haven't had a chance to go through all of the
20 documents, but I have not been able to find at any rate any documents relating to how Mr Cheney's second report on the genesis of this fire spread model came about. No briefing notes, no requests for it, no offers to do it or any discussions or
25 emails between counsel assisting - there is obviously a lot related to his engagement and the structure of what his report would be for the first report. There doesn't appear to be anything in relation to what at least the ACT's position
30 was. I was one of the prosecutors seeking the wider range of documents, but in relation to the narrow range, it seems that there were none. As if Mr Cheney got up one morning and just produced this report. If that is the position and if the
35 assurance is that there are no further documents, then so be it. It would just appear that I have not been able to locate any documents on that area.

40 THE CORONER: I am sure you can be given some assistance and that can be clarified, Mr Whybrow.

MR WHYBROW: Thank you, your Worship. Finally, and I won't expand on this - perhaps my learned
45 friend Mr Walker may - although I seek some indulgence in order to see what is in the rest of those documents in the DPP and indeed go through

them properly, there is also the situation of the documents we have seen relating to Mr Cheney give some more flesh to the extent of his involvement in the investigatorial role in the inquest and indeed as your Worship's expert, although not appointed pursuant to section 59.

In the Supreme Court there was some debate as to the significance of Mr Cheney in particular and to a lesser extent Mr Roche's position as a section 59 witness as opposed to, as it seems to have been conceded, that he wasn't appointed under section 59. Although we don't have the reasons, it would appear he is in no different position to any other witness.

Given the extent of his involvement to date, and from some of the documents we have seen for the first time this week, in my submission it would be premature for us to proceed to cross-examine Mr Cheney without knowing the precise status, as Justice Whitlam may make some significant comments on. It could be that he is required to come back again, or there might be other applications that might need to be made if we start and there are particular comments are made about his status in the inquiry based on the arguments made in the Supreme Court.

For my part, my submission is that I not be required to cross-examine Mr Cheney certainly this week, and that indeed it should not be until the reasons of Justice Whitlam are published that Mr Cheney should come back to give evidence. I would also seek firstly an assurance that there are no other documents relating to the genesis of the fire spread report and that those excised portions of the particular document that I referred to be produced. Thank you, your Worship.

THE CORONER: Thank you, Mr Whybrow. Yes, Mr Walker?

MR PHILIP WALKER: Your Worship, I thought I might be in a position to cross-examine Mr Cheney on Friday. I have been through some but not all of the documents. But in the course of examining

those documents, your Worship, there is one which I would like some further information on, frankly, before I am in any position to cross-examine Mr Cheney.

5

You might recall, your Worship, that I asked on the 27th of April this year for some indication of where your Worship actually went while on a view of the area. You indicated that you would provide me certain information. That information was duly provided and became [DPP.DPP.0006.0189]. That document appears to be an expurgated version of some notes taken by Mr Cheney.

15 The document in question within the notes that have been disclosed to us is headed "Notes on field trip to areas burnt by McIntyre and Bendora fires, 20 August 2003 by NP Cheney". Present at that meeting was yourself, your Worship, Mr Lasry, Mr Roche, Ms Cronan, Ms Drew, Mr Cheney, Mr Sean Cheney and Mr Peter Hutchins.

About 5 or 6 pages in on that document under the heading of "stop 6. Wombat Road" is a paragraph which reads as follows - I appreciate your Worship might not have it immediately to hand:

"Discussion included the difficulty of fire suppression in tall alpine ash forest around 75 years old. The fire line construction required chainsaw operators skilled ... even for experienced tree fallers."

That comment which seems to be absolutely central to the issue of the response on the night of the 8th - if I understand it correctly - was not provided in the notes which were provided to me and was clearly the subject of some conversation amongst the parties I read out who were a party to the view on the 20th of August.

I would like to know first of all why it was that that material was not provided given its obvious relevance to the 8th of January and a central issue in the inquiry.

Secondly, I would like to know from your Worship

what your recollection or understanding is of what you were told on that trip so that I might have some idea what you have already been informed about an issue which is critical not only to
5 people directly involved such as Odile Arman but, as it seems to be counsel assisting regularly indicating questions about whether Ms Arman was sufficiently well trained, an issue which might well be shot up the line, so to speak, to my own
10 client.

I would then be in a position to more effectively cross-examine Mr Cheney and do so with the knowledge of what your Worship has been told by
15 Mr Cheney outside the Court room, something of which I am not presently aware.

Furthermore, to take up a point which Mr Whybrow raised, it is the case that there was some
20 consideration by his Honour as to the status of Messrs Cheney and Roche and the question of whether they were in truth section 59 appointees under the Coroner's Act. Whilst we will not know until we see his Honour's reasons, having been
25 present for the whole of the case in the Supreme Court, I think it can fairly be said that his Honour had reached the view quite firmly that they were not section 59 appointees. Whether section 59 provides any protection or not is something
30 that might be the subject of argument. But, as it would appear from what his Honour said in the course of argument, these gentlemen hold a status no different to any other witness and yet without knowing what they have said, they have clearly
35 made some comments to your Worship which potentially impact upon my client. I frankly do not know whether they do so adversely or, for that matter, whether they do so beneficially. I would like to know that before I am required to
40 cross-examine Mr Cheney.

That is my present position, your Worship. One, a request for some indication of what that material was; and, two, in my view, it would be appropriate
45 for the cross-examination of Mr Cheney to proceed only after his Honour's reasons have been made known. Those are my positions, may it please.

THE CORONER: I will tell you now, Mr Walker --

MR LASRY: Can I just intervene before
your Worship goes any further. In our submission,
5 it wouldn't be appropriate for your Worship to
respond to an inquiry about whatever recollection
you may have of the trip with Mr Cheney.

10 These are, of course, matters that can be raised
with Mr Cheney in the witness box. He was the
person who prepared the record of what happened.
As your Worship knows and as I recall, he was the
person who in effect led the field trip and has
15 produced a record of it. It is not appropriate,
we are not now in an American court and certainly
not in a military commission where counsel for a
party can interrogate the Tribunal. I would urge
your Worship, and indeed my submission would be
20 that the appropriate manner in which Mr Walker
should raise these issues is to raise them with
Mr Cheney. He was present and he made the note.
That will be the evidence.

25 What your Worship decides to say ultimately about
what recollection you have of that trip and to the
extent to which it is relevant to findings that
you might make is obviously a matter for the
future. It is certainly not something that should
stand in the way of Mr Walker proceeding to
30 cross-examine Mr Cheney.

THE CORONER: Yes, thank you, Mr Lasry.

MR LASRY: Perhaps, seeing I have intervened at
35 perhaps not a convenient time, I might respond
briefly to Mr Whybrow.

Mr Whybrow's initial position was he wouldn't be
in a position to cross-examine Mr Cheney before
40 Friday. In my submission, that should be the day
on which Mr Whybrow commences. We don't accept
that it is necessary to await the reasons of the
trial judge in the Supreme Court proceedings. His
Honour was aware that people involved in this case
45 were anxious to get on with the evidence. His
Honour chose to give, as I hope I put it neutrally
on Friday, an economical result which frankly

might have been of a bit more assistance than it was at that time, and produced a number of inquiries both from Mr Johnson and Mr Chillcot who was there representing the DPP. There was nothing
5 there in any of the proceedings on Friday, at least in its conclusion, which suggested that your Worship should not proceed with the matter until the reasons were given.

10 The significance of the status of Mr Roche and Mr Cheney as appointees under section 59 or not - I might be misinformed about this - it seems to me for present purposes not carrying much
15 significance. They are witnesses and they are able to be called as witnesses. Whether they were appointed under section 59 for present purposes doesn't seem to me to be of particularly high significance.

20 Your Worship, otherwise I might say that we don't propose either to be, as it were, interrogated and information given and explained in relation to the documents. The documents have been sought. The documents have now been provided. If there are
25 issues to be raised - for example, the circumstances in which Mr Cheney came to produce his amended report - and that's not evident from the documents that are in the room where they are being inspected or not evident from the folders,
30 then Mr Cheney can be asked about the circumstances in which he came to produce that report. We don't propose now to respond to interrogatories that occur to my learned friends in the course of their inspection of the
35 documents.

I might just add, the timetable, which is a combination of the submissions of Mr Johnson, is suitable to us. We can have Mr Cheney here of
40 course periodically tomorrow - Mr Watts hasn't as yet made his submissions - I was anxious to raise the matters I did at the point at which I rose.

MR WATTS: Mr Johnson has made my position clear.
45 I will be in a position to proceed at 2 o'clock tomorrow. But I just want to raise Mr Craddock's position. He rang me this morning and asked if I

could indicate to your Worship that at the moment he is part-heard in a case in Sydney. He did have some commitments next week which he has now altered. He is available next Monday, Tuesday and Wednesday. He will be here on Monday. He can then, at that stage, proceed as the timetable develops on Monday, Tuesday and Wednesday. We ask your Worship's indulgence that he would not be required this week. He is simply part-heard in a matter in Sydney and can't be here.

He of course does represent the significant interest of Mr McRae and Ms Arman and seeks your Worship's indulgence in that regard.

THE CORONER: Yes, thank you.

MR WHYBROW: Just before Mr Walker starts again, Mr Lasry responded to particular issues I raised except in relation to the excised portions of a particular set of notes from Ms Drew. I was wondering whether there is a position as to whether those documents are going to be provided because they seem to fall within the call.

THE CORONER: These are the notes you were talking about?

MR WHYBROW: I think I have identified them correctly as document number 2 of item 6 of part 1 in the folders.

MR LASRY: The frank answer is I'm not sure. It may be that what was provided was provided because what was originally sought was the details of where we went and what we did rather than what was discussed. That may be the reason.

THE CORONER: I don't think that is the document that Mr Whybrow is talking about. He is talking about a different document.

MR WHYBROW: It is a set of notes of Ms Drew's, two documents, one of a meeting with your Worship on 28 July 2003 which included Mr MacWalter, who I understand to be the coronial officer from the Territory, yourself --

MR LASRY: The answer is I don't know. I will make some inquiries. If there is anything useful I can say to my learned friend I will tell him.

5 THE CORONER: Mr MacWalter is a police officer attached to the coronial team. It would have been an initial briefing. If there are any notes, then I certainly haven't seen any notes of that that I can recall.

10

MR WHYBROW: It involves Mr Cheney directly. There are parts that have been blanked out. As there was no order by your Worship when you directed that the relevant documents be provided
15 nor any objection to production taken, I simply ask that the entirety of these particular documents be produced in due course.

20 THE CORONER: Ms Drew can make some inquiries about that, perhaps.

MR LASRY: Yes, your Worship.

25 THE CORONER: Yes, Mr Walker?

MR PHILIP WALKER: I heard what Mr Lasry said in response to my request for some indication of what your Worship was told by Mr Cheney.

30 THE CORONER: I will tell you now, Mr Walker, I don't intend to become a witness in these proceedings and I am not required to. That is really what you are asking me to do. I think we have had this discussion before.

35

MR PHILIP WALKER: Your Worship --

40 THE CORONER: I can tell you now, and I think I have said this before too, Mr Walker, since the fires in January 2003 I have been told, as I am sure many people in this community have been told, many things by many people. What I will base my report on and my findings on is the evidence that has been provided in these proceedings. The
45 evidence that you have had access to and that I have heard, that is what I will be basing my report and my findings on. Not what people may or

may not have told me in the last so many months,
that is not before this court as evidence.

5 MR PHILIP WALKER: Within a memorandum I think
produced by Mr Lasry himself, he describes your
visit up there as part of the coroner's
information gathering exercise. I take it you
will therefore somehow disclaim or --

10 THE CORONER: I don't intend to engage in
conversation about this any further, Mr Walker.
You have what you have. If you have any questions
to ask as to how that was created, you can ask
those questions of Mr Cheney. That is the
15 appropriate course to proceed. That is the
appropriate course for you to take.

Just on the point of not proceeding until you hear
or see what his Honour Mr Justice Whitlam has to
20 say, there is no embargo on this coronial inquiry
proceeding pending the comments or the findings
made by his Honour. There is no legitimate
forensic purpose in that for you or for me. There
is no reason for me to stop this inquiry pending
25 those comments and those findings, and I don't
intend to do that.

MR PHILIP WALKER: I have made my application.
Your Worship has decided on it.

30 THE CORONER: When are you able to proceed?
Mr Whybrow did indicate that perhaps Friday. Are
you able to proceed on Friday as well?

35 MR PHILIP WALKER: Friday would be the day that I
would be able to proceed, or perhaps late Thursday
just depending on how proceedings pan out.

40 THE CORONER: We will see how it goes and how much
progress we can make on Thursday. Yes,
Mr Erskine?

MR ERSKINE: I would simply say, first of all --

45 THE CORONER: I am about to put you at the top of
the list, Mr Erskine.

47

MR ERSKINE: I was going to suggest Mr Archer go first. If he is going to take 3 minutes, we would all like to see whether that is made out.

5 The best estimate I can give, and counsel's estimates are always notoriously fallible, is that I would be about an hour or two. So if the expectation is that Mr Watts is starting at
10 2 o'clock tomorrow, we may have a hiatus tomorrow morning. It is up to your Worship whether we have it early or late; that is whether we start at 10 and take an extremely long lunch or start at 11.30. I am in your Worship's hands.

15 THE CORONER: That is fine if that needs to happen. I must admit I favour starting at 10 and seeing how we go. If we have a break then perhaps we have a longer lunch.

20 MR ERSKINE: I wouldn't want it thought that we were at this stage planning to take the whole morning.

25 THE CORONER: I understand. I am grateful for you giving an indication as to how long you propose to take.

MR ERSKINE: Subject to all of the vagaries of counsel's estimates.

30 THE CORONER: The batting order at this stage is perhaps Mr Archer first, followed by Mr Erskine, and then Mr Johnson and Mr Watts --

35 MR JOHNSON: Yes, Mr Watts and then myself and then --

40 THE CORONER: And we will see how we progress. We probably won't finish tomorrow in any event. We will see how we go on Thursday. If there is some spare time on Thursday, if Mr Whybrow and Mr Walker aren't ready to proceed we might adjourn through the day and resume on Friday or start with Mr Walker on Thursday and Mr Whybrow on Friday and
45 Mr Pike and Craddock on Monday.

MR ERSKINE: I think I should say this about

Monday, I think I flagged this last week, that I might not be available in the week of the 20th.

5 THE CORONER: If there is anything you wish to raise --

10 MR WATTS: I am in the same position next week as my learned friend. I can't be here next week that is why --

THE CORONER: You should perhaps complete your cross-examination in any event this week.

15 MR WATTS: I will do my best.

THE CORONER: Is there anything else? So we will adjourn until 10 o'clock tomorrow morning.

20 **MATTER ADJOURNED AT 11.58AM UNTIL WEDNESDAY
15 SEPTEMBER 2004 AT 10AM.**

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TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUIRY INTO INQUEST AND INQUIRY
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 76

Wednesday, 15 September 2004

6937

.CF154/2003 15.09.04

[10.15am]

THE CORONER: Are you ready to proceed, Mr Archer?

5 MR WOODWARD: I ask that Mr Cheney come back to the witness box.

THE CORONER: Yes, thank you, Mr Cheney.

10 <PHILLIP CHENEY, RESWORN

<CROSS-EXAMINATION BY MR ARCHER

MR ARCHER: Q. Mr Cheney, the Australasian Fire Authorities Council document, "Position Paper on
15 Community Safety and Evacuation During Bushfires" is a document that you are familiar with?

A. I am familiar with it. I don't know it verbatim.

20 Q. Did you have any part or any role to play in its production?

A. Not directly. But I probably talked to people that did draft it.

25 Q. It's general tenets are tenets that you would agree with?

A. I believe so.

30 Q. In relation to your general thesis in relation to owners of property having responsibility for fuel management, fire suppression, that document fits in with your general thesis in that regard?

A. Yes.

35 Q. Can I have brought up Mr Cheney's report fuel management document [DPP.DPP.0008.0001] at page 18 which I assume is 0018.

40 I just draw your attention to the second last paragraph on that page. The last couple of sentences. I will read them out:

45 "In my opinion the condition of the fuels adjacent to the urban areas of the ACT set back distances from forest vegetation, the compact nature of ACT urban development provided Canberra with the safest interface

of any city with the equivalent or higher rainfall zone anywhere in Australia. The other fire experts agree."

5 I assume that is an opinion that you adhere to today?

A. Yes, it is.

10 Q. So far as the areas of Canberra that were most severely affected on the 18th, Duffy and Chapman - certainly in relation to Duffy I assume that that particular opinion applies; is that right?

A. Yes.

15 Q. Chapman?

A. Yes. More so, probably.

20 Q. The following paragraph provides an explanation as to perhaps why that did not provide the practical protection that may have been expected. That was that the state of the fuel levels in more remote areas were such that with the high wind, the amount of embers that were blowing that day rendered that protection not as

25 practical as otherwise might have been the case?

A. That's the behaviour that you expect under extreme fire weather where you are not going to stop it. The fire will burn across most barriers that are reasonable to construct under those

30 conditions.

Q. You talk about the compact nature of ACT urban development. What do you mean by that?

A. The fact that the ACT was developed almost by

35 a suburban block at a time, and that suburban block was filled up with dwellings by and large before a new block was developed. Compared to ribbon developments in say the Blue Mountains or on the outskirts of Sydney, and in the peri-urban

40 areas of most cities of Australia where you tend to have less compact development in time, so the houses start off with a few houses and then additional houses develop in time.

45 Q. The movement of the fire on that day, the speed of it surprised some of the firefighters. You refer to that in one of your reports that,

once the fire reached the grasslands - some of it eaten out - that it moved much quicker than they had anticipated. Was the speed of the movement something that you think could have been reasonably anticipated?

5 A. I believe it should have been, yes.

Q. You have obviously been in court a lot during these proceedings and read just about all of the transcript, I assume. The planning that took place particularly on the 17th and the 18th, is it fair to say that perhaps a consistent theme of that planning was that there was an underestimation of the rate at which the fire might spread?

15 MR WATTS: I object to this question. It is far too general in my submission. The question is:

20 "The planning took place on the 17th and 18th, is it fair to say that perhaps a consistent theme of that planning was that there was an underestimation..."

25 Frankly, what does that mean? It is so general as to be an unhelpful question and the answer would not be of assistance to your Worship.

30 THE CORONER: Can you be more specific as to which part of the planning you refer to, Mr Archer?

MR ARCHER: I don't believe it is unnecessarily general. I am putting the general proposition that the planning of those two days did not accurately anticipate the rate of spread of fire, particularly on the 18th. If that is a more specific question, then that is the one I put to Mr Cheney.

40 THE CORONER: You mean all aspects of planning?

MR ARCHER: Yes.

45 THE CORONER: The total operations. All of the operations involved in the planning.

MR ARCHER: Yes.

THE CORONER: Q. Are you able to comment on that, Mr Cheney?

5 A. I believe - it seems to me, and from the evidence that has been given, that the spread in eaten out pastures was underestimated. In fact I think there was a belief - it seemed to me anyway in my opinion - that the fire would not spread across the eaten out pastures. To that degree how much of that reflected on the planning
10 I don't know. That is my view.

MR ARCHER: Yes, thank you.

15 THE CORONER: Thank you, Mr Archer. Mr Erskine, would you be more comfortable in the front row?

MR ERSKINE: No, your Worship. Because I have access to those instructing me, I am happy to do it from the second row.
20

<CROSS-EXAMINATION BY MR ERSKINE

MR ERSKINE: Q. Mr Cheney, I would like to start please with the maps that you have drawn up of the spread of the fire. To begin with just to recap
25 how they were prepared, you had various sources of information that you have told us before. In no particular order you had the linescan information whenever it was available?

30 A. Yes.

Q. And just pausing with that for the moment. The linescan data is by no means constant across the period we are talking about.

35 A. I don't quite understand what you mean by "constant".

Q. In the sense you don't have 24 hours worth of data for every day, do you?

40 A. No, not indeed. This is the most data we have ever had for analysis of a wildfire.

Q. Absolutely. Just so we understand it, the linescan data is across the period from 8 January to the impact of the fires on the 18th of January
45 sporadic?

A. Yes. I think there was an attempt to fly it once a day. It didn't always manage for

operational purposes. But, yes, it was a daily scan. So that is one of the reasons why I went for a daily positioning of the fire.

5 Q. You then had aerial photographs being taken by different runs of different organisations from time to time?

A. There was a set of aerial photographs which were taken after the fire which reflected the
10 degree of damage and degree of scorching in the canopy and the degree of defoliation.

Q. In terms of aerial photographs or aerial
15 observations made day by day between the 8th and 18th one of the great difficulties is the amount of smoke generated by particular fires?

A. Yes. My staff took some photographs from the air and most of them I could not accurately locate where they were and neither could they.

20

Q. Then if I can lump together what would be a quite substantial category of information you had to work with, you got the accounts of people on the ground at various locations at various
25 times making observations?

A. Yes. Although--

Q. Which you then factored into your mapping process?

30 A. That was factored in. By far and away the most important one was the linescan information.

Q. Could we turn up, please, the most recent set of maps that you prepared which is
35 [DPP.DPP.0008.0121]. While it is coming up, are you able to remember the times at which the linescan information exists for the 18th of January? I think it is broadly between 2.40 and 3.10 in the afternoon, isn't it? Summer time,
40 that is.

A. The line on those maps, where there is a more precise timing is likely to be the linescan timing. In this one that I have in front of me, which is 17 January, it is an aerial photograph
45 interpretation which was largely based on the boundary of the green crown taken from aerial photographs.

Q. If we can go back to the linescan so we can pin down the times that you had them available to you. Is it your recollection that the linescan data for the 18th of January that you used in
5 relation to these maps starts at about 2.40pm and finishes at 10 past 3?

A. I think it was a bit later. I think there was a 3.30 one - in that timeframe.

10 Q. In that general period. You don't have a before and you don't have an after.

A. No. That's correct.

Q. If we could go please to 0121. My 0121 is
15 18 January 1500. Might I just approach the screen your Worship?

THE CORONER: Yes.

20 MR ERSKINE: Q. Mr Cheney, could we just focus on where you see the words "Mt Coree" are, there is a great tongue of fire extending to the east heading towards Pierce's Creek.

A. Yes.

25

Q. That is the path for the moment that I would like to talk about. Now, the data that you had to show that - can I call it a tongue?

A. Yes.

30

Q. So we know what we are talking about, the data was primarily the linescans?

A. Yes.

35 Q. That showed something fairly close to what you have drawn there, although there were some spot fires ahead of the main front and your line goes around the outside of the spot fires?

A. Yes. That depends on the interpretation of
40 the scan data.

Q. Indeed. So that in terms of the 1500 hours map we can be pretty confident, can't we, that the fire is pretty well in that location, the point
45 I have drawn your attention to?

A. Yes. The linescan that covered that area was a band which approximated the angle of the border,

the line of the border and ran in a swathe across the centre of the map. So it enabled me to fill in the detail of spots up on the edge of the Murrumbidgee just below the border on the northern flank. And it also showed the pattern of fire spread down near Mt Coree and in the creek to the west towards the Goodradigbee.

5
10 Q. If we then go back one map at 1445, and on this one what I have been calling the tongue is obviously much smaller. Again that is supported by the linescan data; isn't it?

15 A. No, it's not. That's an interpolation of my own because the linescan - at that time the line scans were further east towards the head of the fire approaching Mt Stromlo.

20 Q. All right. May I take it then that 1430, which is the previous map, which appears to show no change in the spread of this particular part of the fire is again interpretation?

A. I think that's an error of - that it just got missed out in the production of these maps.

25 Q. Can we just go back to 1430 map then.

A. In fact. I would say that 1445 hours, that's reproduced the 1435. My interpolation should have included another spread between 1445 and 1500 - it should have included 1445 pattern.

30

Q. Well, if we go to the 1430 map, that is interpretation as well?

A. Yes.

35 Q. If we go back one then to the 1400 map, again we are with interpretation at the moment, aren't we?

A. Yes.

40 Q. In fact, the last piece of firm observation that is made I think you say is somewhere around 12 or 1 o'clock the fire is reported as having gone across the Goodradigbee to the west which probably turns up about 1200?

45 A. Yes. At 1200 there were some photographs of the fire.

47

Q. If we turn up the 1200 map, which is back a couple from there. Mine is 0114 if that helps. Where the word "Goodradigbee" appears there is a burnt area under the letters "GBE" on the western side. That is in part confirming an observation that is made about that time?

5
A. Yes. An observation was made on the southern side. Probably about half the perimeter of that area on the western side of the Goodradigbee. The rest of it would be an interpolation between where the fire was overnight, as indicated by the crown scorch, and where the fire was when there was linescan data which did cover eventually on the last linescan the western-most perimeter of that part of the fire.

Q. So getting between the 1200 map and the 1445 map is - I don't mean this in any way disparagingly because it seems to be a sensible approach - between the 1200 and the 1445 is a matter of saying, "Well it was at this point at 12 and that point at 1445. Somehow or other it has spread between the two." That's effectively what the exercise was that you did with the maps in between those two points, is it not?

20
A. You would go out to 1500 actually. The 1500, what was interesting from a fire behaviour point of view was if you look at the 1500 scan the fire has proceeded up the Goodradigbee Valley as far as the junction of the Goodradigbee River and Flea Creek. So it had actually progressed further south than one would normally expect because, under that north-westerly wind, you believe that as soon as it gets on to the slope that would dominate the spread. My interpretation is certainly based on the assumption that there was no break-away on the southern part of the McIntyre fire.

Q. That was the point I was about to come to.

A. Okay.

Q. Again, if I might approach to point out a spot. On this map, which is the 1200 map, there is a dotted line running from the power line down to the Goodradigbee River?

A. Yes.

Q. I think you previously told us that is the dozer trail that was bulldozed as a containment line some days earlier?

A. That's correct.

5

Q. If we could just look at that area. You have no information one way or the other, do you, as to whether there was a break-away from the southern part - the area I am talking about say from the dozer trail across - of the McIntyre's fire?

10

A. Not after 1200 hours.

Q. If I tell you that the crews who were working the McIntyre's fire, that is fighting it, who were withdrawn later in the piece on the 17th noticed the extreme conditions were building up. Even at that point as they drove along the Powerline Trail they saw areas that they thought had been out smouldering back into life. That would suggest it is a possibility that the southern line could well have spotted over?

15

20

A. Yes. I guess I would not have been surprised if there had been a break-away on any part of the southern line between the Goodradigbee and Dingo Dell. I think it was a credit to them that it didn't break away.

25

Q. Before I turn to the other parts of the report. Just so we have the terminology right - we talked about line scans and spot fires. One other term I wanted you to determine was a "flank fire"?

30

A. That part of the fire that is more or less parallel to the prevailing wind direction.

35

Q. It is part of the main fire. We are not talking about a spot fire, for example?

A. A spot fire will have a flank on it.

40

Q. There will be a flank to a spot fire?

A. Simply that part of the fire where the fire is burning, is spreading--

45

Q. Could we explain it by using the map we have got here? At the 12 o'clock timing you have the prevailing wind being north-westerly, do we not?

A. Yes.

Q. So the area to the furthest east has a front heading towards ultimately Duffy?

A. Yes.

5 Q. And is it the areas to the north and to the south in the burnt area that you have got there which would be the flank fires?

A. That's correct.

10 Q. Just repeating, you would regard a flank fire as being - sorry, if you saw a spot fire you wouldn't call it a flank fire. It would be part of the main fire or the flank fire? I said that very badly because a spot fire will have flanks?

15 A. Yes. A spot fire is a spot fire with a head, a back, a flank as is the main fire.

Q. Can you go, please, to page 12 of your report. I take it you have a copy of that handy.

20 A. Which one?

Q. The most recent report of yours, the revised report. Do you have that page?

A. Sorry, I missed the page, sir.

25

Q. We are looking at [DPP.DPP.0008.0051] page 12. Do you have that page open?

A. Yes.

30 Q. Now, do you see a paragraph towards the middle of the page that begins "by 2000 hours the fire behaviour had subsided"; do you see that paragraph?

A. Yes.

35

Q. You go on to say:

40 "On the western slope into the Goodradigbee River the fire had burnt out the entire catchment of the creek up to Webbs Ridge and the flank fires were burning quietly."

The footnote says video taken by CSIRO research team. Did you mean to convey in that that what the CSIRO had videoed was the flank of McIntyre's?

45

A. At that time, yes.

47

Q. May I take you please to Mr Gould's statement. It is [DPP.DPP.0006.0289]. Could we go, please, to page 3 of that report. If we could scroll down to the bottom of the page, please. You see on the
5 screen there, Mr Cheney:

"We took a weather measurement - dry bulb?"
A. Yes.

10 Q. If I ask you to go down, Mr Gould says:

"At this point it is important to clarify that I did not know the location of the main fire, which I now know to be called
15 McIntyre's Hut fire and that we were working only on a spot fire."

And if I ask you to go to page 4, in the second paragraph there you see the words "we walked back
20 out onto the Dingi trail"?

A. Yes.

Q. The last sentence reads:

25 "During this reconnaissance we did not identify the location of the main fire."

He then goes on to talk about leaving the Dingi Trail and going to the fire that is now called
30 Baldy's fire?

A. Yes.

Q. Now I have drawn your attention to those, is it clear that Mr Gould was not in fact looking at
35 the flank fire of McIntyre's in those videos but he was in fact looking at a spot fire?

A. He was looking at a spot fire, yes.

Q. Can I ask you then to go back to your report to page 13. Do you have that page open now?
40

A. Yes.

Q. I need you to go to the sentence towards the top of the page where you say:
45

"No evidence was presented that anyone from New South Wales Rural Fire Service reached

the fire anywhere on the ground that night or reported the fire behaviour after 1830 to the incident controller."

5 That's in reference to which, McIntyre's or Baldy's, that statement?

A. McIntyre's Hut, but I don't think anybody went to Baldy either that I could find.

10 Q. I am about to come to that. Your comment:

15 "Mr Cooper reported that Simon Bretherton had inspected the Baldy Range spot fire and that it was on both sides of the trail and containable by ground crews, no arrangements were made to assemble crews to attack the spot fire on the first night or at first light the next morning."

20 You then go on to make some comments about "fires looking worse in the distance and fires looking worse at night". I would like to take you to the meeting that took place at Queanbeyan on the night of the 8th of January at which the strategy to
25 deal with McIntyre's was first discussed in detail. I think you are familiar generally with the meeting I am talking about, are you not?

A. Generally.

30 Q. Yes, thank you. Have you seen the submission that was made by the New South Wales authorities to the New South Wales coronial?

A. I don't know whether that was the same as the submission that came to this coronial or whether
35 it was a different one.

Q. Let us cut to the point so we don't have to worry about it. It is document [RFS.AFP.0093.0002]. First of all, if we could go
40 to the front cover of that. It came in a sort of a booklet. It had on the front of it a photograph of a smoke plume from McIntyre's on the afternoon of the 8th?

A. Yes, I have seen that.

45

Q. It has just turned up on the screen there. If you are broadly speaking familiar with this

document - I don't expect you to have an in-depth
knowledge of it. I would like to take you please
to 0029 in that document. Mr Cheney, this
document contains a summary as an extract from
5 large bits of information, logs and so forth.
Subject to what anybody else says, as I understand
it, none of the extracts have been suggested to be
inaccurate or wrong. So it is probably a useful
summary point of the various logs that we have.
10 This particular page begins - do you see the
heading "8 January 2003"?

A. Yes.

15 Q. It starts:

"At 1500 hours with an all clear."

Then the first report of columns of smoke from
Coree at 1526. Then 1606 a further report placing
20 the fire in the vicinity of the Brindabella
National Park. This would appear to be the first
set of reports, Coree at least, and McIntyre's
fire.

25 I should pause here and say, Mr Cheney, this
chronology that I am going to take you to includes
references not only to McIntyre's fire but to
a number of other fires as well. Towards the end
of it - if you will bear with me, I want to put
30 them all into some context. If we go down to 1637
on that page. You see an entry there that
"McIntyre's is fairly burning hard at the moment,
large column of smoke"?

A. Yes.

35 Q. 1654 smoke turning yellow columns and very
thick. At 1700 at the bottom of the page there is
a photograph taken which I think has been used
a number of times in both the New South Wales
40 coronial and this one.

Then if we turn the page, 1708 at the top of the
page says, "The Fairlight brigade reported fire on
the western side of the Baldy Range". Can we
45 pause there because I am not sure if Fairlight has
been precisely identified in some of this material
but it has been identified on a number of

occasions. Might I approach Mr Cheney's map that is behind him?

THE CORONER: Yes.

5

MR ERSKINE: Q. Are you able to tell us where Fairlight is, Mr Cheney?

A. (witness points).

10 Q. It is just to the north-west, almost west of Uriarra Crossing?

A. Yes.

Q. But over in New South Wales, right?

15 A. Yes. I can give you a grid reference, if you like.

Q. So that we have then a reference from that far away seeing a fire on the western side of Baldy Range. Pausing here, I think you are familiar with the chronology. It seems unlikely that that is a report of the Baldy's fire because the first reports of Baldy seem to come a little bit later. It is probably a reference to McIntyre's?

20
25 A. I suspect it probably is. I would have to check the photograph that was taken from Mt Coree which was included in my Powerpoint, which indicated there was smoke visible from Mt Coree at the location of the Baldy spot fire. I can't
30 recall the time of that precisely.

Q. The next entry indicates that National Parks and Wildlife chartered a light aircraft to fly a fire detection run. There is a note there that
35 there were strong north-westerly winds. Flying conditions were rough. There was an altitude of 67,000 feet. At 1715 Coree is reporting wind gusts of 70 to 80 kilometres an hour and continuing to report lightning strikes. Do you
40 see that entry?

A. Yes.

Q. Then at 1718 we have another report from Fairlight and he advises - Mr Brian Blundell who
45 is deputy captain - there was a fire on the west side of Baldy due west from Brookvale. There were gale-force winds and the fire was going well?

A. Yes.

Q. Do you have Brookvale there on the map by any happy chance to your left?

5 A. I know where Brian Blundell lives. Yes Brookvale is pretty much right on the border where Mountain Creek Road crosses the line of the border of the ACT.

10 Q. Thank you. 1724 Coree reports again a thick column of smoke. If we jump down to 1730 there is a large plume from McIntyre's visible in Canberra and Queanbeyan. There is a reference to a photograph taken of that particular fire at the
15 time?

A. Yes.

Q. The next entry was 1730 was wind gusts of 41-60 kilometres an hour. If you could jump down
20 one entry at 1740; do you see this?

A. Yes.

Q. By this stage the air observer reports McIntyre's being approximately 200 hectares in
25 size?

A. Yes.

Q. Determining the eastern flank was obscured by smoke for up to 5kms immediately down wind with a
30 convection column of 6000 feet. We are dealing with a reasonably impressive fire in a short period of time, aren't we?

A. No doubt about that at all.

35 Q. The next entry describes National Parks officers who had been dispatched to the McIntyre's Hut fire meeting on the Brindabella Road near Blundell's Flat at approximately 1740 and the observations they make, and the report back to
40 Queanbeyan of the observations.

Then if we go over the page, this will be to 0031.

The paragraph I took you to before continues over this page. The next entry is at 17.52 in which
45 Brian Blundell reports leaves and embers flying over Fairlight. You have pointed out Fairlight to us on the map. Would you accept that the distance

between Fairlight and where McIntyre's fire was at that stage is something of the order of 10 to 12 kilometres?

A. Yes.

5

Q. Again that confirms we are dealing not only with a pretty impressive fire by this time, which you agreed with a minute ago, but also one being driven by some reasonably strong winds if there are leaves and embers coming that distance in that time?

10

A. Yes.

Q. 1806, Coree reports a new fire, this being known as the Baldy Range fire?

15

A. Yes.

Q. Is that the entry you were talking about?

A. That was the entry I was talking about, yes.

20

Q. If we tie that together very briefly. Would it seem to be the case that the observation made at 1718 from Fairlight on the previous page of a fire on the west side of Baldy going well is almost certainly McIntyre's?

25

A. Yes.

Q. Then shortly afterwards the National Parks officers arrive at Mt Coree and there is a report of their observations. Main fire appeared to have crossed Webbs Ridge. Smoke can also be seen on the Baldy Range. If I could then ask you to drop down to "the fire detection flight ended about 1930". If we could just scroll down the page. I want to pause here for a moment, Mr Cheney because the air observer has at this stage on the late afternoon of the 8th of January reported eight fires for which Queanbeyan is going to have to take some action. The first one on the list is obviously McIntyre's, about which we know. A small fire called the Mt Vale fire perhaps 10 kilometres south-west of McIntyre's. Numbers 3, 4 and 5 are ones that we know about in this inquest of course because they are the three in the ACT: Bendora, Stockyard and Gingera. Number 6 is Mt Morgan, number 7 is Wild Cattle Creek and number 8 is Mt Foxlow in the Yananumbeyan. Just pausing there,

30

35

40

45

Yananumbeyan is to the south-east of Queanbeyan if I recall correctly. Have I got that one right, the last one?

A. I don't know where that is.

5

Q. I am told by those behind me that I have got the location correct. You would agree at this stage that the National Parks and Rural Fire Service people in Queanbeyan were confronted with a considerable number of fires they were going to have to respond to that night in one way or another?

10

A. Yes.

15

Q. If I could then ask you to turn the page, this is to 0032. While that is happening, we just have in our minds that the fire detection flight ended at 1930. This is where the chronology has now got to with a list of all those fires. Can you come down two entries to 2000. At 2000 Brian Blundell again phoned Queanbeyan and reported fire approximately 630998 on Baldy Range. Wind change 30 to 40 kilometres an hour. South. Fire heading towards Dingo Dell. National Parks, Queanbeyan log" do you see that entry?

20

25

A. Yes.

Q. Pausing there for a moment. We have accepted that Mr Blundell is at Fairlight?

30

A. Either at Fairlight or at his property.

Q. If I can tell you the grid reference appears to be slightly out in that it puts a fire a couple of kilometres to the west of Baldy's. But it puts it in exactly the right location north and south, which might suggest that there is an error in the grid reference in those first three numbers. If we made that 660998 it would put it slap bang in the middle of Baldy's spot fire. That suggests, does it not, that as late at 8pm the information available to the team at Queanbeyan was that there was a fire on the Baldy Range. There had been a wind change but you would agree that 30 to 40-kilometre an hour winds are still pretty strong?

35

40

45

A. Yes.

47

Q. And that the fire was now heading towards Dingo Dell. Could you just point out on the map next to you where Dingo Dell is?

5 A. (witness complied). The Dingo Dell is located about 5 kilometres west, north-west of Brookvale.

Q. The next entry you see on that page is noting that Fairlight brigade crews subsequently relocated to Dingo Dell and Dingo Flats for proper protection. That also suggests something about the brigade's level of concern about what they were facing?

A. Yes.

15 Q. It is at about this time that a meeting is convened in Queanbeyan by Ms Crawford. First of all, can I suggest to you that Ms Crawford did very much the right thing in bringing together, in the face of all the team was facing, all the key players who were going to have to work out the strategy for dealing with all of these fires; that is, she brought her own people from National Parks, she brought Rural Fire Service from New South Wales and she also had available senior people from the ACT?

20 25

A. Yes.

Q. So in terms of convening a strategy meeting to discuss the strategy, that was a very sensible step to take at that point in time?

30

A. Yes.

Q. The information that I have just taken you through, which was the information available to the meeting, would have indicated, would it not, that the McIntyre's fire was a very significant fire fanned by some quite strong winds and that even as recently as 8pm, which is only half an hour before the meeting starts, the winds are still being reported as 30 to 40 kilometres an hour; which you agreed with me a minute ago was fairly strongly winds?

35 40

A. I don't know where that record was from. That was not the wind speed that other people who went to the site recorded on site, which is the point of my comment.

45 47

Q. Indeed. I am dealing with the information that was at that point available to the meeting at Queanbeyan. It is fairly axiomatic, isn't it, we can't criticise a meeting for information it
5 didn't know about. You could criticise them for not getting it but you couldn't criticise them for not having it.

In relation to Mr Gould, are you aware that
10 Mr Gould gave his evidence to this inquest that his team, when they were doing the observations of the fires and the videos, did not report their observations back to anybody in Queanbeyan at the time?

15 A. That's correct.

Q. Indeed not even when they got back to Canberra at half past 12 that night?

A. Yes.
20

Q. There was certainly no way in which the meeting at Queanbeyan would have had access to Mr Gould's information?

A. I don't think they can expect other people to
25 do their job for them.

Q. Quite so. Quite so. Just so we are clear about that. You accept that Mr Gould's information wasn't available to them?

30 A. Yes.

Q. Now, there is another piece of information which that meeting had. Because you have said no-one from New South Wales went to see the
35 Baldy's fire. As you note in your report, Mr Bretherton went to the Baldy fire - he is an ACT fire officer, you understand?

A. Yes.

40 Q. And he reported his findings to Mr Cooper. You are aware of that?

A. Yes.

Q. Are you aware how that information was in turn
45 passed on to the meeting at Queanbeyan?

A. Yes, but you will need to remind me precisely.
47

Q. There are various places where we can take you to it. If I can take you to the transcript at page 4430. This is Ms Crawford's evidence to this inquest. At line 33, having been asked this question by Mr Lasry:

10 "Q. Did you think it was important to have someone get as close as they could to the Baldy fire in order to assess the topography in effect and its size and other information from the ground that might assist you to make a judgment of how to deal with it?

15 "A. That's exactly right. When the ACT actually arrived, the ACT actually arrived at 8 o'clock to the control room for the meeting. Neil Cooper from ACT Forests had just received a phone call from some crews he had on the ground who were in the Brindabellas. He said they were on the Baldy fire trail and heading out. I said, 'Has it crossed the trail?' --

That is the Baldy fire --

25 "'Tell me what is happening.' He said they didn't go that far down. I asked, 'Could he send them down to the Baldy spot fire and confirm it is over the trail.' We believed it was. 'Confirm that'. He rang them back. He came and told me, 'No, it is across the trail and they are getting out of there.' I said, 'Isn't there something they can do?' He said, 'No, they are not even in a fire unit.'

35 "Q. The best thing they could do is look before they leave?

40 "A. That's right. Someone had been on the ground. I took from that there was nothing they could do. We had lost that as a containment line as well."

That is then confirmed. Then there is further discussion about the information that they had at that meeting about weather reports and the like.

Can I also take you to Mr Bartlett's statement

which is [ESB.AFP.0001.1148]. At page 9,
paragraph 32, I will read out the passage whilst
it is coming up on the screen. This is a long
paragraph in which Mr Bartlett talks about the
5 meeting that we are discussing in Queanbeyan. He
says right down towards the bottom of that page:

10 "We had sent an ACT Forests officer, Simon
Bretherton, out to the fire. We spoke to him
while we were at the Queanbeyan meeting and
he informed us that the fire behaviour on the
Baldy Ridge was sufficiently intense that he
did not feel confident of driving through the
fire."

15 Now, Mr Cheney, if I say to you that that is the
information they had at Queanbeyan and that in
particular they believed that they had information
then and there from somebody on the scene - that
20 is Mr Bretherton and his little team - indicating
that the fire was across the trail and it was
sufficiently intense, to use Mr Bartlett's words
"they weren't confident of driving through it", is
it then, in your view, a reasonable response from
25 this meeting to conclude that for the moment they
have got to work on the proposition that Baldy's
has been lost?

MR WOODWARD: I object. To characterise those two
30 extracts of the evidence as being all that the
meeting had I think is unfair. Certainly it is
not unreasonable to put those two pieces of
evidence of that particular exchange to Mr Cheney
and ask him to comment on that. However, it
35 shouldn't be put on the basis that that is all the
evidence there was. Mr Cooper gave evidence about
it. Mr Bartlett, in transcript, gave evidence
about it. In those circumstances if the full
story is to be put that is one thing, and then it
40 can be described as that is what happened. In
these circumstances and in my submission it needs
to be put as being, well, that is the evidence of
Crawford and the statement of Bartlett and limited
in that way.

45 THE CORONER: Do you accept that, Mr Erskine?

47

MR ERSKINE: I don't know whether Mr Woodward is suggesting that I have left out in the characterisation that I have put on this something important. I am not aware that I have. Rather
5 than occupy the inquest by taking you through every single reference, which I think there are a number, my recollection - and I am subject to correction - that the references are all pretty well in the same direction.

10

MR WOODWARD: That is not my recollection. My recollection is Mr Cooper's evidence was more along the lines that the information he provided was they were getting out because they were not in
15 a firefighting vehicle and obviously there is nothing you can do. In those circumstances certainly no suggestion that the fire was so intense that they were getting out for that reason.

20

MR ERSKINE: Q. Rather than trawling through all of it, let us put it this way: as I understand it this position is not controversial, that for at least Ms Crawford and Mr Bartlett at that meeting
25 their understanding of the information they had got from somebody on the scene was as I had read it to you. Mr Cooper may have a different view and one would perhaps not find it surprising that people around a table like this would have some different recollections of what was said. Do you accept that?

30

A. Yes.

Q. In the evidence that I have just read to you from Ms Crawford and the statement that was read to you from Mr Bartlett, if that be their understanding of that particular piece of information, coupled with all the other information I have taken you to from the New South
35 Wales submission, can I put the question to you again: It was a reasonable strategy to adopt that was adopted that night - if I also add on the piece of information - that there was going to be an inspection of Baldy's at first light?

40

A. No, I disagree.

Q. You disagree?

A. I disagree.

Q. In what respect, Mr Cheney?

A. I disagree because they should have known that
5 they were on a falling fire danger and that the
early reports would be expected to be of a higher
intensity fire that you would get later on at
night. The other reports were from people remote
from the fire. I don't even know whether
10 Mr Bretherton actually got to the fire. He didn't
have a firefighting vehicle and he didn't do
a thorough assessment of the spot fire at the time
he was there.

15 So they needed more information. I believe they
should have known that they were going into
a falling fire danger, that the fire behaviour
would decrease in that country at night and that
they needed to get a proper assessment of what it
20 was doing and where it was on the ground.

Q. Mr Cheney, at the risk of labouring this
point, this is a meeting taking place from about
8.30 at night?

25 A. Yes.

Q. The most recent information they have is at
8pm from Fairlight in which a grid reference is
given for the fire. We accept that the grid
30 reference appears to be out by a bit. The
reference to the fire appears to be precise. As
at 8pm there is a report of a wind change of 30 to
40 kilometres an hour indicating although it has
changed direction it is still strong winds. In
35 those circumstances, Mr Cheney, is it not
unreasonable for them to conclude that they are
going to have to work out a strategy based upon
the proposition that they have lost Baldy's but
they will check Baldy's first thing in the morning
40 to make sure that is the case?

A. No. I disagree.

Q. You are aware, aren't you, that there was
a check made of Baldy's the next morning?

45 A. Yes.

Q. You are aware that there was even an effort

made to fight Baldy's the next morning?

MR WOODWARD: I object to that. That is wrong.

5 MR ERSKINE: I am sorry; that is right.

MR WOODWARD: That the effort to fight Baldy's didn't commence until the morning --

10 THE CORONER: The morning of the 10th.

MR ERSKINE: I am sorry, your Worship, but that is actually wrong. I can take you to the evidence on that.

15

MR WOODWARD: That is the first that is being suggested, your Worship.

MR ERSKINE: It is in evidence before this
20 inquest.

THE CORONER: That it was fought on the morning of the 9th?

25 MR ERSKINE: Yes. There was a team sent to it on the 9th. They started fighting it. The air observation at 11.30 indicated the fire was much bigger than they thought it was and they were pulled out.

30

THE CORONER: Do you have a reference to that, Mr Erskine?

MR ERSKINE: Yes. If we go to --
35

MR WOODWARD: While Mr Erskine is looking that up, my recollection of the evidence - this is Ms Crawford and Mr Arthur's evidence - is that there were teams sent to the Powerline Trail to
40 work on the extension Powerline Trail down the Goodradigbee River. They were unable to do that work because a dozer wasn't available. A captain went out that happened to observe that the Baldy fire was smaller than perhaps had been first
45 thought. The teams from down there then went around and did look at it to start work on it but decided it wasn't appropriate to start work on it

and the work commenced properly on the following morning, on the 10th.

5 The other matter that I object to is the suggestion that there was a decision made on the night of the 8th to inspect Baldy first thing in the morning. In my submission - at least I am not aware of any evidence that suggests a decision was made on the night of the 8th to conduct an
10 inspection of the Baldy fire first thing on the morning of the 9th. It seems to be on the evidence something of a fortuitous event that morning of the 9th.

15 MR ERSKINE: Would it be appropriate to take the morning adjournment so I can find the reference?

THE CORONER: We will take the morning tea adjournment so you can find that reference.

20

SHORT ADJOURNMENT

[11.15am]

RESUMED

[11.40am]

25 MR ERSKINE: Your Worship, there are a number of places in the evidence where the issue of the what was done in relation to Baldy's is discussed. The most convenient one may well be the chronology contained in the New South Wales submission at
30 [RFS.AFP.0093.0033] at 34. If I could note for your Worship on that page the first time reference is at 6am where members of the IMT were gathering in Queanbeyan. There are then four entries that don't have times attached to them. The next entry
35 is at 7.30:

"Fairlight brigade dispatched to Dingo Dell to report the Baldy Range fire and prepare for property protection."

40

That is at 0033. On 0034:

45 Two RFS group officers departed the national parks workshop early AM to proceed to the Baldy fire. Active fire observed on both the west and eastern side of the trail. Three RFS cat 7 vehicles were diverted from the

Powerline Trail to Baldy Range fire."

The part I read you is the second entry on that page. If you go down to the middle of the page
5 where there is an entry headed "reconnaissance flight of 'Firebird 755" it commences at 11.20 says:

10 "At approximately 11.45 the reconnaissance flight flew over the Baldy Range fire. The Baldy Range fire to the east of the trail was far bigger than could be seen from the ground. This information was conveyed to the RFS group captains at the Baldy fire. The
15 three cat 7 vehicles were withdrawn."

There is then a reference in the next entry to return to the control centre advising that they believed 10-12 category 7 crews may be able to
20 contain it. Then two aircraft waterbucketed the fire throughout the afternoon. It is on the basis of that and there are other references along the same lines in other parts of the evidence. It is on the basis of that that I said there was in fact
25 firefighting efforts being done at the Baldy fire on the 9th.

MR WOODWARD: The evidence of Ms Crawford to which I referred is at pages 4466 and 4467 where she
30 says at about line 36 - she talks about the water bombing on the Baldy fire on the afternoon of the 9th, and then she says:

35 "Because we didn't have crews on the ground --

That is referring to the Baldy fire --

40 "But it was certainly to our advantage to wet in front of the fire where ... restrict the spread of the fire."

Et cetera. She refers earlier on at the top of the page to doing direct attack on Baldy on the
45 10th and the aircraft were on it on the 9th. The reference seems to be that the actual - as I indicated earlier, as I understand the evidence,

some crews were diverted from the power line trail to the Baldy spot fire but did no work on it effectively. 30 people with Ms Crawford didn't get there until the morning of the 10th.

5

Mr Arthur was asked why crews weren't put on the fire on the afternoon or even in fact overnight on the night of the 9th. He was asked at line 4572 at line 4:

10

"Q. Was any consideration given to putting crews on the Baldy fire on the night of the 9th?

15

"A. I don't have a recollection. All I can recall ... exact time.

"Q. Would there have been any reason why if that was the view of the IMT that they wouldn't put crews on the fire that night?

20

"A. There wouldn't have, no.

"Q. You don't know why that wasn't done?

"A. No."

25

MR ERSKINE: To complete the picture, your Worship, there is Mr Hunt's evidence at 4642 and there are also similar references in the evidence given to the New South Wales coroner, which is also before you. At 4642 Mr Hunt is asked by

30

Mr Lasry on this aspect:

"Q. The attempted suppression of that fire - that is Baldy's - actually occurred on the 10th; is that correct?

35

"A. No. Well, it is my understanding - we had crews sent in on the early morning of the 9th to do the rake hoe on charlie sector down to the river ... and actually started on the Baldy fire.

40

"Q. On the 9th of January?

"A. Yes.

"Q. Do you know whether those crews stayed there on the night of the 9th and the early morning of the 10th?

45

"A. No. We flew over later ... come back

with more resources.

"Q. So those crews were withdrawn?

"A. Eventually that day, yes.

5

"Q. What time was that do you know?

"A. I couldn't tell you."

10 The evidence is, with great respect, that there was some effort made to fight Baldy's on the 9th, and we can probably quarrel over the detail. But it is not correct to say that there was no effort made to fight the fire on the 9th. There plainly was, both on the ground and from the air.

15

Your Worship, I was going to move on to the next topic, if that is appropriate.

20 Q. There has been some discussion in your report, Mr Cheney, about the comparative merits of using the river as opposed to - I am sure I am going to get this name wrong - McIntyre's and Lovells trail as the western containment line. Was it McIntyre's or Lovells, I have forgotten?

25 A. Both names apply to parts of the trail that goes from the Goodradigbee River. I think it is Lovells trail up to the junction where the turn-off is down to McIntyre's Hut. From that point on it becomes McIntyre's Hut trail but it is
30 labelled differently on different maps.

35 Q. So long as you and I and the rest of the inquest know what we are talking about - we are talking about using the trail as opposed to using the river. I don't want to go into all of what you have said because you have given your evidence about that. But can I just add to the mix this proposition: if the western containment line was going to use the trail, it would require some
40 resources to patrol it and eventually to back-burn from it; would you accept that?

A. Yes.

45 Q. Can I suggest to you that it might require something of the order of 3 to 5 tankers plus 10 to 15 firefighters to carry out that sort of task?

A. Yes. That seems reasonable.

Q. So into the mix of issues as to the river versus the trail being used as a western containment line, we probably have to throw in a resources issue as well on that basis; don't we?

5 A. There is always resources issues to be thrown in, yes.

Q. You accepted earlier that early on the night of the 8th the Queanbeyan meeting was looking at potentially either having responsibility for or being involved in eight fires that night?

10 A. Yes.

Q. And the possibility of more to come?

15 A. Yes.

Q. Given the sort of conditions that were around at the time?

20 A. Yes.

Q. Now if we can go to your report at page 15. That is [DPP.DPP.008.0051]. I want to pick up one issue here, Mr Cheney. First of all, do you see a paragraph which has "footnote 35" in it?

25 A. Yes.

Q. It begins "officers from ACT Forests?"

A. Yes.

30 Q. Are you referring here to the issue of whether or not the back-burn should have started along the southern perimeter earlier than it actually did? You made the statement there that Mr Arthur wanted a secure line around the entire perimeter. By that do you mean the entire southern line?

35 A. No. I understood that as being the entire perimeter of the fire that he was working on.

Q. Because in fact isn't it the case that burning off began before parts of the northern line had been secured?

40 A. Yes, indeed.

Q. There may be a difference in understanding about that and no doubt that can be cleared up in the inquest later. But can I put this hypothetical to you for the moment: if it be the

case that the incident controller was insistent that he would not commence burning out until he had a control line around the southern and eastern perimeters in particular, that becomes then
5 a question of safety trade-off, does it not, given what he had by way of a trail to work with on the southern side?

A. Well, there were sections of trail that were already in and there were a few sections that
10 needed to be tied in. That is fairly common in firefighting.

Q. But you don't disagree, do you, with the description of the serpentine nature of the power
15 line trail in places?

A. No, it is a windy trail.

Q. You don't disagree with the proposition that in places it is a death trap without helicopter
20 support?

A. Yes, I disagree in part with that.

Q. You do?

A. Yes.
25

Q. Would you agree that there is in the decision whether or not to start the burning on that day or the next day trading off issues of safety versus getting the burn-off started; that is, it would
30 have been more safe to do it the next day. It then becomes a judgment call as to how much more safety you need.

A. I think it is something that needs to be assessed by the crews going and looking at the
35 condition of the trail and the difficulty of the burning-out operation. It is actually a very accessible trail. It is not steep. While it is windy, the position of the cleared area of the power line break that had been cleared through
40 there meant that there were ample places that could be a refuge. So you couldn't describe it as a death trap in sensible firefighting terms. Perhaps that reflects a lack of experience in
45 forest firefighting.

Q. That is not seriously put in relation to the people fighting this, is it, Mr Cheney?

A. Yes, indeed.

Q. Lack of experience?

5 A. Yes, forest firefighting is different to what a lot of people do.

Q. Are you seriously suggesting that people who were making decisions about this fire lacked experience?

10 A. In forest firefighting.

Q. As you wish. Finally, Mr Cheney, can I take you, please, to page 18 of your report and to the sentence which has "footnote 45" at the end of it.
15 You are talking here of the 11th of January and are referring here to an ACT task force which had been deployed to McIntyre's. You noted in the paragraph I was taking you:

20 "They were advised by the Emergency Services Bureau in the ACT they had to return to their respective depots by midnight, which meant leaving the fire ground at around
25 2100 hours."

That's the context in which you make the next comment:

30 "This decision may have influenced the RFS incident control team not to continue with the burn overnight. (45)"

Footnote 45 is a reference to a statement of Mr A.E. Winter. We haven't been able to define
35 whether the document I am about to show you is in the plethora of evidence or not. It is a photocopy of McIntyre's Hut radio log starting on 11 January. I have the original book, if the inquest wishes that and a number of photocopies.
40 I just ask you, Mr Cheney, to look at the photocopy.

If I tell you, Mr Cheney, that this is an extract from the log from the 11th you can see right down
45 the bottom, the first page there, above the entry 006 there is 12/1/03, can you see that?

A. Yes.

Q. As you read through the next page there is a whole series of entries going through the night, which would tend to indicate that Mr Winter may have had the understanding that the fire wasn't being fought that night but plainly he made a mistake.

A. Yes. I would have to read it.

MR ERSKINE: I don't know whether it is appropriate, your Worship, if I tender that. I don't know what the appropriate procedure is.

THE CORONER: You simply say "I tender that". You can certainly tender it. There is no impediment on you doing it. This is not, as I understand it, part of the records that we have. So you wish to tender that document? Any objection, Mr Woodward?

MR WOODWARD: No, your Worship.

THE CORONER: This document is a transcript of radio log for the 11th of January. Who maintained that? Was it the Rural Fire Service in New South Wales?

MR ERSKINE: It is the Rural Fire Service log, your Worship.

MR WOODWARD: Could I just ask my friend, your Worship, as I understand it this is being tendered as evidence that in fact the burning-out operation did continue overnight on the night of the 11th and 12th after the withdrawal of the ACT crews?

THE CORONER: Is that so, Mr Erskine?

MR ERSKINE: That's so. As I say, we have the whole book here if the inquest would prefer to have the whole exhibit.

THE CORONER: I don't need the book to be tendered. Certainly Mr Woodward and any other counsel may examine it, if they wish to do so.

That document will become exhibit 0080.

**EXHIBIT #0080 - TRANSCRIPT OF RFS LOG FOR
11-12/01/03 ADMITTED WITHOUT OBJECTION.**

MR ERSKINE: I have no other questions.

5

THE CORONER: I see Mr Watts is not here. I think in the batting order that we established yesterday, it is Mr Watts and then you, Mr Johnson, but not until 2 o'clock.

10

MR JOHNSON: Yes. I infer from Mr Watts' absence that he is out making some finishing touches on his preparation. I would ask your Worship to adjourn to 2 when Mr Watts will commence and I will be in a position to start after him.

15

MR ERSKINE: I had a brief chat with Mr Watts this morning because he was next to me asking the same thing, and he said he was able to and planning to start at 2.

20

THE CORONER: And ready to go?

MR ERSKINE: Yes.

25

THE CORONER: We will adjourn until 2 o'clock this afternoon.

LUNCHEON ADJOURNMENT

[11.58am]

30

RESUMED

[2.00pm]

THE CORONER: Yes, Mr Watts, are you ready?

35

MR WATTS: Yes, your Worship.

<CROSS-EXAMINATION BY MR WATTS

MR WATTS: Q. Mr Cheney, can I start by asking you about some basic physics concerning the fires. I noticed I wasn't here of course when you gave evidence on the first occasion, but you had your trusty cigarette lighter, I think, with you; is that right?

40

A. I did.

45

Q. You gave a demonstration?

A. I did.

Q. Of the nature of the flame and temperatures inside the particular part of the flame?

A. More to illustrate the difference between temperature and heat.

5

Q. Yes, we will come to that issue a bit later. Can you tell me this - it might seem a silly question - why does a flame burn upwards? Is it the heat rising or is it the weight of the gas escaping?

10

A. It's because the gas has been heated during the combustion process. Then it's lighted in the air surrounding it because it's hot and it's expanded and less dense, so therefore it will rise.

15

Q. And of course when you light a match and hold it upwards, that tends not to burn after a while. Is that because it runs out of fuel? Down the stick, I mean, you hold the lit part at the top?

20

A. Holding it vertically?

Q. Yes.

A. It is because the rate of heat transfer at the bottom of the match is dependant primarily on radiant heat transfer. It doesn't have the advantage of getting convective heat transfer.

25

Q. It doesn't burn down the stem, does it?

30

A. Well, it depends on the dryness of the match. This is one of the tests. If the wood is very dry and easily ignitable, yes, it can burn down the stem. It depends on the amount of radiant heat transfer at the base of the flame being sufficient to preheat and ignite the wood.

35

Q. Does it take it down?

A. And take it down. If the conditions are a bit moist and the wood, the match stick, responds to the atmospheric conditions, then a little bit of additional moisture may be sufficient for it not to burn down.

40

Q. Of course if you invert a lit match, it burns far more effectively up through the wood of the match, doesn't it?

45

A. Yes.

Q. And is that because it is burning into the fuel?

A. Yes, pretty well. Plus it has a more effective transfer of both radiant and convective heat to the match stick. That's a pre-heating process which assists the ignition.

Q. And is it the same principle or a similar principle whereby we observe that a bushfire burns uphill more quickly than downhill, because it's burning into the fuel?

A. Yes. By and large the flames lean over, or even if they are standing vertically, the angle attended by the slope foreshortens the area, so there is more effective heating of the fuel.

Q. There is more immediate fuel to the fire, is that right?

A. No, not necessarily more fuel available. The amount of fuel there is the same unless you are involving other layers of fuel whose ignition depends on the intensity of the fire that is generated on the surface. But if we take the simplest example where the fuel bed is just a litter bed --

Q. I am sorry, because--

A. Because the fuel bed is a litter bed - leaves, sprigs, bark and a bit of grass - then the process is that there is more effective pre-heating of the fuel before the flames come into contact with it so it ignites quicker. That process goes to effectively making the spread quicker. A few other things are involved in that as well.

Q. When we look at a flame and see an orange or blue flame, I know it's ignited gas and I think you talked about it being hydrocarbon gas on the last occasion; is that so? What is it we are seeing?

A. If you're looking at what's called a pre-mixed flame where the gas and the oxygen are in their optimum ratios so that they burn very efficiently, you get the reaction where it goes almost directly from gas to the end products of carbon dioxide and water without an intermediary product of carbon particles being produced in between as part of the

process.

5 If you are looking at an orange or red flame, that really is an indication of the amount of carbon particles, atomic carbon, which is produced as part of the thermal breakdown of the wood into gas. And then carbon is produced, and that being highly excited and by virtue of the temperature being raised radiates in the red spectrum. Is
10 that okay?

Q. Fine, thank you. I will come back to some of these matters a bit later.

15 I next want to ask you some questions about the development of your origin and development report, without distinguishing between the original one and the new one. What you seem to have done, apart from the introductory part, you have given
20 us a day-by-day description of each of the fires; that's right?

A. Yes, that's what I attempted to do.

25 Q. And it makes it very helpful to understand what happened. What I want to ask you is this: on some days, of course, you were direct witness to events. That's right; isn't it?

A. Yes.

30 Q. And other days you have given us your description of what happened when you weren't there?

A. Yes.

35 Q. Say 11th January on Bendora fire. I don't think you went out there that day?

A. Yes. The 11th?

Q. Yes, the 11th?

40 A. Which was Saturday?

Q. I am not sure what day of the week it was. The 18th was a Saturday.

A. No, I didn't go out on the 11th.

45

Q. But the on the 12th you went out there?

A. Yes.

Q. I take it that on the days you went out there you have told us what you've observed?

A. Yes.

5 Q. Have you also added in things that you were told?

A. Yes.

Q. And things you read about?

10 A. Yes.

Q. And on the days that you didn't go out there, say the 11th of January, that would be completely matters you have been told about or read about?

15 A. Yes. Mostly drawn from statements of people that were out there.

Q. I don't think you have attempted in your report to distinguish - you have given us some
20 footnotes of course, but there are occasions, are there not, where you have not attempted to distinguish what is your own observation and what someone else might have told you?

A. I think only on a couple of occasions
25 I footnoted that it was my observations.

Q. So that your role as an expert in this matter is a little bit unique, in a sense, that you are partly an expert commenting upon matters you knew
30 to be true and partly a witness of what you say happened?

A. Yes. No one person could be at every part of the fire. I certainly couldn't. So my task was to try to reconstruct the fires to the best of my
35 ability.

Q. But your role has been more than simply an expert who has been called in later to comment on facts; you were actively involved in what was
40 going on?

A. I guess so.

Q. In the ACT for some time prior to January, you have been actively involved in firefighting issues
45 and matters?

A. Yes.

47

Q. You have been on the bushfire council?

A. Yes.

Q. You were involved, I think, in commenting upon
5 the 2002 bushfire management plan?

A. Yes.

Q. And you have been a person to whom others have
come over the years to seek counsel and advice
10 about bushfire matters?

A. Yes.

Q. And you've been in situations where you have
offered advice and given advice over the years
15 about bushfire matters?

A. Yes.

Q. I think you have told the court on the last
occasion that whilst you haven't been actively
20 involved in operational matters - that is being
involved running a firefight - you have been an
observer of things?

A. Over the years I have done firefighting. As
part of my research I have managed some fairly
25 large what could be fire incidents, in terms of
organising the suppression and organising the
research.

Q. As I recall it, you told the court on the last
30 occasion that 1972 was the last time you were
actively involved in being in charge of fighting
a wild fire; would that be correct?

A. 1972 is probably the last time, excluding
putting out a few fires on my own property.
35 I actually physically constructed a fire line.

Q. Yes.

A. After I had been involved in fire management
at different levels, through the running of
40 research programs, and have been supervising fire
suppression in association with those programs.

Q. Yes. I am not attempting to criticise you for
any of this. I am just trying to understand.

45 A. Just wanted to clarify.

Q. Clarify and understand your role over the

years. Can I take you to one day referred to in your origin and development report. Can I take you to Sunday, the 12th of January, on the Bendora fire. It is [DPP.DPP.0008.0051], at page 34.

5 Mr Cheney, have you your own report?

A. Yes.

Q. That was one of the occasions when you were actually on the ground observing things?

10 A. Yes.

Q. Do I understand from some evidence you gave on the first occasion that part of your role from the time these fires started was to look at fire spread and test some theories or ideas that you had about fire spread, and to check them against your theories - I am not using "theories" in any critical sense, hypotheses, whatever you like to call it - were you collecting data?

15
20 A. Yes. I was of the opinion at the time that there would be a fair bit of data available from these fires. I personally wanted to get a feel for the fires in the field so that I would be better positioned to interpret the data when I looked at it at a later time. We did make some observations of the weather conditions that were on the site and basically took - the team took photographs at different times.

30 Q. Sorry to stop you there, but you weren't going out to specifically look at operational matters, you were more there to look at fire spread issues; would that be correct?

35 A. I don't think you can avoid looking at some operational matters. You get involved in them. I needed to talk to the people in charge basically to get access into the fire anyway.

Q. I understand that --

40 A. Having, in general terms, to find out what they were doing.

Q. Yes. But essentially you were not involved, say, on the 12th of January in any operational matters, were you?

45 A. Not in the terms of carrying out any operational fire suppression, no.

Q. You were not there to give advice about operational matters and you did not give advice about such matters on the 12th, did you?

5 A. Not unless I was asked specific questions by anybody.

Q. Would I be correct in understanding that you got there at about 2.40 in the afternoon?

10 A. I think that's about right, yes.

Q. And the crew that were there had been there since early that morning?

A. I don't know how long they had been there.

15 Q. Mr Bartlett was the incident controller out there on the day, wasn't he?

A. Yes.

20 Q. Did you seek a briefing from him or did you talk to him when you got there?

A. Yes.

Q. Did you get a full briefing from him as to what was going on?

25 A. Very, very general briefing of the position as he saw it. We drove around to parts of the fire together. At a later stage he was going to offer to fly me in a helicopter, which didn't eventuate - just discussing the situation with
30 Mr Bartlett.

Q. You know, don't you, that there have been some - I think Mr Cooper had been the incident controller the previous night, Neil Cooper?

35 A. Yes.

Q. There had been some difficulties with back-burning that night due to some strong winds; did you ascertain that?

40 A. Yes, I think so.

Q. The overnight strategy had been to burn out the area between the border trail and Mt Franklin Road; was that the strategy as you understood it?

45 A. Yes. I think previously there they had been trying to hold it on the road below, which was Chalet Road. When it had crossed over that road,

then the next step further east was the border fire trail and, beyond that, Mt Franklin Road.

5 So by the time I got there, the burning-out operation in that part of the fire was from the Mt Franklin Road as far as the turn-off to Moonlight Hollow Road. And when I got there, they were trying to hold the extension of the northern part of the fire along Moonlight Hollow Road.

10

Q. We will perhaps come to that in a moment. Two things: one, it was pretty clear that it was going to be a difficult day in terms of the weather - winds?

15 A. Only in relative terms. It wasn't going to be as difficult as it was later on --

Q. No, but in relative terms at the time, it wasn't an easy day for operational firefighting; that's true, isn't it?

20

A. I don't quite know how to define "easy" in those terms. They were going to confront some difficulties.

25 Q. Perhaps I will put it this way: the wind was strengthening. In fact, the wind strengthened just after you arrived?

A. Yes.

30 Q. Which made it more difficult to fight the fire?

A. Yes, because the wind was easterly and was burning upslope in Moonlight Hollow area of the fire.

35

Q. And Vivien Raffaele I think had a crew along Moonlight Hollow Road, did she not?

A. Yes.

40 Q. Would you agree with me that crew was stretched for about 2kms along that stretch?

A. No.

Q. Something in than vicinity?

45

A. They were concentrated fairly much on the section where the fire was running up to the road.

47

Q. And then there was some spotting over; was there not?

A. Yes.

5 Q. You made some comments about the way that was dealt with. The spotting was dealt with in two ways, I suggest: one is by crews being sent in to deal with them?

A. Yes.

10

Q. And also by the use of helicopters?

A. Yes.

15 Q. You have commented about the fact that it appears that crews are not permitted to work beneath helicopter drops. It's true, of course, that you don't put a crew right where the helicopter is about to land. That would be a safety issue, wouldn't it?

20 A. On the size of the helicopters they were using, it wasn't much of an issue. To keep yourself dry, you would step back out of where the drop was going to be.

25 Q. You try not to get the landing right on top of you. Also there is an issue sometimes about branches being brought down by a water drop?

30 A. Very large water drops. But the size of the branches that I saw, I didn't see any come down. I was under the water drops most of the time.

Q. That is what I was coming to, the fact that Mr Bartlett was in fact directing the water drops from the ground; was he not?

35 A. He - either Mr Bartlett or Ms Raffaele.

Q. Ms Raffaele?

A. Yes.

40 Q. In fact, it is not true to suggest that the crews were not working in that area underneath the drops?

45 A. They didn't get there for quite some time. I walked up the hill to observe the potential of spotting. One spot fire occurred and there were quite a number of unsupported water drops before the crews came up to the fire.

Q. Whilst that may be the case, in fact during the day it was not the case that crews were not working at all in conjunction with the drops?

5 A. I don't know where else they were working in conjunction with the drops. They seemed to be mostly on the road and the drops below the road were being used to try and slow the spread of the fire and reduce the intensity as it came up to the road.

10

Q. Which is a common use of water drops, is it not, to slow the intensity of the fire?

A. It is used, yes.

15 Q. But what I am suggesting to you is that whilst there may have been occasions when drops took place when there was no crew there, there were many occasions when drops were done where the crew was in place to deal with the fire underneath
20 where the water drop was taking place?

A. I got the impression that there were many more occasions when water drops were made which were completely unsupported and basically just, as an effort, to try and slow the fire down. The point
25 of my comments was that the small helicopters in those heavy fuels were particularly ineffective in slowing the fire down.

30 Q. Of course that's not something the person on the ground has much control over, is it, the size of the helicopter?

A. I'm sorry, I don't follow your question there.

35 Q. The incident controller on the ground uses whatever resources he or she is given at the time?

A. Yes.

40 Q. In terms of the overall strategy of fighting that fire, you know Mr Bartlett is a very experienced incident controller, is he not?

A. Yes.

45 Q. In fact, extremely well-qualified in that regard?

A. Yes.

Q. He was the person on the ground who was in the

best position to know what strategy should be put in place in terms of fighting fire; would you agree with that?

A. Yes.

5

Q. I think you have made a comment in this part of the report where you suggested that scouts might have been put up above Moonlight Hollow Road, was it - to deal with spots as they occurred?

10

A. Yes.

Q. Can I suggest to you that the difficulty with that is, firstly, removing resources from an area where they may be needed?

15

A. I consider it a standard practice if you have a fire which has the potential to throw a spot fire across the road to have one or two people up there looking for spot fires so they can put them out as soon as they occur. It is much easier if you are right on the spot to put your boot on it or scrape it with a rake hoe when it is only half a square metre than if it builds to any size. It is just a matter of applying some resources to do that job.

20

25

Q. Mr Cheney, I don't think anyone disagrees it is easy to put out a fire 6 inches by 6 inches. But the difficulty is, it is not, firstly you take resources from elsewhere that may be needed; secondly, you can't know where spots are going to occur and where in fact to station the scouts?

30

A. I think Mr Bartlett would know where to deploy resources if he decides to do that. It was obvious that you would put them keeping abreast of the flank fire that was progressing below Moonlight Hollow Road. The spots would come within 40 or 50 metres of that location. If you were already 50 metres up the hill, you were going to be closer, and it would be easier to get to them than if you wait for them to show up from the bottom and then send resources up to try and fight them.

35

40

45 Q. Can I suggest to you it would have required scouts along a distance of about 2kms to effectively do what you were suggesting, and the

resources to do that were simply not available?

5 A. No. You can suggest that, but the point where they were most likely to come was where the flames were active and burning up the trees and throwing embers from that, which was immediately above the position of where the flank fire was.

10 Q. I want to suggest to you that in fact there was never any significant delay between spots occurring and them being attended to?

A. I would disagree with that.

15 Q. And in fact where spots were occurring rake hoe lines were being put about those spot fires; were they not?

A. No, they attempted to attack the spot fire with a hose lay when it had achieved probably a dimension of perhaps 15 by 10 metres or something.

20

Q. Have you read the statement of Vivien Raffaele?

A. Yes.

25 Q. Can I suggest to you that she tells us that when spot fires occurred RAFT crews were putting rake hoe lines around the fires when they occurred?

30 A. It wasn't in the area that I was observing the spot fires, Sir.

Q. Isn't that one of significant issues, Mr Cheney, that you were there observing part of it?

35 A. Yes.

Q. You didn't have overall responsibility of the whole fire?

A. Yes.

40

Q. Or the knowledge that, say, Mr Bartlett had about what was needed where?

A. I believe Mr Bartlett was looking at a bigger picture.

45

Q. Yes. Can I just ask you this: the fact that spotting-over occurs in circumstances where the

wind is getting up of course is not indicative of any failure of the overall strategy of fighting the fire, is it? It is something that simply happens on occasions?

5 A. It is something that is likely to happen and something you should plan for.

Q. But the overall strategy of putting in containment lines as they did, attempting to hold it within those containment lines was a pretty sound strategy; wasn't it?

10 A. Yes.

Q. Can I next please take you to your fuel management report, which is [DPP.DPP.0008.0001] and to page 17. Do you have that?

15 A. Yes.

Q. I want to direct you to the heading "Rotation for hazard reduction". I am talking simply about pine forests for the purpose of these questions. Firstly, when prescribed burning is done in pine forests, if it is done, it is not done for the purpose of stopping fires; is it? It doesn't stop fires.

20 A. No. No prescribed burning effectively stops a fire unless it's in the year of the burn or the first year after the burn.

Q. And, of course - I might come back to this later - burning in pine forest is somewhat problematical; isn't it?

25 A. Yes.

Q. They have a low tolerance of fire and it can have disastrous outcomes when you burn in pine forests, can't you, in terms of the trees?

A. You can damage the trees and depending on the fuel load that's accumulated, which is often related to the harvesting operations, it is difficult to burn some fuels without either severely damaging the butt of the trees for lumber purposes later on or in fact killing the trees if the convective is too high.

40

Q. Thank you. And, likewise, other hazard reduction methods such as prune lower branches,

grazing cattle amongst the trees and poisoning weeds, again are things which whilst they might reduce intensity of fire through there are not designed to stop a fire?

5 A. No.

Q. Can we please turn, on the same report, to figure 1, which is on page 10. It is a black and white graph. I don't think there is a colour
10 version. Mr Cheney, I think when you were giving evidence about this matter earlier Mr Lasry was questioning you. I interjected and asked which end was which. The transcript reveals that you had low on the left and extreme on the right.
15 That's back to front, isn't it?

A. Extreme on the left, yes.

Q. We can't even see on the left of that graph where we have the curves upwards?

20 A. That is extreme there.

Q. Extreme to the left?

A. Yes.

25 Q. And the fuel load, you have down the bottom, is measured in tonnes per hectare. That is so, isn't it?

A. Yes.

30 Q. I just want to make this clear. We are talking about surface fuel load, are we not?

A. Yes.

35 Q. That is the fuel low down near the ground; is that what we are talking about?

A. Yes. It is usually the leaves, twigs, litter and some of the shrubs and grasses that are on the surface. It doesn't include materials supported in the trees.

40

Q. Thank you. I will come back to that in a moment, if that can be left there. During these fires, there were significant fuel loads in the eucalypt forests; weren't there?

45 A. Yes.

Q. Out in areas before the fires reached the pine

forests, they were burning through forests of up to 20 and 30 tonnes per hectare; would that be correct?

5 A. Yes. The higher fuels were more associated with the ash bark forests.

Q. And the structure and nature of pine plantation forests is significantly different to the native forests?

10 A. The main difference is that if the trees are unpruned then the lower branches can support needle fuels from the ground into the green crown.

15 Q. I want to ask some questions about that in a moment. Are you suggesting on page 17 - we don't need to put it up on the screen - that pine forest fuel load should be kept at 8 tonnes per hectare or less for the surface fuel load?

20 A. That comment is generally aimed at eucalypt forest. If you really need to reduce the fuel loads in pines to reduce the fire intensity and the fire behaviour, you have to take more drastic steps than just reducing the surface fuel load.

25 Q. When you are talking about 8 tonnes per hectare there, you are talking about?

A. Eucalypt forests.

30 Q. Thank you, I needed that clarification because I was going to suggest to you that, even in a well-managed plantation, it is difficult for the pine plantation to reach equilibrium at about 10 tonnes per hectare. Would you dispute that?

35 A. Excluding contributions from slash and debris from harvesting operations, that would be correct.

Q. I am talking about a well-managed one where that problem is dealt with.

40 A. I think that as soon as you start - it depends on if you are doing thinning operations - you will find that the total fuel load would exceed 10 tonnes per hectare, because you would get a contribution from the slash materials that persists for some period of time.

45

Q. I think really what I am putting to you is the reverse: that in a well-managed plantation it is

hard to get below 10 tonnes per hectare - you
can't really get below 10 tonnes per hectare.
I think we are wasting time now because you have
agreed with me that it is not talking about pine
5 forests.

A. Let me say, if you want to get below 8, you
would have to go into some other form of fuel
reduction which reduces the nature of the slash
piles within it. If slash is not present then it
10 can be burnt reasonably frequently, but it has to
be frequently.

Q. It would be a true proposition, would it not,
that where a fire actually starts in a pine
15 plantation it is easy to control it than where it
comes in, roars in from a eucalypt forest?

A. Simply a factor of size, yes.

Q. Could we come back to this figure 1. Can
20 I just ask you firstly what the black line at
1,000 going across is meant to depict?

A. In a eucalypt forest that's the intensity that
you are likely to be successful in controlling
with hand tools.

25

Q. I see. And I think your evidence is that if
we get an intensity of 3,500 or above in any kind
of forest, it is pretty well uncontrollable?

A. By any means.

30

Q. By any means, yes. If we had a forest at,
say, 5 tonnes per hectare, which is fairly low, in
extreme conditions if you run a line up from the 5
you get to about 3,000?

35

A. Yes.

Q. It is probably just controllable; would that
be right, in some circumstances?

A. Yes. You are starting to reach the limit
40 there. It is probably not controllable under
extreme conditions because of the wind. Even
though theoretically you might control it and the
actual intensity of the flames may not be high,
the continual blown embers are going defeat
45 suppression.

I have another version of that graph which

probably illustrates the point better. You can have it, if you want it.

5 Q. Mr Cheney, I have had enough trouble trying to understand all of this. Let's stick with what we have got. It is true also that you could have a situation where in a eucalypt forest you can have a fuel load of almost zero and still have a fire go through if it sufficiently intense when
10 it gets there?

A. That's right.

15 Q. And the example I had in mind was the Mt Macedon fire. Do you recall that, where fire had already been through and removed the surface fuel, another fire came through later?

A. I know that part of the Mt Macedon fire, the northerly run of the fire, was stopped effectively by a previous fire. It happened some months
20 earlier, except that the fire had spotted some 7 or 8 kilometres right across that area and created problems on the downwind side, after the wind changed. I am not aware of any specific cases of fuel reduction being involved.

25

Q. When these fires on the 18th of January came into the Uriarra pine forest, the intensity of the fire at that point would have exceeded 3,500; would it not?

30 A. Exactly where are you talking about?

THE CORONER: Which pine forest?

35 MR WATTS: Q. Uriarra. When the McIntyre's Hut fire, not my learned friend's "tongue" that came through the bottom but the main McIntyre's Hut fire that came through and hit Uriarra pine forest, it would almost certainly have exceeded
40 3,500?

A. Well, being pedantic about it, I believe in the first tongues that came over and a pocket of the Uriarra pine forest in the northern sector the intensity was quite low because the pines were young and they were still evidence of green pines,
45 that path there which burnt at night. Later on, the intensity, plus the size of the fire, rapidly got beyond --

Q. Certainly by the time it got to the Mt Stromlo area?

A. It was steaming along pretty well there.

5 Q. And applying your graph to that situation, it wouldn't have mattered two hoots what the surface fuel load was in the pine forests in that area, it was unstoppable?

A. Certainly unstoppable, yes.

10

Q. When you gave evidence again, I think it was last week or the week before, in your evidence-in-chief on this occasion, you were asked some questions - I withdraw that.

15

Can I take you to pages 26 to 29 of this fuel management report. I want to ask you some questions about crown removal. I take it you are talking there about pruning; is that what we are talking about?

20

A. There is a concept that it was possible to create a crown fire-free zone by pruning the lower branches to a height and also reducing the surface fuels so that a fire burning into a pine forest, even under extreme conditions, could not develop into a crown fire but would still burn through that forest.

25

Q. In fact, in the areas around Narrabundah Hill, I think there had been such work done prior to these fires?

30

A. Yes, there was a strip between - sort of running parallel to Eucumbene Drive, which had been treated.

35

Q. And the fires in fact still came through there, didn't they?

A. Yes.

40 Q. So it's not, in a sense, a panacea to where fires will be stopped?

A. No. But I think there was evidence, as I have tried to illustrate in those photographs, that in fact the attempts to reduce the fuels and create that crown fire-free zone did reduce the fire intensity in parts where the fuel removal had been high in the previous fire that had been put

45

through.

Q. Yes. I think it does illustrate that in your report, although again it is a black and white
5 photograph. It is a bit hard to exactly see it.

A. Yes.

Q. You do know, of course, that pruning of the
10 pine forests is an expensive part - a necessary
but expensive part of the management of pine
forests?

A. Yes.

Q. And the general practice has been to prune to
15 6 metres?

A. Not the general practice. In the past the
general practice has been to prune to 2 metres.

Q. Well, you are suggesting, I think, 8 metres?

20 A. In this crown fire-free zone?

Q. Yes.

A. Yes, it was to 6 metres.

25 Q. To make myself clear, I meant in that area.
But as I understand what you are suggesting, in an
area say around, let's take the Duffy area as an
example, you would have a 500m buffer zone where
the pruning is up to 8 metres?

30 A. Yes.

Q. And the depth would be 500 metres?

A. Yes.

35 Q. There has been no particular study about the
effectiveness of that kind of suggestion; has
there?

A. No.

40 Q. There is no data to support it?

A. There is one chap, called Alexander, who
attempted to develop a model and did burn some
fires within pines to try and build a model of
a pine fire-free zone. But you're right, it
45 hasn't been tested. Plantation managers have been
very reluctant to let me burn fires in their
plantations.

THE CORONER: That sounds reasonable.

MR WATTS: Can I suggest that's not a surprising
5 bit of it.

Q. Can I suggest this to you: you were asked when
you gave evidence-in-chief about where you costed
a number of things. This is another item that you
10 haven't tried to cost in terms of pine forest
management; have you?

A. Not specifically but I can understand it would
be expensive.

15 Q. Or at all?

A. Or at all, no.

Q. Can I suggest to you that a big difference
between 6 metres and 8 metres is that, if you use
20 8 metres, you have to use a mechanical cherry
picker to be able to do it. You can't do it from
the ground as you have done at the moment?

A. Or you can use ladders and climb, like I do.

25 Q. It would significantly, I put to you, increase
the costs and overheads of the management of
a pine forest, if your suggestion is adopted?

A. I think this is a cost that if you are going
to put plantations close to an urban area you have
30 to face up to, or you put them somewhere else.

Q. But it's an increased cost in the face of an
absence of any particular evidence that it would
be very effective?

35 A. I think you could look at that diagram, and
considering the intensity of the fire, say that
those pictures say it did have some effect. As
you said before, it's not a panacea, but it is
certainly a long way better than having an
40 unpruned plantation alongside the urban area.

Q. I don't think I was suggesting to you it not
be pruned at all. I think what I was putting to
you, Mr Cheney, was there is no evidence to
45 suggest that going to 8 metres works any better
than going to 6 metres. You can pick 10 metres or
12 metres, it is simply a bit of guesswork at the

moment; isn't it?

A. The higher the better.

5 Q. We can take all the branches off and we would
have no problem.

10 Can I just show you this document (handed) which I
think was a photocopy of what has been termed
a note pad with green cover on it. It is one of
your note pads, I think. Do you know what that
is?

15 A. It looks like in part some notes that I made
out on an investigation of a fire coming out of
a rubbish dump in Western Australia.

20 Q. Can you tell us when the notes were made, just
to shorten - I don't want to waste time on this?

25 A. I think the part you may be referring to is
the second of those. I think the first two pages
in the copies you have given me are those notes
which was of another investigation of an escape of
a fire from a tip. And the second two pages where
there is "prune to 6 metres, burn and remove
debris" --

30 Q. Is that related to pine forests?

A. That is related to the pine forests that were
adjacent to the water treatment works on
Mt Stromlo particularly.

35 Q. When did you make these notes?

A. They would have been made in 1982.

40 Q. '82?

A. '82.

45 Q. So your suggestion then was prune to 6 metres?

A. Yes.

47 Q. If I can have that back please. (Document
returned)

Can we turn to page 7 of the report and in
particular table 2. Mr Cheney, this is your
difficulty of suppression table. Can I take you
to the very high part where you say:

"Back-burning will fail due to spotting.
Burning ash should be avoided."

Do you see that?

5 A. Yes.

Q. I am being in no way critical. I am not
suggesting the general concepts in your table are
not correct, but can I suggest to you that these
10 are general statements that do not have to be
invariably applied inflexibly?

A. Yes, but I would suggest that last paragraph
of that "very high" should be given more credit
than it is at the moment.
15

Q. Well, on any particular day the fire danger
rating may vary of course?

A. Of course.

20 Q. Just because there is a forecast of a very
high fire danger doesn't mean that some stage
throughout that day you can't do some
back-burning?

A. Absolutely.
25

Q. And of course even in some adverse
circumstances you can back-burn if you have a big
enough containment line?

A. If you are working in forests, the general
30 principle I would recommend people use is that, if
you can't fight the fire directly, you are likely
to lose it if you put in a back-burn. Again, it's
a general rule but the reason that you lose fires
is generally because of spotting rather than
35 flames sort of leaning across the road, although
both can happen.

Q. Of course the other thing is that sometimes
you will have a weather forecast which is adverse
40 and weather forecasts are notoriously - I withdraw
that - can be quite different.

A. Yes.

Q. I am sorry, the actual weather can be quite
45 different to what is forecast?

A. Yes.
47

Q. I think Mr Bartlett in his Bladbo fire report - do you remember that?

A. Yes.

5 Q. I think he had a table in there showing throughout that period of time there was a significant difference between the forecast weather and the actual weather. I suppose what I am suggesting to you is that, whilst this table
10 is a very good guide, you have to exercise some discretion and flexibility when you are actually on the ground.

A. Yes, if you can assess on the ground that the fire danger is not as high as is rated there then,
15 even though the weather may be forecast at some other place, there is great variation in the strength of the wind in particular across the landscape. And one of the difficulties in firefighting is knowing where that's going to be.
20

MR WATTS: Does your Worship wish to take a break at 3 o'clock? I am going to another point.

25 THE CORONER: It is just as convenient now to take a short break.

SHORT ADJOURNMENT

[2.58pm]

RESUMED

[3.10pm]

30 MR WATTS: Q. On the last occasion you gave evidence-in-chief, I think at about page 6804, you were asked some questions about land managers' responsibility for fire suppression. Do you
35 recall that?

A. Yes.

Q. I think your suggestion is that each land manager be responsible for its own fire
40 suppression. Is that as we understand it?

A. Yes.

Q. I am not talking about the backyard, you know?

45 A. Major.

Q. Major?

A. Major land managers, yes.

Q. That's a proposition which you have advocated for some time; is it not?

A. Yes.

5 Q. In the ACT it would mean that Parks would have its own fire suppression agency and Forests would have their own; is that so?

A. Well, a branch, yes.

10 Q. That's what I need to understand. Are you suggesting that they have their own independent firefighting agency or that there be some coordination between them?

15 A. They have within their staff the sufficient capacity to undertake suppression of significant fires on their land.

Q. Your suggestion, again can I put to you, has not been based upon any particular scientific study?

20 A. No.

Q. It is, can I suggest, your feeling or impression of what might be better?

25 A. That's my opinion, my view, yes.

Q. And can I suggest to you that even now in the ACT the agencies we are talking about have their own firefighting capacity?

30 A. Yes.

Q. For example, we have the forests brigade and the Parks brigade?

35 A. Yes.

Q. Can I suggest to you that one of the problems that can arise if you have independent agencies is problems of coordination between them?

40 A. Yes.

Q. Would you agree with me that there was some problems in Victoria for a period of time between CFA and the DSE?

45 A. I don't know of that, but I could well imagine.

Q. On a day like the 18th of January, the fires

within a few hours traversed national park, pine forests, rural land and urban land.

A. Yes.

5 Q. And it wouldn't be appropriate, would it, to have separate agencies simply dealing with their own area?

A. No. Long before that stage it would have to come under some coordinated firefighting effort.

10

Q. Can I suggest that having regard to the size of the ACT, what happens, at the present time, is the most cost effective way of handling it?

15 A. It depends whether you factor in the cost of the losses.

Q. Well, of course, your proposal is not going to stop losses; is it?

20 A. It is not going to stop them, but if it leads to more effective and more efficient fire suppression, there is a good chance it will reduce it.

25 Q. But, of course, you are not able to point to anything which would indicate that would be the outcome, are you?

A. No. Only my experience.

30 Q. Can I ask you some questions, please, Mr Cheney, about your amended report and in particular this is [DPP.DPP.0008.0051] starting on page 55.

35 I take it you would agree with the proposition that prediction of fire behaviour at any specific time or point - sorry, at any particular point in space or time usually has a wide error margin?

A. Yes.

40 Q. They are your own words, aren't they, in your other report?

A. Yes.

45 Q. At page 505 of the transcript, Mr Stitt put to you, and I think you agreed with it, that the use of a scientific method to bring to fire can give a fairly wide error band on any particular

prediction?

A. Yes.

5 Q. I suppose it goes without saying, the further out in time they are trying to predict a fire, the harder it is to do so?

A. Yes, depending on what you are trying to predict for.

10 Q. It's a bit easier to predict the next day than eight days ahead, because you don't know the weather eight days ahead; do you?

A. Yes. It's the weather prediction there that's the problem.

15

Q. Yes. And a fire itself I think you described as a chaotic chemical reaction?

A. Yes.

20 Q. It is very hard to study bushfire behaviour in a laboratory?

A. Yes.

25 Q. I think you have been critical of some studies in the United States on the Rothermel model of predicting fire behaviour, because it was done in that kind of environment?

30 A. Yes. The studies were very good, but because they were in a wind tunnel environment the extrapolation or the extension of those wind tunnel results to the field creates some considerable difficulties.

35 Q. And predicting the macro-behaviour of fire, to use that term, requires you to take into account numerous micro elements?

40 A. Because the fire itself does a certain amount of integration, then you end up making a prediction for the faster spreading point of the fire, which is what we have tried to do, trying to predict for the head fire rather than any specific point within the landscape at any particular time. So you start to average things out over time and space.

45

Q. Well, to work it out with any great precision you have to know the fuel content, its dryness; is

that so?

A. Yes.

Q. The weather conditions in the particular area?

5 A. Yes.

Q. In terms of temperature, humidity, wind and that kind of thing?

A. Yes.

10

Q. You have to take into account what impact suppression activities might have on what's going on?

15 A. You normally predict for the potential fire spread. Then suppression activities may or may not be successful, and may or may not change the rate of spread.

20 Q. I suppose what I am suggesting to you there, if in fact you have a circumstance where a fire has been contained, you don't assume that it is going to necessarily break its containment lines unless you know something to tell you that it's going to?

25 A. You have to predict for what it will do if it does break its containment lines. So there is a theoretical prediction or practical prediction, I prefer to say.

30 Q. It is, in a sense, theoretical, is it not, because it doesn't help those who have to know what is in fact going to happen?

A. You will have to repeat that.

35 Q. Those in planning are expected to do more than come up with theoretical possibilities. They are expected to come up with something as close to reality as possibly?

40 A. Yes, those in planning, though, should be predicting what will happen if the fire escapes the control.

45 Q. I understand that. But what I am suggesting to you, they also should be predicting as best they can what is the most likely thing that can happen?

A. Yes.

Q. That can not always be an easy task. That's so, isn't it?

A. That's right.

5 Q. For example, although you can have an idea of what the fuel is in a particular area, you can't have an intimate knowledge or detailed knowledge of what the fuel is over a wide range of the areas, can you?

10 A. No. That's correct.

Q. And in any particular area, say a eucalypt forest, you might have creeks and so on which provide a wetter area and then a more exposed area, certain slopes here and certain slopes there. So you can't plug it into a computer and have a printout taking all those factors into account, can you?

15 A. It's very difficult to get a practical answer that way. You can do it, but it's very difficult to get a practical answer.

Q. You agreed with Mr Stitt earlier last year when he said to you the different fuels have different chemical compositions and react in different ways. So to predict it precisely you would have to know all that?

25 A. Yes. I don't think you will ever get to that degree of precision, but practically the differences in fuels as they affect fire behaviours in terms of their chemical composition, and to an extent even their structure, are not that important. The other factors that influence fire behaviour have a much greater impact on the prediction.

30 Q. Like weather?

A. Like the wind, the humidity and the fuel moisture content. If you are looking at wind and fuel moisture content, you probably explain something like 80 per cent of the variation on level ground. You add the slope in and there are certain relationships which appear to hold up reasonably well for fires burning upslope or downslope.

45 Q. Of course to add to the complexity you are

depicting, you might rely upon weather forecasts which turns out to be incorrect?

A. Yes.

5 Q. And to add to the complexity, local weather conditions can be quite different from the area where you have the weather forecast?

A. Yes.

10 Q. And then you have problems, I think you referred to them yourself - I don't know what their significance is - atmospheric stability, solar radiation and things like that which are an overall mix?

15 A. We surmise they are. We haven't been able to show them in any sense where we have been able to get practical differences that can be attributed to that. But we surmise that would have some effect.

20

Q. So at the end of the day, whatever the best forecasting is, the behaviour of bushfire can surprise people?

A. Yes.

25

Q. Surprise the best prepared and informed planner?

A. Yes.

30 Q. And I think you said at 510 of the transcript that there were some matters of this fire which surprised you?

A. Yes.

35 Q. Mr Erskine's "tongue" surprised you?

A. Yes.

THE CORONER: Do you want to rephrase that, Mr Watts?

40

MR WATTS: The tongue of fire that escaped the McIntyre's Hut fire to the south - to the west and south and came in between the Bendora fire and McIntyre's Hut fire, can I suggest to you was a complete surprise.

45

A. Yes.

47

Q. What was surprising about that was the fact that it happened, but also the speed in which it came through?

A. Yes.

5

Q. I think you have agreed that you never thought that all the fires would merge in quite the way they did?

A. Yes. I was surprised there wasn't more lateral spread on some of the fires and that that fire coming through the centre filled out extremely rapidly.

Q. I think when I started I asked you questions about you visiting places, and I take it that what your general plan was was to work out on a day-by-day basis where you might get the best material that you needed?

A. It was more to go to places that were accessible on different fires to get an impression of the fire behaviour and how it was burning in different fuel types.

Q. And I think on the 18th you headed down to the south?

A. Yes.

Q. Past Tharwa?

A. Yes.

30

Q. Am I correct in understanding that the fire which on the evening of the 17th was at Mt Tenant - is that correct?

A. Yes.

35

Q. On the 18th spread to the western side of Monaro Highway, it didn't go any further?

A. It didn't even get there. It was burning on the eastern side of the Murrumbidgee River and it reached about the top of the slope of the valley there. There was some spot fires that could go closer to the Monaro Highway.

Q. Is my information correct, it spread something in the region of less than 3kms throughout the whole day?

A. It wasn't very far. I don't know. Three may

be right. It might have been a bit further.

Q. That would be in the ball park. Do you want to have a look at the map?

5 A. I will have a look at the map. Say probably closer to 5kms.

Q. Thank you. In terms of predicting fire spread, we have this McArthur meter which we have.
10 Mr Cheney, lawyers might not be illiterate but they are generally enumerate, and something like that scares us a lot.

A. Good.

15 Q. Is there an equation that you use or you can write down which reflects what this purports to calculate?

A. Yes. There are equations which represent the result of that meter.

20

Q. Your calculations which are on page - you have done four calculations on page 56 of your report or scenarios, we might call them. Do you know what I am talking about?

25 A. Yes.

Q. Two are based on forecasts, as I understand it, two are based on actual weather; is that so?

A. Yes.

30

Q. Did you simply in each case apply the data to one of these or a computer version of one of these?

A. Just the meter.

35

Q. The forest fire meter mark V, and in terms of the forest multiply it by three?

A. Yes.

40 Q. Can I just ask you one question before I come on to the detail of those calculations. On the previous page, page 55 - before I ask you about that precisely, we have talked already about topography and fires going up hills?

45 A. Yes.

Q. When I started asking you some questions I

asked about fires burning up hills, why they burn up hills more quickly; is that so?

A. Yes, you asked that question.

5 Q. And I think you explained to us why. The McArthur meter tells us, does it not, that you have to take into account topography?

A. Yes.

10 Q. In fact, on the reverse of this McArthur meter it has a five-degree, 10-degree and 20-degree angle. Are you familiar with what is on the back of that?

A. Yes.

15

Q. It tells us in terms of a 20-degree angle fire burns up a slope four times as fast, as a general rule?

A. Yes.

20

Q. I take it we are talking about eucalypt forests, are we, or doesn't it matter?

A. It doesn't matter whether it is a grass land or pine forest or eucalypt forest. The same relationship appears to hold fairly well for all fuel types.

25

Q. It tells us that downslope you make a corresponding reduction. I take it that means you divide by four?

30

A. Yes.

Q. For a 20-degree angle?

A. Yes.

35

Q. Just to clarify, I suppose: these estimates of rates of spread in terms of slopes, again, are not meant to be mathematical precise things that we take as gospel on each occasion, are they; or are they as close to that?

40

A. They are a mathematical function which describes those rules of thumb or those general points that McArthur has described there. But I don't think you take any part of fire behaviour as absolute gospel.

45

Q. So unless I am misunderstanding something,

when you tell us in the middle of page 55:

"The effects of slope cancel out a large fire."

5

That's not consistent with what's put on the back of the McArthur meter; is it?

A. When you do get large fires, what McArthur says in his production of that meter and the
10 accompanying papers is that the increase upslope tends to be cancelled by the decreased downslope. So if you have a fire moving through the topography then you can do the calculation as though it was on level ground, and assuming that
15 those two effects cancel out.

Q. Well, the information on the back of the McArthur meter - I am not saying what you are putting is incorrect - that information about that
20 is not available on the back of this McArthur meter; is it?

A. No. But I would suggest it is fairly widely promulgated in fire lectures.

25 Q. If, of course, you applied what's said there about the slope, upslope and downslope don't cancel each other out, do they?

A. I don't follow your question.

30 Q. Well, if we have a fire where the upslope is 20 degrees and downslope is 20 degrees, say over a period of time, if the fire goes - can I put this to you: say a fire burns for three hours. The first hour it burns at 1 kilometre an hour on
35 flat ground and travels 1 kilometre?

A. Yes.

Q. The second hour it goes up a slope at 20 degrees. It travels 4kms, according to this?

40 A. Yes.

Q. The third hour it travels down a slope at 20 degrees. It travels a quarter of a kilometre. That's so?

45 A. That's right.

Q. And so in that circumstance if you adopt

what's on the back of the metre that doesn't cancel itself out, does it?

5 A. No. That's largely the situation of a fire that is not spotting. When you get up into the extreme fire dangers where fires are spreading across the landscape, the spotting fills out the downslope, and so it burns out much faster than a fire which is starting and burning down. And in fact, depending on the wind curl over the
10 topography, the fire may burn downslope at much slower than a quarter of the predicted rate of spread. It is one of the reasons why it has been difficult to put that information into a computer model which relates all those equations to
15 specific points in the landscape.

Q. So these variations of course add to the complexity of the planner's task?

20 A. Yes.

Q. With these particular fires, the McIntyre's Hut fire, if you wanted to predict when the fires might be reaching the urban area, you would have to have known not only the matters I have talked
25 about before but you would have to have known when the McIntyre's Hut fire was likely to break out of containment lines and where and the extent of the breakout?

30 A. Yes.

Q. Because simply by applying your calculations might produce an incorrect result, if in fact the fire is contained on a particular day?

35 A. That would seem reasonable. If it is still contained it is not going to spread. But you make a prediction for what happens if it escapes under those weather conditions.

40 Q. But when planning for the future, you have to try and make an estimate of when it is going to actually reach somewhere, not when it might reach somewhere if something else happens?

45 A. You are always planning for if something happens, and that's if the fire breaks away. I mean, if you don't do that, you don't prepare anything.
47

Q. Mr Cheney, I think we are at cross purposes.

A. We might be.

Q. I am not suggesting the planners aren't
5 required to do that type of planning as well. But
what's of course very important is the prediction
as to when in fact the fire is likely to reach
somewhere. There is a bit of guesswork involved
in that, isn't there?

10 A. Oh, yes.

Q. Can I just clarify some matters with you about
what you say. Can you help us understand your
calculations. Could we go to what we call
15 scenario one on page 56. Just to make it
abundantly clear and try to show that I might
understand some of this, you don't multiply the
grassland prediction by 3, do you? You are not
doing that?

20 A. No, because we had revised McArthur's
grassland fire danger meter and produced a new
meter that took that into account.

Q. So you're only doing it for the forest.
25 I notice you are not distinguishing between pine
forests and native forests?

A. That's correct.

Q. Just on that, as I understand the way you have
30 developed your Vesta study, it's essentially been
based on your observation on what's happened in
the jarrah forests of WA?

A. That's correct.

Q. I know you told us that pine forest managers
35 are not too keen on you lighting fires in their
forests, but I take it that you haven't actually
done a study of pine forests other than what you
might have observed on the 18th of January?

40 A. That and other wildfires that have been
recorded in pine forests. There have been quite
a number of them. There have been some reasonable
studies that recorded the rate of spread under
weather conditions that can be related to the
45 forest fire danger index. There are a number of
those case examples around. When you've got
nothing else you are wise to look at those case

examples and see how the fire behaviour in the pine forests compares with the predictions of the eucalypt forest. There is not that much difference.

5

Q. You have worked out a rate of spread with scenario one on your figures of 5.5km for 5.4 for eaten-out pasture. I take it we can ignore the non eaten-out pasture because there wasn't any.

10 Is that right?

A. There was some ungrazed pastures in the Murrumbidgee corridor, the reserve, but they were relatively small in extent.

15 Q. You have not taken that into account?

A. No, I haven't.

Q. And you have concluded with each of these scenarios, am I correct, on doing your calculations that fires reached the outer urban areas - would have by 1300 to 1400 hours?

20

A. Put simply, it's an average speed of 5km/h over 15 kilometres.

25 Q. Yes. Over what period of time? When did you start?

A. That would take three hours from it starting to move.

30 Q. With your calculations and using 1300 to 1400 hours, what time? Are you taking 10 o'clock as your starting point?

A. At 1500 hours, that could have been at 12 o'clock. Movement from 12 o'clock.

35

Q. No. You tell us on page 57, 1300 - between 1300 and 1400 hours?

A. Sorry, where is that?

40 Q. Page 57. Your prediction is between 1300 and 1400?

A. Yes.

Q. Which of course was earlier than actually happened?

45

A. Yes.

47

Q. And so do I understand that you are calculating that from average spread from 10 o'clock?

A. Yes, that would be correct.

5

Q. We will just hold that there. Can I take you and can we bring up Mr Cheney's fire spread photos which we had earlier today, [AFP.AFP.0099.0007]. Have I got the right one. I want the one - I want the same as Mr Erskine.

10

THE CORONER: You better ask Mr Erskine. He did very well this morning. Your Worship, the trouble is my document doesn't have any page numbers on it. Can we turn initially to 0800 hours on the 18th of January. The amended one is [DPP.DPP.0008.0113].

15

MR WATTS: I am being slow. I want the amended ones, your Worship.

20

THE CORONER: They are the ones that I understand are amended.

25

MR WATTS: If we can go to 0800 hours for a start.

Q. Whilst we are bringing that up, Mr Cheney, to save time, can I ask for this - Mr Erskine asked some questions about how these were put together. I think you told us that some were done by line scans. The later ones where they are at 15-minute intervals were done by line scans?

30

A. There was line scan data that enabled me to interpret different parts of the fire. Data compilation was done using all the data available to me, including videos that had been taken from Mt Stromlo, and the time that it reached the urban interface.

35

Q. So you did these initially and then you have amended them as you have seen further material; is that so?

40

A. Yes. I went back and I had been a little broad on the area where more detailed examination of the line scan gave a better interpretation of the photographs. In particular, the spot fire that had occurred at Mt McDonald. Having more

45

time I could look at the video and make an interpretation of where that spread and how that fitted into the eventual pattern, when there was a line scan available over that area.

5

Q. But you are pretty well satisfied that what we've got with these pictures is pretty close to the mark?

10 A. I think that's the best interpretation you are going to get. If there is other evidence that was positive and could be confirmed, shows that I was incorrect, I wouldn't be surprised.

15 Q. I am not suggesting for a moment you are incorrect.

A. I am sure I am in places.

20 Q. We'll soon find out. Whilst this is not meant to be accurate to a millimetre, it is true, is it not, that you are quite satisfied from your experience, and looking at material you have looked at, that the pictures for the 18th of January on the McIntyre's Hut fire starting say at 8 o'clock are pretty close to the mark?

25 A. Yes, I feel they are.

Q. Whilst we look at this, at 8 o'clock on your map, the fire has not crossed the border; that's right, isn't it?

30 A. That's correct.

MR WATTS: Would your Worship excuse me for a moment?

35 THE CORONER: Yes.

MR WATTS: Q. Mr Cheney, do we jump from 8 o'clock to 12 o'clock; is that so?

40 A. I think so, yes.

Q. And between 8 o'clock and 12 o'clock - ignoring what's happening on the west - on the eastern side there is little change in the spread of the fire?

45 A. Yes, that's right.

Q. So that in your scenario one calculation is

done from 10 o'clock. For at least two hours of that nothing is really happening?

5 A. Yes, because the eastern side burnt-out onto the pasture country, so it was spreading laterally both on the northern and the southern flanks but it wasn't proceeding to the east.

10 Q. So that at least for the period between 10 o'clock and 12 o'clock your calculation does not give us an indication of the spread of that fire; does it?

A. No.

15 Q. If we had adopted your scenario one for that period of time, and you tell us that you are working from 10 o'clock, we should have had a spread of about 10 kilometres for those two hours and we have no spread?

A. No, the paragraph says:

20

"The planning unit should have assumed that the fire danger index of 80 was possible and extreme weather conditions would occur after 1000 hours."

25

The difficulty was when the fire was in the eaten-out pasture it required to exceed a certain threshold wind before it started to move.

30 Q. The fact is this is not a simple matter here, is it, at any particular point in time for applying a mathematical formula to certain factors and getting an accurate result?

A. No, that's correct.

35

40 Q. If I can take you to the period between 1200 hours and 1400 hours. Do you see what I am asking you at the moment? I am taking you to the spread between 1200 and 1400 hours over the period of two hours?

A. Yes.

45 Q. During that period of time the actual weather was fairly close to what was forecast for that day. That's true; isn't it?

A. Yes.

47

Q. The kind of weather we get later on and which you have used for your two further down calculations was not forecast?

A. That's right.

5

Q. And if these photographs are fairly accurate, as you seem to be confident they are, they tell us, do they not, that between 1200 and 1400 hours this fire travelled about 5kms to the east?

10 A. Yes.

Q. Which of course gives us, if you look at the actual thing that happened, a rate of spread of about 2.5km/h?

15 A. Yes.

Q. So that in actual terms, what we have is a rate of spread with those weather conditions as forecast of 2.5km/h and not anything like the sort of figures you're suggesting?

20 A. Yes. Except that the field observations of people at Uriarra at 1200 hours said the fire was still behind Uriarra station, and it started to move at 1300 hours. So that movement was mostly
25 between 1300 and 1400 hours, if you look at the 1300-hour map. And also the northern part that Mr Hoare photographed also started moving shortly before 1300 hours. This was when the weather conditions on the fire site were starting to
30 reflect what was recorded at Canberra airport.

Q. Later on in the day?

A. At that time.

35 Q. Well, the weather conditions deteriorated significantly, didn't they - the forecast fire danger index for the day was 60, was it not?

A. Yes, I believe so.

40 Q. That's right, isn't it?

A. Yes.

Q. And that was reached at about 1300?

A. Yes.

45

Q. So you are telling us that the fire started to spread more quickly after 1300?

A. Yes.

Q. But that's in circumstances where the weather has then got worse than was predicted?

5 A. Well, yes.

Q. And in circumstances where the fire danger index is accelerating rapidly from there where it reaches 100 at 1500 hours?

10 A. Yes.

Q. So can I suggest to you that what I put to you before was correct, that the actual rate of spread which occurred with the weather condition as forecast in scenario two of yours was well less than your theoretical calculations predict?

15

A. Yes. At that stage I would have to look from 12 to 1300 hours. Yes, I would say that's correct.

20

Q. You know, do you not, that at 9 o'clock on the 18th Hilton Taylor prepared a forecast of when the fires might reach Weston Creek?

A. Yes.

25

Q. Can you bring up [ESB.AFP.0110.0693]. You have seen that document before, Mr Cheney? You recall Mr Taylor gave evidence about that?

A. Yes.

30

Q. And can I suggest to you that was a remarkably accurate prediction?

A. Yeah, pretty good.

35 Q. A pretty good piece of planning on his part?

A. Yes.

Q. You, I think, gave evidence last year that you attended at least one of the planning meetings at ESB; is that so?

40

A. I think it was after the 18th.

Q. I think your evidence was, as I recall it, and I will check it overnight, that it was on the 16th or 17th, wasn't it?

45

A. I think you need to check that.

47

Q. I will just find my note, your Worship.
Page 534 of the transcript, that's as I recall it.
As I recall the evidence, you weren't sure but you
thought it was the 16th or 17th - Thursday or
5 Friday. In any event, it was before the fires
reached Duffy, was it not?

A. Yes.

Q. The tenor of your evidence, if I could
10 summarise it, was you were concerned about the
absence of warnings; is that so?

A. Yes.

Q. But you were reasonably satisfied that they
15 were on top of the planning as to what was going
to happen?

A. Yes. I believe that they were aware of what
could happen under conditions of an extreme fire
day.

20

Q. Did you at any stage on or just prior to the
18th of January do calculations of the kind you've
given us here?

A. No.

25

Q. Was there any reason you didn't?

A. As I said, my first reaction was, if we get an
extreme day we should plan for what is the best
possible conditions. That was actually the very
30 first paragraph there. You would say, "Well, we
know from historical evidence that the maximum
rate of spread in forest fires can be up to 10 or
12km/h and in grass fires up to 20km/h or half
that in eaten-out pasture." In terms of planning
35 for an extreme day, that's all the planning that
needed to be done. That was the potential that
the fires in the forest could under extreme
weather come into Canberra.

40 Q. And you were satisfied that that was in hand?

A. Yes. I was satisfied that the Emergency
Services Bureau people understood that.

MR WATTS: Is that a convenient time?
45

THE CORONER: We will adjourn until tomorrow
morning at 10.

COURT ADJOURNED AT 4.00PM UNTIL THURSDAY,
16 SEPTEMBER 2004 AT 10AM

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TRANSCRIPT OF PROCEEDINGS

CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

MRS M. DOOGAN, CORONER

CF No 154 of 2003

CANBERRA

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

DAY 77

Thursday, 16 September 2004

[10.00am]

MR PHILIP WALKER: Your Worship, just before
Mr Watts recommences his cross-examination, I
5 indicated the other day that I thought I might be
able to commence on Friday but that I would if
possible start on Thursday. I do believe that I
will be able to do that from about 2 o'clock
today. I will do the best I can with the material
10 that I have.

I should also mention, however, whilst this runs a
little bit ahead of plans, Mr Whybrow is
encountering some difficulty both because of a
15 couple of other commitments but also in dealing
with some of the material that he has to get
through the material. He, I think it can be said,
will not be able to start cross-examination
tomorrow. I think I should just indicate, if
20 possible, he will seek that he commence his
cross-examination next week.

For my part, I may well finish this afternoon.

25 THE CORONER: Mr Johnson, I think, also --

MR JOHNSON: As I understand Mr Watts will be
another half an hour or so. If that occurs, I
will finish by lunchtime if not before, which
30 means that Mr Walker could then proceed. Perhaps
we can then take stock at the situation at the end
of the day.

THE CORONER: That's the best thing to do,
35 Mr Walker.

MR PHILIP WALKER: I am simply giving you an early
warning of the way I thought it might be from my
point of view.

40 THE CORONER: How long would you be, Mr Walker?

MR PHILIP WALKER: I would have thought a couple
of hours.

45 THE CORONER: So you say not before 2 o'clock for
you today?

MR PHILIP WALKER: If possible.

THE CORONER: That is fine. If Mr Johnson
5 finishes before lunch that is fine, we won't start
until 2 o'clock with you. We will see how we go.
Do you know whether or not Mr Whybrow will be
available? When you say another commitment, where
is he?

10 MR PHILIP WALKER: He is presently engaged in
Queanbeyan. I don't know whether this case will
finish by tomorrow. You might recall he said we
were considering getting some advice and maybe
ultimately with a view of getting a report from an
15 expert. That gentleman was hoping to undertake a
view of some areas tomorrow. Mr Whybrow was
hoping, if possible, to actual accompanying him on
that view. The fellow is only available to do
that view tomorrow.

20 THE CORONER: I don't recall hearing about an
expert in relation to this, and a view. As I say,
maybe that is just my recollection, but it is the
first I have heard of that.

25 Mr Whybrow certainly didn't tell me that he was
not going to be available because he was involved
in other matters. He asked originally for the
adjournment of five working days to consider
30 before cross-examining Mr Cheney. I was of the
view that he needed the five working days because
he was putting a commitment into examining the
material. He at no stage told me it was because
he was involved in other matters. Mr Pike and
35 Mr Watts I knew of. Mr Whybrow has never informed
me that he was involved in other matters.

MR PHILIP WALKER: I think it is a combination of
both. I know Mr Whybrow has read a good deal of
40 the material because I have discussed it with him.
I think, frankly, the truth is in the five days it
is a combination of both.

THE CORONER: I am grateful to you, Mr Walker. We
45 will take stock of the situation at the end of the
day. Thank you, Mr Walker. Thank you, Mr Watts.

MR WATTS: Thank you.

<PHILLIP CHENEY, RESWORN

5 <CROSS-EXAMINATION BY MR WATTS

MR WATTS: Q. Mr Cheney, can I clarify one matter
with you. With your fire spread photographs or
plans or whatever, when you talk about a distance
10 of a fire travel, are we talking of a distance as
a crow flies or the actual distance travelled by
the fire? There is a bit of a difference
sometimes; isn't there?

15 A. Whether it goes up and down slope. No. It is
the map distance that I measured.

Q. The map distance?

A. It is a planar horizontal distance.

20 Q. So with the MacArthur meter, when you make an
allowance for fire spread and slope, does it take
into account the fact simply that the fire is
burning faster up the hill or is it taking into
account also the fact that it is also going a bit
25 further up a hill and down a hill?

A. It assumes an average at high intensity fires
that it will do the same pace as it would on level
ground. Although the fire does go faster uphill
and slower downhill, the meter doesn't
30 specifically calculate that when you are
calculating spread over large distances.

Q. Yesterday I asked you about the Mt Tennant
fire. Your fire spread maps - the Stockyard Fire,
35 was it the one that was at Mt Tennant?

A. That's correct, yes.

Q. You suggested it travelled about 5 kilometres
that day?

40 A. Yes.

Q. Your plans don't actually show the spread of
the fire on the 18th, do they?

A. Not to the final 1600 hours or to that time.
45

Q. Your last map seems to stop when it is on
Mt Tennant or just across Mt Tennant?

A. Yes. I haven't reconstructed that part. The final area is not far beyond where it was at 4 o'clock in the afternoon.

5 Q. Did it get into the Ingledene pine forest?

A. Yes, it had burnt through the Ingledene pine forest by the time I had observed the head fire.

Q. At what time, do you know, did it stop?

10 A. It effectively stopped spreading towards the east.

Q. I mean, towards the east?

15 A. When the wind change came through. That would be recorded on one of the bureau anemograms, say about half past 6 or a bit later.

Q. At night?

20 A. Yes.

Q. Certainly between - I take it there wasn't much spread - perhaps if I go to your fire spread map. Without trying to bring it up on the screen, the last one we have seems to be 17 January at midnight?

25 A. That's correct.

Q. I take it there wasn't much spread of that fire between midnight and 10 o'clock the next day?

30 A. I probably assume the overnight spread was similar to what occurred overnight at McIntyre's.

Q. The weather conditions down in that area I take it were pretty much the same as they were further up where the McIntyre's Hut fire was?

35 A. No, they weren't.

Q. Weren't they?

40 A. No.

Q. What was the difference?

45 A. The wind speed was considerably less. I expected that fire to cross the Monaro Highway first. That's why I went there. When I got there the conditions were dead calm, so I drove through the head fire to the Ingledene pines. And then I drove down to Michelago to get out of the blocking

effect of the convection column of the fires
up-wind. Beyond, to the south of Michelago the
wind speeds were less than 20 kilometres per hour
out in the open outside of the effect of the
5 convection column.

Satellite photographs also bear this out. There
was a considerable gradient in wind speed from
Goulburn through to Michelago. The peak wind
10 speed, it appears, was probably less than probably
north of Canberra, between Goulburn and Canberra.
The wind speed at Tuggeranong and at a private
meteorological observer at Gilmore was also quite
a bit less than the wind speed in Canberra. That
15 supports the observation that the wind speeds
further south were quite a bit lighter than they
were in Canberra.

Q. That points out the matter we were discussing
20 yesterday, there can be significant localised
differences in weather different to what is
forecast and different to the place where the
forest is given for?

A. That's correct. They can be both higher and
25 lower. The forecast is made generally for the
recording station, which would be Canberra
Airport.

Q. Tuggeranong?

30 A. And Tuggeranong, yes. Tuggeranong is
generally because of its location a bit less than
the airport anyway. But in this case I believe
there was a substantial gradient in the wind speed
falling away as you went to the south.

35 Q. When you first gave evidence last year you
were asked some questions about fire intensity.
You gave some evidence, and I think it is in your
report about the formula for calculating fire
40 intensity?

A. Yes.

Q. Do you recall that? You also at page 283 and
I think 286 of the transcript talked about the
45 difference between heat and temperature. You
referred to that yesterday.

A. Yes.

Q. I think that was where you said you got your cigarette lighter out to demonstrate that difference; was that so?

A. Yes.

5

Q. I apologise if you think this has all been covered before but I wasn't here on that occasion. I just want some clarification about the difference between heat and temperature. Am I
10 correct in understanding that temperature is simply a snapshot of the temperature of a fire at a particular point in time and a particular place?

A. Well, physically the temperature is the state of excitation of the molecules around you. It is
15 the air or, in the case of a flame, the molecules within the flame. So when I turned on my gas lighter, the temperature in that flame is around about 1,000 degrees. You could pass your finger through that at a reasonable pace and that
20 1,000 degrees is not transferred to your finger, which starts to feel pain at about 47 degrees Celsius because the heat from the flame or the amount of energy being produced from the flame is absorbed by your body and your skin so you don't
25 feel it.

So you have to think about heat in the terms of the amount of energy that is produced. That is in joules per second or watts. That is the number or
30 the unit for which you can correlate with impacts such as damage to trees or vegetation or heat being radiated out from the fire.

Q. The intensity is expressed in kilowatts per
35 metre, is that right?

A. Kilowatts per metre of fire edge. It is an attempt to try and calculate how much heat is being produced or how much energy is being released around the perimeter of the fire.
40

Q. When you say the perimeter, do you mean the fire front?

A. Well, around the entire edge of the fire, because the intensity will differ depending on how
45 fast the fire is spreading on each point of the fire. That will be different. The fastest part will be the head of the fire. You see that

because generally that is where the flames are tallest. The slowest part, because it is moving back into the wind, is the upwind edge of the fire.

5

Q. But that is a measure per metre?

A. That's correct.

10 Q. When you tell us about a fire having an intensity of say 3,500, that is a measure per metre?

A. It is usually or should be quoted of the fire front.

15 Q. Of the fire front?

A. Where it is identified. The general convention is that intensities are calculated for the fastest spreading part of the fire.

20 Q. I want to ask you two things about that. One is, is there an absolute measure of the intensity of a fire taking into account not a per meter measure but an absolute measure; do you simply multiply that figure by the number of metres; do you understand what I am asking?

25

A. Yes.

30 Q. When you have two fires, A and B, both might be an intensity of 3,500 but can be given an absolute reading for those two fires and say that fire's intensity is X and this is Y?

35 A. Both are calculated numbers, you would appreciate. You can, by taking the total area that is burnt in a certain period of time so you then have a heat release in kilowatts per square metre. So it is the square metre size that takes in what is being consumed. You would calculate that by taking the increase in area of the fire and therefore the amount of total fuel consumed
40 over the whole fire.

45 Q. So you just simply, as it were, add the number of square metres together. Two square metres is twice as much as one square metre. That follows?

A. Yes, generally.

THE CORONER: Always.

THE WITNESS: You take the increment in area of fire spread rather than just the rate of spread.

MR WATTS: Q. What I was seeking to clarify, I suppose, is if you have a fire that is 10 square metres, it is about 10 times as much as a one square metre fire. It doesn't increase in some kind of other geometric progression?

A. Yes. The area of a fire, if it is spreading at a constant rate, will increase exponentially simply as area does, because simply it is the square of the radius of the fire.

Q. Am I correct in understanding that you can only really calculate the fire intensity after it has gone through when you know what is being consumed?

A. Yes. It is a very general figure and it is usually assumed that most of the surface fuels are consumed. To calculate it absolutely you would have to calculate the total fuel consumption, which would include the contribution from the large log material and other materials that have burnt well behind the fire edge.

Because we try and relate fire intensity to what is happening at the flame front, mostly we only use the fine fuels because they are burnt in the area of continuous flaming and usually consumed within a second. One of the problems with that unit is that, to calculate it absolutely, you would have to take a segment of the fire from the metre at the point right back to the origin and work out all the little bits of burning fuel within that.

They end up - they are contributing behind the fire front. So in general terms they don't contribute to the activity in the flames, although they may have some contribution and do have some contribution to the overall convection of the fire.

Q. What I want to come to is this: have you done a calculation of the fire intensity of the fire as it reached the area of Duffy?

A. No, not specifically. But we can do one.

Q. Can you make an educated guess without sitting down and doing a calculation?

A. I think we ought to agree what goes into it. A rate of spread of, say, 5 kilometres per hour, a
5 fuel load of 20 tonnes per hectare if you are taking the fuels that are consumed both on the ground and in the canopy and multiplied by the heat of production. I am not going to take a
10 guess at it but I can calculate it out for you, if you like.

Q. Does it have anything to say about the speed at which the fire arrives?

A. The figure is dependent on the speed. Because
15 it is a calculated figure, it is dependent on what you observe of the rate of spread of the fire. It is dependent on the fuel that is available to burn.

20 Q. Could I ask you perhaps, when you have a moment, to do some kind of calculation of what intensity you feel the fire was as it reached Duffy?

A. Mmm-hmm.

25

Q. Your report refers to your Vesta program?

A. Yes.

30 Q. That's been now under way for some years, has it not?

A. Yes.

Q. When did it commence?

A. I commenced planning for it in 1992. We got
35 it approved about 1996. Then we started the burning experiments in 1998. Analysis has been somewhat interrupted by this inquiry.

Q. Perhaps assisted by the inquiry?

40 A. Not really. Unfortunately. I hope I might be able to.

Q. You made no mention of it, of course, in your first fire spread report. That's true; isn't it?

45 A. That's correct.

Q. Unless I misread things, the only mention of

it in the first tranche when you gave evidence was at 512 when Mr Stitt asked you a question about it. Do you recall that?

A. No, I don't.

5

Q. If I could suggest to you that, when he raised it with you, you mentioned to him that the results were still being written up?

A. That's correct.

10

Q. Is that still the position?

A. We were progressing with the analysis slowly - with the data.

15

Q. Still even today, I could take you to the CSIRO website documents if you wish, but the documents on the CSIRO website seem to suggest that it is still pretty much a work in progress?

A. Yes.

20

Q. The CSIRO produces the MacArthur meter mark 5?

A. Yes.

Q. Is it a patented thing?

25

A. It is copyrighted.

Q. You have copyright in it?

A. Yes.

30

Q. I take it that there is a committee, is there, at the CSIRO which determines what goes into it and how it is done?

A. Me.

35

Q. You are the head of the committee and the members?

A. Probably. There are some others.

Q. Do you have full attendance at meetings?

40

A. Generally.

Q. There has been a number of versions of it, updated from time to time?

A. Yes.

45

Q. And we are now at mark 5. Is that the latest one?

A. That's correct.

Q. I am talking about the forest fire index, not the grass fire?

5 A. Yes.

Q. I would be correct in putting to you, would I, that the methodology in the meter is as up to date as you can confidently put into it at the present
10 time?

A. The reason we undertook Vesta was to revise the meter after reviewing MacArthur's original data and comparing with wildfires. He had experimental fires which were at the low end of
15 the fire intensity scale. To get an operational working meter, he connected that with some wildfire information - a limited amount of wildfire information. He was trying to get some points at the top end of the scale.

20

What that methodology led to was an incorrect function which related fire spread to wind speed.

Q. I understand that is what Vesta is working on, to try and develop a MacArthur meter --
25

A. That's correct.

Q. -- that takes into account certain factors which it doesn't yet take into account?

30 A. That's right. The MacArthur meter at the moment and always has worked very well for small initiating fires. It was one of the problems that we faced in getting funds to re-do the work.

35 Q. This statement "we have a great deal of analysis still to carry out" would be a correct statement?

A. It is an iterative process. You keep working over it. If we had three months, I would say we
40 were three months off.

Q. What I am trying to get to is this: you haven't yet developed algorithms which you can satisfactorily use to develop a mark 6?

45 A. Not yet, no. That's correct.

Q. In the material on the CSIRO website and

elsewhere the term is used "up to three times"?

A. Yes.

5 Q. It is not a case of simply always multiplying it by 3 when you hit extreme fire danger?

A. Looks pretty good, I'm afraid. That was
apparent from some very early work we did to
justify doing the Vesta program, where we showed
10 on a limited number of fires that the spread of
large fires was three times greater than the
smaller fires. The MacArthur meter predicted
pretty well for the small fires but not for the
large fires. So it was necessary for us - there
was insufficient data for analysis. After we did
15 the Vesta program where a more complete set
supported that, then we felt that that was
important enough to issue a warning because we had
borne out the very early experiments with more
extensive fires.

20

Q. The calculation, even on your own material,
indicates that the multiplication is up to three
times but not always three times; that's true,
isn't it?

25 A. That depends on the wind speed and the size of
the fire. At high wind speeds and large fires, we
would use three times.

30 Q. In simple terms, it is true to say that you
are hoping to be able to develop an updated
MacArthur meter that takes into account this
material but at the present time you have not been
able to achieve that?

A. That's correct.
35

Q. It is correct, is it not, that when planning
programs even today are carried out throughout
Australia the MacArthur meter mark 5 is still
taught?

40 A. Yes.

Q. Are you aware of this document produced by the
Australian fire authorities as part of the module
on incident planning (shown)?

45 A. I know they have produced one.

Q. If you accept from me this was produced in

September 2003 and that prediction tools are referred to on pages 24, 25 and 26. You can have a look at it, if you want to satisfy yourself, but would you accept from me firstly this is a document used by the Country Fire Authority in training people in planning?

5 A. Yes.

10 Q. Would you accept from me that there is no mention of Vesta anywhere in the document?

A. I don't know that but I will accept it from you. But I might add that some planners are aware of the warning in the Vesta results. I was rung up by Victorian planners during the fires to discuss the multiplication factor. It is not unknown in the fire business.

15 Q. Finally, could I just ask you: you were around Canberra during the 2001 fires, were you?

20 A. Yes.

Q. As I understand it, there were about six different fires around the place, is that right, of varying sizes?

25 A. I guess so.

Q. A total of about 1,600 or 1,700 hectares was burnt out?

30 A. Yes.

Q. The 2003 fires there was about 170,000 hectares burnt out?

A. Yes.

35 Q. The intensity of the fires that were around Canberra in 2001 cannot in any way be compared with the 2003 fires; that would be correct?

A. You can compare them. The fires in 2003 burnt under a very high fire danger of around about 33. These fires burnt under a fire danger which in places was approaching or exceeding 100. It was very different conditions.

40 Q. That is what I am putting to you, they were quite different conditions?

45 A. Yes.

Q. And significantly different in calls upon those required to fight them; do you know what I am suggesting?

A. Not really.

5

Q. I am suggesting the 2001 fires, it was not appropriate to compare the two in terms of fire intensity or suppression?

A. You calculate the fire intensity to make an estimate of the heat release. It is just a comparative number. Just as those fires were spreading slower they probably consumed about the same amount of fuel and so the intensity figure will be considerably lower than figures that would be calculated for the 2003 fires.

10
15

MR WATTS: Yes, thank you, Mr Cheney.

MR WOODWARD: While that part of the transcript is up on the screen, I think in his answer to the last question Mr Cheney said, "You can compare them. The fires in 2003 burnt under a very high danger around 33. These fires" - I think that should read 2001.

20
25

THE WITNESS: Yes, I'm sorry.

MR WATTS: I think counsel assisting is correct.

THE CORONER: Thank you. Thank you, Mr Watts. Yes, Mr Johnson.

30

<CROSS-EXAMINATION BY MR JOHNSON

MR JOHNSON: Q. You indicated during evidence yesterday, Mr Cheney - at the top of page 6977 Mr Watts was asking you this:

35

"Q. But essentially you were not involved, say, on the 12th of January in any operational matters, were you?"

40

"A. Not in the terms of carrying out any operational fire suppression, no."

"Q. You were not there to give advice about operational matters you did not give advice about such matters on the 12th, did

45

you?

"A. Not unless I was asked specific questions by anybody."

5 To the best of your recollection were you asked specific questions by persons seeking your advice during the period of 8-18 January; that is, people in the field?

10 A. Apart from informal discussions probably with Mr Bartlett, Mr Cooper and Mr Sayer, but they were informal discussions.

15 Q. I just wanted to take you to a portion of the evidence of Ms Crawford at page 4514 of the transcript. I don't know if that is capable of being brought up. If there is any difficulty, I have a hard copy which can be handed to the witness, one to your Worship and one to anybody else who would like a copy.

20

In giving evidence on 3 May this year, Ms Crawford, who was involved in an operational sense with the National Parks and Wildlife Service with respect to the McIntyre's Hut fire, said at 25 line 31 on page 4514:

30 "The night of the 17th Dr Cheney was out there on the fire ground at that area and spoke with my divisional commander. My divisional commander said, 'What do we do? It's in the timber.' The advice I got back through my divisional commander was 'There is nothing you can do once it is in the timber. Once it gets out in the cleared country, 35 that's when you hit it.'"

She goes on to explain her thought processes. Does that assist your memory of having any discussion with any New South Wales Rural Fire 40 Service personnel in the field on the evening of 17 January 2003?

A. That was the limit of the sorts of discussions I had when I ran into people and was asked a question, yes.

45

Q. Just looking at that, do you have a recollection of being asked a question to that

effect and giving an answer to that effect?

A. Not really. I can recollect the position we were but I don't recollect the conversation.

5 Q. Well, at that time - do you disagree with what is put there? Do you say that --

A. No, that sounds reasonable. We were looking at where the fire was spotting out into the open grassland east of Dingo Dell, and the tankers were
10 attempting to pick up the spot fires as they were coming out into the grassland. My assessment of the size of the fire at that stage was that they had very little opportunity to do anything in the timbered country that was going to be effective on
15 that fire and that their best chance was to hold it along the boundary of the timbered country. I think they decided that anyway already.

Q. You expressed a view that suggested that there was at least an opportunity to deal with the fire in some fashion once it was in the cleared country, that that was an opportunity which would present itself?

A. That night, yes.
25

Q. Do you have any knowledge yourself as to whether the New South Wales planners working at Queanbeyan were calculating any potential rate of spread in the event that the McIntyre's Hut fire
30 broke out and moved to the east, firstly towards the ACT border and then potentially beyond?

A. No, I don't.

Q. Did you go to the Queanbeyan Fire Control
35 Centre at any stage and observe any planning meetings there in the manner in which you apparently did in Canberra on one occasion?

A. Yes. I went there on one afternoon and I think it was either the 14th or 15th.
40

Q. Not on the 17th?

A. Not on the 17th, no.

Q. Or the 18th?

45 A. Or the 18th.

Q. Now, you were asked some questions by Mr Watts

this morning about the MacArthur forest fire danger meter mark 5. When was the last edition of this actually printed, are you able to say, what year?

5 A. I think it has a print date on it.

Q. It has "C", presumably for copy, "CSIRO 1992". Is this the last date?

A. Probably, I would say.

10

Q. So it hasn't been re-issued since 1992, as you understand it?

A. As I understand it, yes.

15

Q. Mr Watts asked you some questions about the work-in-progress nature of Project Vesta. Would it be correct to say one of the needs for continuing Project Vesta findings is to validate the fire behaviour model in a range of forest fuel types in south-east Australia?

20

A. Yes. That is a process that I would like to see in place once we have got the results of Vesta. Again, the model that we are producing is attempting to replace fuel load with a visual hazard assessment which takes into account the structure of the fuel. There are differences which are apparent in the analysis which relates fire spread better to structural measures than it does to actual fuel load. There is a correlation between fuel load. It is just better if you take a structural measure.

25

30

So I think a hazard assessment process based on fuel structure would be more useful to firefighters and to people assessing hazard and also if we can relate it to rate of spread in a positive way then it will provide a better predicting tool.

35

40

Q. As part of that process would you anticipate that experimental fires would need to be lit in south-east Australia and in fuel types prevalent in that area?

45

A. Yes, I think. But it is the normal process of validation. There won't need to be as many as we did for the original Vesta program, which was something over a hundred experimental fires. It

would be wise to carry out experimental fires in particular shrub types. I think for basic litter dominated fuel with low shrubs such as on Black Mountain and a lot of the dry forests in the ACT, you won't need many fires to validate it. Prediction will be pretty close. In other types, particularly the coastal forest in New South Wales, it would be wise to carry out some calibration trials there. We hope to have those in process through the bushfire CRC.

Q. That is the 2004-2005 bushfire season?

A. Sorry, no, the Bushfire Cooperative Research Centre.

Q. Sorry, I misheard you. The primary Vesta experimentation that I think Mr Watts asked you about yesterday related to jarrah forest in Western Australia; that's so, isn't it?

A. Yes.

Q. Are you able to provide an approximation at least as to when it might be possible to have a further version of the forest fire danger meter or perhaps versions - it may be that more than one is needed in due course; would that be a possibility?

A. That would depend on my colleagues. Once I finish the papers, they will have to go through the next step and promulgate it into something like a meter or a program which is a user friendly piece of work that can be used by operators. It will depend on the customers as to how they want that produced for them so that it can be an easy-to-use planning tool.

Q. So there are a number of steps that will need to be taken. Is it simply premature at this stage to try to nominate an approximate time when a further model of this meter might become available?

A. It is by me because I am not aware of the future commitments of my colleagues that will be doing the work.

Q. The whole idea of the meter is to try to provide a working tool for use in the field by persons in operational settings; that's so, isn't

it?

A. That's correct.

5 Q. It is a rule of thumb type instrument though,
isn't it; it is not a prescriptive type
instrument, is it?

A. It combines the major variables that affect
fire behaviour and gives you a prediction of fire
spread.

10

Q. There are questions of judgment to be brought
to bear. However, insofar as it might relate to
estimates of fuel load, possible future weather
conditions and matters of that sort, there are
15 variables that will have to be taken into account?

A. Yes, indeed.

20

Q. There are matters of judgment to be brought to
bear in conjunction with an item such as this
meter in producing a result?

A. Yes.

25

Q. It is not now capable of being brought down to
the level of putting some figures into an
equivalent of a hand-held calculator and producing
a result; it is not capable of that?

A. No, you get the same result. It is the same
functions, you get the same result.

30

Q. I just wanted to ask you this: when you were
giving evidence-in-chief a couple of weeks ago in
this phase, Mr Woodward took you to the warning on
the back which said:

35

"The fire behaviour information provided in
this table is a guide only: No warranties,
guarantees or representations are made that
it is 100 per cent accurate. Current
research indicates that this table may
40 underestimate rates of spread at high wind
speeds."

40

45 From what you have indicated, a point was reached
perhaps in the late 1990s where this multiple of
up to three was identified as being a useful
additional piece of information; is that right?

A. Yes.

Q. Was consideration given to re-issuing this meter at that time with that additional information incorporated on the face of the meter itself, as far as you know?

5 A. No, it wasn't.

Q. Was there a reason for that?

A. Basically we wanted to get it right. So the CSIRO's legal branch has put that liability
10 warning on the back. It never used to have it because we used to accept that it was something that people would take as a guide. In this day and age you have to be more careful, apparently.

15 Q. Lawyers getting involved. I know what it is like.

A. Definitely. Really, in our research we like to go through a peer review process when we have completed it so our research is criticised by our
20 peers. Then we make those corrections to satisfy their comments and criticisms, or we fix up their criticisms as best we can, and then we go ahead and publish. From the published material we would then like to work to a meter like that.

25 Just as I said earlier, we felt that because we confirmed the under-estimate of fire spread after the Vesta fires - it was so apparent even though we had not done the full analysis, we felt it
30 would be useful for fire authorities to have that warning as an interim result from Vesta. Normally we would not do that until we had gone through the full publication process.

35 Q. I wanted to ask you some questions about the topic that you have raised in your land management report about your own view that land managers have a responsibility for fire suppression on their own
40 land, just to use the topic. That is a proposition which you have raised, I think, at several points in your land management report about which Mr Watts asked you some questions yesterday. Can you recall that general
45 proposition?

A. Yes, clearly.

Q. I think Mr Watts asked you some questions

yesterday at 6993 and following about that. I just wanted to ask you some further questions about that. Are you familiar with the memorandum of understanding which was entered into before the
5 2003-04 fire season by the Department of Urban Services on the one hand and the ACT Bushfire Service and Fire Brigade as the various entities were then described?

10 A. Not intimately, no.

Q. Perhaps if I can just show you this document.
(shown)

15 MR JOHNSON: In due course if this could be tendered, if it isn't already in the existing material.

Q. Could I just take you through to page 13 of
20 19, Mr Cheney, at the bottom of the page and the heading "18 - Initial response on DUS managed lands". You see there a series of principles which were governing the initial response on DUS managed lands during the last fire season at least. Could I just take you through those:

25 "18.1 Both DUS and ACT BS - which I think is the Bushfire Service - support the principle of rapid initial attack through the deployment of the most appropriate, nearest
30 and most readily available crew from DUS, ACT BS volunteer resources or ACT Fire Brigade regardless of land tenure."

Does that seem to be a sound starting point that
35 one wants a rapid initial attack essentially by those that are able to get there first?

A. Yes.

40 Q. And 18.2:

"While supporting the maintenance of
centralised 24-hour day, seven days per week
fire reporting for urban and non-urban lands
via the 000 system and deployment for these
45 areas is via COMCEN, both DUS and ACT BS support the need for DUS involvement in initial response."

Now that, I think, is certainly not inconsistent with your view that the land managers must have some involvement in the response, including the initial response; is that so?

5 A. Yes.

Q. And then it goes on - I won't read all of 18.3:

10 "DUS involvement in initial response will be achieved through:

"Automatic response of agency representatives (or their local delegate) to wildfires on DUS lands when the fire danger or drought conditions warrant."
15

And then it goes on to say other things:

20 "Ensuring more DUS personnel nominated the lead first response crews on DUS lands staff are sufficiently skilled to undertake initial attack."

25 Et cetera. Is this certainly part of a practical arrangement which emphasises the need for the land managers, insofar as DUS may be land managers, to be part and parcel of the initial response?

A. I don't think it goes far enough. I don't think it attacks the real crux of the problem that the ACT has faced in the past and will face in the future.
30

Q. I am not suggesting to you it is a total answer, Mr Cheney. I am just saying in so far as you have raised this issue, and indeed you have told Mr Woodward initially I think that it was essentially to try to stimulate interest on the part of land managers to be more active with fuel reduction. Isn't that the bottom line of what you want to achieve through this personal view you have?
40

A. It is really for them to be responsible for their land management actions. In my view, it is not satisfactory for the land manager to be responsible for the fuel, and the Emergency Services and the chief fire officers to take
45

responsibility for the suppression, which has been the case in the past and which still looks like remaining the situation here.

5 If the land manager doesn't take responsibility for his fuel then he won't take the steps necessary either to reduce the fuel or build up his suppression capacity which may need to be specialist suppression capacity to handle the
10 hazard that he is dealing with. You can see in the case of the ACT pine plantations that it is a business decision for them not to prune, but this makes fire suppression more difficult. So the offset for that business decision not to prune
15 really should be for that land manager to provide the specialised suppression equipment that can handle the fire in that forest and not rely on calling on volunteers to do the job for them.

20 The crux of the matter is that the government in the ACT has set aside two-thirds of the ACT as national park and is not facing up to the full cost of managing fire suppression on that land.

25 Q. Are you familiar with section 120 of the new Emergencies Act which provides for the obligations of rural land owners or managers on their land?
A. No, I'm not.

30 Q. Perhaps if I can hand a copy of the section to you. (handed) I just ask you to read it to yourself. I am not asking you for a legal opinion, Mr Cheney. But in the context of the issue that we are presently discussing, this
35 section of the Act which is now in force appears to place a responsibility on the owner or the manager of the land in a rural area to take all reasonable steps "to prevent and inhibit the outbreak and spread of fire on the land and to
40 protect property from fire on the land or spreading from the land". That appears to be a primary statutory responsibility on the land owner or manager to take steps of that sort, doesn't it?
A. It looks very similar to the New South Wales
45 Act which I was a bit more familiar with years ago.

Q. Isn't a provision of that sort something that tends to provide a statutory reminder at least to all persons who are owners or managers of land, including government land managers of the
5 responsibilities that they have in this area which would affect issues of fuel management and fuel reduction as well?

A. I would say, as a non-lawyer, that fuel management is a reasonable step to be taken by
10 someone who is managing land where that can be taken without undue penalty to the business he is running. You wouldn't ask a wheat farmer to burn his crop before it is harvested. That would hardly be a reasonable step.

15 If you are fuel reducing in pine plantations then the cost of it has to be weighed up and say, "What is a reasonable step?". In some areas you are always weighing off suppression against fuel
20 management. It is the reason because you need to do this weighing off between suppression and fuel management that the agency who controls the fuel, who eventually controls the fire - it is his fire, it is on his land and in his fuel - then he has to
25 be able to make the step as to whether he fuel reduces or whether he puts his efforts into fire suppression.

If that responsibility is passed on to a third
30 party, such as the Chief Fire Control Officer or his emergency service agent, in the guise that it is an emergency then I don't think it is good enough because I don't think it will be done.

35 Q. Is the arrangement in Victoria with the DSE - firstly the DSE is a land manager in Victoria, as you understand, of public land including forest and such?

A. Yes.

40 Q. As understand it, does that agency, the DSE in Victoria, have primary suppression responsibility with respect to fire on their land?

A. Yes.

45 Q. I want to show you a document in relation to Victoria. (handed) This is an extract from an

Auditor-General's report in 2003 on fire prevention and preparedness in Victoria. This is an extract. The whole report is available, if it is helpful. I just wanted to take you to chart 4C which is on page 56, the second page of what I have just handed to you. Perhaps paragraph 4.31 says what the chart represents:

"Chart 4 summarises the DSE's performance against its prescribed burning targets over the past eight years. In this period, the DSE has achieved 36 per cent of the optimal prescribed burning targets set by the DSE in fire protection plans;

15

"54 per cent of the annual area identified and advised to stakeholders in the fire operations plan;

20

"and 71 per cent of the output target."

I just want to suggest to you that, even if the legal responsibility of initial suppression on a land manager's land applies, in the case of Victoria at least it certainly doesn't lead to 100 per cent delivery with respect to fuel reduction, having regard to this document; do you agree with that?

A. Up to a point, except that it is only hearsay on my part. But discussions with Mr Morgan, who is the Chief Fire Control Officer, I understand he is having problems with his National Parks branch within that organisation in doing the fuel reduction that he wants to do. Here is a case again of split responsibility. Although it is within the same department, the fire management branch does not have the say to do the fuel reduction that they deem necessary for their firefighters to work efficiently on national parkland.

So, again, it is a similar problem. It is around Australia and is being discussed at the AFAC meeting next month.

45

Q. One of the differences between the ACT and other jurisdictions in Australia is that the ACT

is a fairly compact jurisdiction size-wise, certainly compared to Western Australia or the other states; would you agree?

A. Yes.

5

Q. Is one of the practical reasons for having the primary suppression responsibility on the land manager or owner in other jurisdictions the fact that there may be a significant time lag before other operational agencies may be able to get to the scene; is that a factor taken into account, as you understand?

A. I would imagine that that is a factor an agency responsible for an area such as Namadgi National Park should take into account and should be part of the expenditure it does on fire management so that it has the resources readily available to attack the fires as it is needed.

Q. As you understand it, there is a clear point of distinction between the Australian Capital Territory and other states based upon the very geographical factor that it may cause delay in response by agencies other than the land manager/owner; that is so, isn't it?

A. Yes. But considering the size of the ACT, the response within the ACT should be much faster than almost any other major forested area in south-east Australia.

30

Q. You agreed with Mr Watts yesterday that there is in fact a firefighting resource in the land management agencies; that's so, isn't it?

A. Yes.

35

Q. So this is not a situation where there is a complete absence of that function within those agencies and a total reliance on the Bushfire Services as it was called in days gone by; that's so, isn't it?

A. Well, it depends on the numbers of people that are involved in that agency. We can compare ACT Forests, where everybody in ACT Forests including the director, has firefighter training. The same is not true of the department of environment.

45

Q. There may be that distinction but you

understand that there are persons who are engaged in the firefighting function and trained for it within both Environment ACT and ACT Forests?

A. Yes.

5

Q. And, as this inquiry shows, there is an involvement of a number of persons from a number of agencies in an operational firefighting situation?

10 A. Yes.

Q. Were you aware that ACT Forests had 24 permanent firefighters, two tankers and two light units as at 2003?

15 A. I think that's just about their whole staff, isn't it?

Q. See what I want to suggest to you is that - perhaps we will start - you acknowledged to
20 Mr Watts that this is a personal view, it is really a deep-seated view that you have had for a long time, isn't it?

A. That's correct.

25 Q. I think you gave evidence last year indicating that these views went right back and that you expressed them in the Hannon inquiry or post-Hannon report assessment in 1991. So these are longstanding views?

30 A. Yes.

Q. You have not come to this issue in this inquiry as someone who has no former involvement or views on this and is expressing this view
35 having considered all the facts. I am not suggesting that as a criticism; I am suggesting it as a fact. That's correct, isn't it?

A. That's correct.

40 Q. Essentially you are repeating now what you said before, being views you have held for some time in this context?

A. Yes.

45 Q. Is it an issue in the ACT, having regard the size of it, the effective use of resources which provide for effective initial attack capability

and at the same time an effective fuel reduction approach being undertaken by whichever department may be involved; is that really what one wishes to aspire to in the ACT?

5 A. Can I have that again, please.

Q. Is it an issue in the ACT, having regard to the size of it, the effective use of resources which provide for effective initial attack
10 capability and at the same time the effective fuel reduction approach being undertaken by whichever department may be involved, is that really what one wishes to aspire to in the ACT?

A. I think it is an issue that has to be
15 addressed. Although my view is longstanding, the recent events here and in Victoria and elsewhere around Australia only confirm that view more strongly. It is becoming extremely serious in many parts of Australia as the forest industry is
20 withdrawn from the native forests and put into reserves of one sort or another and adequate fire suppression resources don't go with that land transfer and fire management.

Q. This is your view, long held, and you maintain that view for the reasons you have expressed, both in your report, to Mr Watts yesterday - (phone rings). You have in your land management report touched upon a number of suggestions or views as
30 to the past and suggestions as to the future with respect to fuel management and fuel reduction. I just wanted to start with this: there are a range of views as to factors which ought to be taken into account in dealing with that issue; are there
35 not?

A. Yes.

Q. The views range from those who may be more environmentally affected taking into account
40 conservation issues and wilderness issues, and there are views which may be focused more on the mitigation of the effects of bushfire in particular areas. That may not be well expressed, but do you understand what I am putting? There
45 are different views to be taken.

A. There is a range from doing nothing to doing pro-active fuel reduction that assists fire

suppression operations.

Q. In relation to the decision as to doing something, because I don't think anyone in this inquiry will be suggesting that nothing should be done, insofar as what to do is concerned, there are a range of factors to take into account from a fairly aggressive fuel reduction view ranging through to environmental conservation wilderness considerations - all of which go into the mix and have to be considered; you would agree?

A. I would agree.

Q. Is your view at the more pro-active end of the scale when it comes to fuel reduction that you give less weight to conservation or environmental or wilderness considerations?

A. I consider wilderness an outdated concept anyway and not appropriate for the ACT. That is by the by. It depends entirely on the objectives of the person managing the land. He is the only one that can make really sensible decisions about what fuel reduction he will do and what suppression he will do.

Again, it comes back to the responsibility that he has to work out practically what he can do. That will only come about by installing an effective fire management section and developing the expertise within that department that understands the problem and can make the decisions both as to where fuel reduction will be carried out but also how suppression will be carried out. If they are not doing the suppression and in charge of it, then they can't expect to achieve the goals that they hope to achieve in terms of their management.

Q. Dealing with wilderness firstly: at page 29 of your report which is [DPP.DPP.0008.0001] - do you have a copy of your land management report with you, Mr Cheney?

A. Yes.

Q. At the centre of the page you say:

"In the past a popular way of managing access was to declare areas of wilderness.

Wilderness in its pure form prohibits
pro-active management in the area."

5 Then you go on to say a number of things about the
upper Cotter wilderness. You had a little bit
more than that to say in your draft report about
wilderness, didn't you, Mr Cheney?

A. Absolutely.

10 Q. Could I just show you a document that is drawn
from the documents produced pursuant to
your Worship's order the other day. Volume 1,
part 1, tab 2 is said to be the draft land
management report of 4 June 2004, according to the
15 schedule, with proofing marks made by H. Drew.
Could I take you to page 27, which is there,
Mr Cheney.

A. Page 27?

20 Q. I think the front page is just there to
identify where it is coming from. Page 27 is the
second page. About two-thirds down the page:

25 "In the past a popular way of managing access
is to declare areas wilderness. Wilderness
is an outdated '70s concept and it is
dangerous. It is dangerous because in its
pure form it prohibits pro-active management
in the area. It is elitist because it denies
30 the elderly and infirmed and at least some of
the physically handicapped people access to
areas of our natural heritage."

It seems that part of what is said there is
35 deleted as the document shows. Is it fair to say
what was in the draft indicates your actual views
on the wilderness issue?

A. Good job you didn't get an earlier draft.

40 Q. It was even hotter, was it?

A. Oh, yes.

THE CORONER: Just make no admissions, Mr Cheney.

45 MR JOHNSON: The issue of draft documents is
perhaps a sensitive one.

Q. I raising it with you because you certainly in this area have a strong view which you bring to bear on this issue when you come to address it in your land management report; that is so, isn't it?

5 A. That's right, yes.

Q. You say wilderness considerations are to be completely ignored in taking into account issues such as fuel management and trail construction and things of that sort in the Australian Capital Territory?

10 A. I think you have to put it that wilderness in practice is low density recreation. You really have to identify in a wilderness area, even within an area that is in our designated wilderness, what are the real key values.

Now, as I go on here, for most forested areas in Australia the key value has been and is going to be more so in the future the capacity to produce water from them. If that view is given suitable weight then it will require that management overrides other objectives which may well go along in parallel with that in many cases. But somewhere along the line the manager has to set a priority based on how to use that country for the good of the whole of Australia.

In the ACT, and in particular in the Cotter Catchment, I would say the prime value for that is for water production. Although we can say management of specific plants and animals can also go on in parallel with that objective, that really has to take second billing when there is a determination of management objectives which you need to undertake to achieve your primary objective.

Q. Moving further afield than wilderness considerations, there are a range of other conservation or environmental factors that need to be taken into account in this area too, aren't there, in deciding on how to carry out fuel reduction and also in relation to things such as trail construction?

45 A. Yes.

Q. Would you say in this area again you have a strong view that a fairly aggressive fuel reduction approach should predominate and that environmental and conservation factors would be very much secondary, if not tertiary; is that a fair way of putting your view?

A. I think anywhere that you could show quite distinctly that the environmental factor is going to be adversely affected by the fuel reduction program, then of course it has to be given consideration. Just one simple but perhaps extreme example, one of the key assets in Namadgi National Park and the Cotter Catchment is the sphagnum bogs. Now no-one in their right mind would say, "I am going to fuel reduce that sphagnum bog." It has enormous value in lots of ways in that it may be a repository of 10,000 years of carbon. If we allow it to burn, as it has done in these wildfires, that is something that we have lost and we are not going to get that back for 10,000 years.

A fuel reduction program must take into account and must be designed to protect as far as you can that asset. It is one of the ways by making fire suppression easier in other parts of the park where there is no discernible change in the plant species and no real impact on the fauna life that can't be handled within the total ecosystem, then that priority has to be taken.

Q. Can you recall in January this year having referred to you a letter from the ACT Government Solicitor that proposed a number of persons who may be able to make a contribution on land management issues from a conservation or environmental viewpoint; do you remember receiving such a letter?

Perhaps if I can just show you this document (handed). This is drawn from the documents produced pursuant to your Worship's order. It is Volume 1, Part I, tab 3, item 36. Can you recall having referred to you the letter of 16 January 2004 from Ms Prosser which in summary raised for consideration the consultation with a number of persons who were listed there - Mr Ian Fraser, Mr

Geoff Butler, Professor Peter Cullen, Mr Clive Hurlestone, Mr Bill Packard and Mr Doug Tinney - on the basis that they would add to the formulation of a complete view on this issue. Do you remember seeing that letter now?

A. Yes.

Q. I think it was referred to you, as the email which accompanies it says.

A. Yes.

Q. It reads that they:

"Are referred to as people who might be called in relation to land management from a conservation point of view.

You indicate:

"... the people listed seem to have little experience in practical land management issues but rather are likely to present a rather narrow ecological view of the effects of fire on specific communities. It may be interesting to put their evidence under cross-examination and see how they justify the events of last year because it is the influence of these people that has made it difficult for successive managers to undertake practical broad-scale management. Perhaps Peter Cullen has the most experience on management issues on a landscape scale."

Can you recall expressing that view then?

A. Yes.

Q. You don't suggest in this area, Mr Cheney, that you have all the answers, do you?

A. Not at all.

Q. You accept, don't you, that there are people who have different views to you and those views are entitled to respect?

A. Indeed.

Q. And are necessary to be taken into account by decision-makers in dealing with this difficult

issue?

A. Yes.

5 Q. Because what one is dealing with in the end is
a consideration of a range of factors, some of
which may not be entirely consistent with each
other. There may be some tension between these
factors. That's so, isn't it?

10 A. There is always going to be tension.

Q. What is called for in the end is a decision
that seeks to pay proper regard and strike a
balance. That's so, isn't it?

15 A. Yes.

Q. You indicated the other day that the Western
Australian Department of Conservation and Land
Management was, as you considered it, a fairly
good example for the purpose of this issue
20 generally; is that so?

A. Yes.

Q. Have you had access to a draft fire management
policy issued in February this year by the
25 Department of Conservation and Land Management,
which is apparently on their website as well as
some other places? Perhaps you can have a look at
this document. (handed) Could I just ask you
firstly whether you have seen this?

30 MR WOODWARD: I don't know whether Mr Cheney's
copy is similarly affected but the one I have been
handed seems to be missing every second page.

35 THE WITNESS: Mine is double-sided printed.

MR JOHNSON: If that is the case, I would ask
your Worship to take a short adjournment and we
will remedy that so everyone has one with every
40 page.

THE CORONER: We will take the morning adjournment
then.

45 **SHORT ADJOURNMENT** [11.25am]

RESUMED [11.54am]

MR WOODWARD: Your Worship, just a few minor housekeeping matters which I wanted to raise with your Worship and the parties, because it may be relevant to cross-examination that is to follow.

5

The first is that, on the day before yesterday we were provided with a letter from the Department of Urban Services to counsel assisting relating broadly to fuel management issues. It is in a sense a supplement to letters that we have received during the course of the inquiry dealing with the government's plans in relation to fuel management, and I wanted to draw the parties' attention to that. I am not sure whether copies have been distributed more widely - they may have been - but in any event the document is on the system now. It is [DUS.DPP.0001.0079]. It is possible that we may raise some issues concerning this with Mr Cheney as part of re-examination. We didn't have it during his examination-in-chief.

The second matter is, again, today I have been provided with copies of a draft of Mr Cheney's fuel management report. The circumstances of this draft are that Mr Cheney provided I think a relatively late draft of his report to Mr Fogarty, who is with the DUS, just as an exchange of information. I think the position is that, apart from the copy that Mr Cheney provided to Mr Fogarty, this is the only version of that draft. So we didn't have it; Mr Cheney didn't have it. By the time the call for documents came through, the ACT Government Solicitor has picked up the fact that they had a copy of a draft which probably no-one else had. I gather the differences between it and the final draft are minor. However, in the interests of completeness, they have provided us with a bundle of copies so that can be available to any party who wishes to inspect it.

Your Worship, the other matter relates to the call made by Mr Whybrow earlier this week in relation to certain notes which were produced in a masked form as part of the bundles of documents that were handed over concerning Mr Cheney. Responding to that call, the notes that are the subject of the

call are notes taken by Ms Drew in her capacity as a solicitor assisting the matter of meetings with yourself, your Worship, the investigating police, counsel assisting and from time to time Mr Cheney,
5 as would be apparent from the expurgated versions that are in the materials.

There are parts of the notes that do respond to paragraph 6 of the letter from Mr Craddock of
10 17 August on behalf of himself and other members of counsel in that they are notes brought into existence by the solicitors assisting the coroner relating to meetings with Mr Cheney which relate to his assistance to the inquiry/inquest and in
15 relation to the preparation of his reports. I have just paraphrased that paragraph of Mr Craddock's letter.

There are other parts of these notes that relate to the timing of commencement of hearings, what
20 evidence would be adduced in phase one of the hearings and so on, which are entirely unrelated to Mr Cheney or the development of his report. It is those sections that were masked in the copies
25 that have been provided to the parties.

We have reviewed - there was originally a process which Ms Drew went through to check which parts related to Mr Cheney and which didn't. She has
30 gone over that process that she undertook, and we are satisfied that all the notes responding to paragraph 6 of Mr Craddock's letter have been produced, except in one respect; that is, in the course of checking through the notebook, we came
35 across notes of a further meeting where Mr Cheney apparently joined the meeting later on. It only became apparent that that occurred when we reviewed the notes.

So there is a third set of notes which I will produce today which respond to paragraph 6. But, again, I am producing it in a masked form so that only those parts that are relate to Mr Cheney's involvement and respond to paragraph 6 are being
40 produced to the parties. I have copies of those here and will pass them around shortly.
45

I can provide to your Worship a copy of the notes in unexpurgated form on which I have marked with a highlighter those parts that have been masked. I would invite your Worship to review those at
5 your Worship's convenience to the extent that your Worship is concerned to be satisfied that the view we have taken of the matter is the correct view. But subject to that, we are satisfied that the call has been answered in relation to those
10 matters, subject to the provision of this set of notes which I will provide now.

THE CORONER: Thank you, Mr Woodward.

15 MR WOODWARD: The final housekeeping matter relates to some cross-examination of Mr Cheney yesterday, both by Mr Erskine and Mr Watts, where it was apparent - Mr Cheney explained that there were parts, particularly on 18 January, where he
20 reconstructed at certain times parts of the fire spread but not other parts. He has suggested that it might be useful for him, by reference to the map that I have put up on the notice board, to explain the parts of development which he didn't
25 interpolate.

Just so that your Worship and the parties are aware, this is in effect a combination map which shows all of the fire spreads in all of the areas
30 from which the Powerpoint presentation has been produced, with the Powerpoint presentation obviously showing the progression on a day-to-day basis; whereas this shows the overall progression over that period.

35 I will ask Mr Cheney to explain which parts of the spread he did reconstruct and do appear in that slide show presentation and which parts he didn't.

40 THE CORONER: Thank you. I will allow you to ask some further questions, Mr Watts, if you wish, after Mr Johnson is finished.

THE WITNESS: Your Worship, the two main parts -
45 these are the fire patterns that I interpreted. Unfortunately, they were different at the back of the fire and at the front of the fire. The two

major omissions were I did an interpretation for
1200 hours at the back of the fire but not for
this section here where we have an 0800 perimeter
and then a 1300 perimeter. So Mr Watts referred
5 to a 1200 perimeter, it hadn't moved. In fact
there had been some movement, particularly on the
flank of the fire but I haven't identified the
position of the fire at 1200 hours.

10 The other one relates to 1445 hours for which
there is no interpretation in this part of the
fire but there is in the parts where I had better
information from the linescan. So unfortunately
when I was preparing the overheads, I didn't take
15 into account that I hadn't made an interpretation
over the whole of the fire area at those times.

THE CORONER: Q. That map is a representation of
the whole of the fire spread at that time?

20 A. Yes, it is. The overheads were component
parts of that spread. Each overhead represents
initially a day and then, on the 18th, the
successive time intervals for which I did an
interpretation.

25

THE CORONER: Thank you. Thank you, Mr Cheney.

MR WATTS: Your Worship, I know you indicated I
could ask questions after Mr Johnson finished but
30 I will actually be leaving at lunchtime to go to
Sydney. I just have a couple of questions.

THE CORONER: Do you mind, Mr Johnson?

35 MR JOHNSON: Not at all.

THE CORONER: Yes, please continue.

<FURTHER CROSS-EXAMINATION BY MR WATTS

40

MR WATTS: Q. Mr Cheney, we looked yesterday at
your 0800 hours map and your 1200 which shows
little movement?

A. Yes.

45

Q. This is indicating some movement in that
period; is that what you are suggesting now?

A. Well, if you were to do an interpretation of 1200, it would be between the 0800 and the 1300 hours isopleths that I have drawn on that map. The Powerpoint actually just reproduced the 0800 one and 1200 unfortunately.

Q. Does it this tell us where the fire was at any time between 800 and 1200?

A. No, not specifically. You would have to make an interpolation between those times depending on the pattern of the fire.

Q. Can we not work out, for example, where it might have been at 10?

A. No, not unless you were to make some assumptions about the spread. If you, say, spread it uniform in a certain part then you can allocate that and proportionally place the fire, which would be relatively close to the perimeter in many places. But there could be some areas where it wasn't.

Q. What distance spread do you say this shows between 0800 and 1200?

A. I don't have a 1200-hour perimeter. But in this section where it has come out into the grassland, you might interpolate in between those two lines and say, "Well, it probably did most of the movement, two-thirds or three-quarters of the movement, by 1200 hours." So in fact the 1200-hour line would lie fairly close in most areas, with the exception of possibly this area here (indicated), to the position of the 1300-hour perimeter.

Q. So your 1300-hour map, are you satisfied that is still correct?

A. That is my interpretation.

Q. Your interpretation is still correct?

A. Yes. I just wanted to say the previous one which had 1200 hours is exactly the same as 0800, I think.

Q. Yes, that's right --

A. That is incorrect that overhead.

Q. You say there would have been some movement?

A. There would have been some movement, yes.

5 Q. So you are saying the 1200 hours would be
somewhere between what is shown on this map at
1200 and the 1300, somewhere between the two of
those?

A. Yes. It is likely to be closer to the 1300
perimeter than the 0800 perimeter.

10

MR WATTS: I understand that. Thank you for your
evidence, Mr Cheney.

15 MR WOODWARD: I think we should tender that map,
your Worship. I can also perhaps indicate that is
one of the sorts of maps that has been provided as
part of this document process that was in the
room. Other parties may have looked at it, but it
would be appropriate to tender it.

20

THE CORONER: That map of the fire spread will
become exhibit 0081.

25 **EXHIBIT #0081 - COMBINED MAP OF THE FIRE SPREAD,
TENDERED, ADMITTED WITHOUT OBJECTION**

THE CORONER: Yes, thank you, Mr Johnson.

<CROSS-EXAMINATION BY MR JOHNSON

30

MR JOHNSON: I can indicate the letter of
14 September from Mr Thompson, the chief executive
of the Department of Urban Services, which was
referred to firstly by Mr Woodward was distributed
35 at the same time as it was provided to counsel
assisting to the other interested parties. So I
think they have had it for a couple of days. It
is now on the system. So that was made known.

40 Could I then hand up a complete copy of the
Department of Conservation and Land Management
document - one for your Worship, one for Mr Cheney
and copies for other counsel. Perhaps if that
could be handed back so if there is anyone else
45 who wants it, it may be made available.

Q. I wanted to take you to certain parts of this

document, Mr Cheney. It states as an objective in the first paragraph:

5 "The department will manage prescribed fire
and wildfires on the lands managed by the
department to protect and promote the
conservation of biodiversity and natural
values whilst also providing for a sufficient
10 level of protection to human life, community
assets and fire sensitive ecosystems. The
department will also promote fire management
that protects biodiversity on lands not
managed by the department."

15 It goes on to talk about risk management and other
matters. Insofar as the objective is stated in
the first paragraph, does that state in terms an
objective to be achieved by a government agency in
this area; does that use a description that you
20 are comfortable with?

A. Yes.

Q. On page 2, 5.1, the first dot point, use of
fire reads:

25 "Fire will be used to achieve a range of land
management objectives, including the
conservation of biodiversity; maintenance of
ecosystem health and productive capacity;
30 conservation of soil, water and catchment
values; conservation of natural and cultural
heritage; regeneration and protection of
native forests and plantations; and
protection of human life, community assets,
35 indigenous heritage sites, recreation sites
and scenic values. These objectives, and the
methods used to achieve them, will be
specified in individual burn prescriptions."

40 Is that formulation of a policy in this area
expressed in a term that you are comfortable with?
A. Yes.

Q. I don't propose to take you to all of this,
45 but there are certain points - the next dot point
commences:

"Prescribed burning plans will incorporate both nature conservation and protection objectives in order to optimise outcomes."

5 That is a factor that is sensible to have regard to?

A. Yes.

10 Q. The second dot point on page 3:

"Planning for prescribed burns will incorporate the need to address strategic protection from large fires, as well as landscape scale and land management unit scale (several hundred to several thousand hectares) plans that provide for the protection and conservation requirements at each of these levels."

20 Is that a formulation that you are comfortable with?

A. Which point was that, sir?

25 THE CORONER: The second dot point.

MR JOHNSON: Q. The second dot point on page 3.

A. Okay, yes.

30 Q. Is that, as you understand it, saying in a broad way that in the area of prescribed burning one has a strategic plan and then a broad area plan as well? There are effectively two ways of dealing with the problem.

35 A. I think you would need to discuss with the CALM people their interpretation of strategic and how they see strategic burning. It is an interpretation that is made differently by different people.

40 Q. There is an appendix - I won't take you to particular parts of it, in due course I will take you to the document which will speak for itself - and for present purposes there is a page headed "Department of Conservation and Land Management
45 draft policy statement: identification and management of wilderness and surrounding areas"; do you see that there? There are eight pages and

the next page on the bottom --

THE CORONER: I think we stop at page 8.

5 MR JOHNSON: I am sorry, there is a deficiency in
that respect. I will seek to come back to that
when that page is copied.

10 Q. Perhaps I can just read out to you one
proposition on this page which I will have copied
in due course. It has:

15 "Background: there is a growing awareness
within the community and the scientific world
that wilderness areas support values that
should be protected from the impacts of
modern technological society."

20 It goes on to list certain values. Do you agree
with the proposition that there is a growing
awareness within the community and the scientific
world that wilderness areas support values that
should be protected from the impacts of modern
technological society?

25 A. It is a common statement from people who
promote wilderness, yes.

30 Q. Perhaps I will come back to that once I have
got the page. I think, as you have indicated in
earlier evidence, that you were shown a draft of
the 2002-2004 bushfire fuel management plan some
time in 2002; is that right?

A. Yes.

35 Q. And asked to comment on it?

A. Yes.

40 Q. Did that plan certainly involve a significant
advance on what had happened before in the ACT in
relation to fuel management, fuel reduction?

45 MR WOODWARD: I hesitate to interrupt, but there
is some scope for confusion in relation to this.
As I understand it, the plan that Mr Cheney was
shown was not that far advanced from the previous
years. The one that was produced after he
commented on it --

THE WITNESS: That's correct.

MR WOODWARD: -- was a different draft. It may be important to distinguish between the two.

5

MR JOHNSON: Q. Have you seen the draft as it stood after you had commented on an earlier version of it?

A. I have.

10

Q. That was a draft that was effectively in existence prior to the January 2003 fires?

A. Yes, but I didn't see it before the January 2003 fires, to my recollection.

15

Q. But you had seen the earlier draft?

A. I had seen the earlier draft for which I was asked to prepare a comment on or critique of, yes.

20

Q. There was input from you into this area before these tragic fires?

A. Yes.

25

Q. You would anticipate and expect that there would be input from persons from different viewpoints in the span of viewpoints relevant to the development of a document of that sort?

A. Yes.

30

Q. That included you and you would expect others with viewpoints perhaps not the same as yours?

A. Yes.

35

Q. Do you understand that the approach that is proposed for the ACT in this area is to use a combination of strategic burning with some broad-based burning; in other words, a combination? Do you have any knowledge of that yourself as things stand now?

40

A. I know that has been said but I haven't seen any plans which would indicate in a strict planning sense as to where or as to how much of that burning would be carried out. I think

45

Mr Long did an assessment of possible strategic strips. I don't know whether Mr Long's suggestion has been followed. I rather suspect that has all been changed because of the fires and that a

burning plan now has to re-consider where you would locate strategic strips as such.

5 Q. In your report, are you suggesting that a type of broad-based burning should be used and not strategic burning insofar as there may be a difference between those two concepts?

10 A. It depends on how you interpret "strategic". In the past that tends to be interpreted as very narrow strips around particular assets. But I would prefer - I would recommend burning on a much broader scale than that, taking into consideration the factors that you have outlined in this paper from Western Australia.

15

Q. Is it your understanding that in Western Australia and in Victoria a combination of strategic burning and broad-based burning is used; speaking in general terms?

20 A. Strategic burning in Western Australia tends to be, because of the nature of the topography, more related to the period that repeated burning is done. It is related to the fuel build-up which the Western Australians believe they can accept in different areas. In Victoria, it tends to be zoned and there are specific zones which they rate at different levels of importance.

30 Q. In relation to the Department of Urban Services generally, if I suggested to you that the fire management program of the Department of Urban Services as at the time of the January 2003 fires involved a budget of some \$2 million but that budgeted expenditure, excluding bushfire recovery works in that area, for fire management programs for the 2003 to 2004 years has been increased to \$6.7 million. Do you have any knowledge of that yourself?

35 A. No, I don't.

40

Q. Do you have any knowledge that there has been created within the Department of Urban Services a fire management unit?

45 A. I've had discussions with Mr Fogarty. I don't know his official position or the structure of his unit or the number of people that he has working for him.

Q. So you have not undertaken an inquiry yourself in that regard - I am not being critical in that respect - but that is the fact, isn't it?

A. That's correct, yes.

5

Q. If I indicated to you that Mr Fogarty is the head of that unit, is he someone who you understand has a background and experience in forestry and operational firefighting - matters of that sort?

10

A. Yes, he is.

Q. There is a person named Simon Hemer, H-E-M-E-R, who is a planner. Do you know Mr Hemer?

15

A. I have met Mr Hemer.

Q. There is a third person who is a training officer in this fire management unit. So there are three full-time people within the Department of Urban Services in this newly created unit. If I ask you to accept that that has happened and these persons are fulfilling those tasks, do you see that as a positive development?

20

25

A. I do.

Q. Perhaps underpinning much of your views is the need for clear, consistent and ongoing awareness of fire management issues on the part of land managers. Would you agree the creation of such a unit will certainly maintain at least a permanent part of the Department to make sure that those issues are not forgotten, if I can put it that way?

30

35

A. I certainly hope so.

Q. I wanted to take you to a couple of other areas. In your land management report, at the bottom of page 30 and top of page 31, there was reference to the sub-alpine snow gum forest. At the top of page 31, in item 6 you said:

40

45

"It was concluded to maintain the vegetation in its current form the ideal fire regime would be a low intensity burning every 8-10 years."

Do you see that?

A. Can I have the page again, sir?

5 Q. Certainly in the print I have got it is the
top of page 31. There is reference to "low
intensity burning every 8-10 years"?

A. Okay. It seems to be page 30 in mine. Thank
you.

10 Q. Insofar as a cycle of burning is concerned,
are you aware of research carried out by Mr Rason
and Mr Khanna which suggests burning more
frequently than every 12 years will not allow
sufficient time for replacement of soil nitrogen
15 and would be ecological unsustainable in the long
term. Have you heard of that suggestion?

A. I know of that report, yes, and that work.

20 Q. Do you consider that that is a relevant fact
to take into account in determining burn cycles;
namely, the impact on soil nitrogen?

A. I think the study was limited in that
primarily they looked at the loss of nitrogen from
the litter bed and to my recollection had great
25 difficulty in putting a number on the nitrogen
that was replaced into the soil from voluminous
plants. That would be a very difficult piece of
research anyway.

30 I think the problem with that conclusion is that
it doesn't take into account the losses that have
occurred when you get the extreme event, as we
have had through that area, if the loss of
nitrogen is not sustainable in the long term,
35 which is difficult to justify on that one piece of
research alone, and not consider the consequences
of losing not only nitrogen but also parts of your
top soil and the nitrogen contained therein under
extreme burning conditions. These are things that
40 the manager has to weigh up.

Just the loss of nitrogen alone, I don't believe
you could say that is unsustainable because there
are areas that are burnt very frequently and the
45 plants that come onto that area, which I would
contend are a natural response to that fire
regime, cope with the reduced nitrogen levels.

So, again, the question comes back to what you want out of that area and how you are going to manage it.

5 Q. So to summarise, it is clearly a factor to take into account that what weight is given to it and what conclusion is reached depends upon the balance which is struck once that and a number of other factors are taken into account?

10 A. That's correct.

MR JOHNSON: That was the cross-examination which I wished to undertake. I think in relation to this extra page, I have read out the portion that
15 I was wanting to put to Mr Cheney. We will have it copied so it is available, if there is anything that anyone else wants to raise out of that.

I would, however, seek to have tendered a number
20 of the documents which I did refer to in the course of cross-examination. There are a number of them. I think the first one was the memorandum of understanding between the Department of Urban Services and the Bushfire Service and the Fire
25 Brigade which was for the 2003-2004 fire season. If that could be marked as an exhibit, your Worship.

THE CORONER: That memorandum of understanding
30 2003-2004 will become exhibit 0082.

**EXHIBIT #0082 - MEMORANDUM OF UNDERSTANDING
BETWEEN DUS and ACT BS AND FB FOR 2003-04 SEASON,
TENDERED, ADMITTED WITHOUT OBJECTION**

35

MR JOHNSON: There is then an extract from Mr Cheney's draft fuel management report from the documents produced pursuant to the order, the first page of that, page 27. I would ask that
40 that be an exhibit.

THE CORONER: Mr Cheney's draft document entitled fuel management in the ACT page 1 and page 27 will become exhibit 0083.

45

**EXHIBIT #0083 - MR CHENEY'S DRAFT DOCUMENT
ENTITLED FUEL MANAGEMENT IN THE ACT PAGE 1 AND**

PAGE 27, TENDERED, ADMITTED WITHOUT OBJECTION

MR JOHNSON: There is again in the material
produced pursuant to your Worship's order the
5 letter of 16 January 2004 from Ms Prosser to the
DPP and the accompanying email of 19 January 2004.

THE CORONER: That letter from Ms Prosser and
accompanying email will become exhibit 0084.
10

**EXHIBIT #0084 - LETTER FROM MS PROSSER TO THE DPP
DATED 19/01/04 AND ACCOMPANYING EMAIL, TENDERED,
ADMITTED WITHOUT OBJECTION**

MR JOHNSON: There is the extracts from the
Victorian Auditor-General's report "Fire
15 prevention and preparedness 2003", page 56, a copy
of which was shown to Mr Cheney.

THE CORONER: That fire prevention and
preparedness document by the Victorian
Auditor-General will become exhibit 0085.
20

**EXHIBIT #0085 - EXTRACTS FROM VICTORIAN
AUDITOR-GENERAL'S REPORT "FIRE PREVENTION AND
25 PREPAREDNESS 2003", TENDERED, ADMITTED WITHOUT
OBJECTION**

MR JOHNSON: Draft fire management policy of the
30 Department of Conservation and Land Management of
Western Australia dated February 2004 pages 1-8 -
I will circulate the other pages, I wouldn't seek
to tender it at this stage because people haven't
seen it, but perhaps the first eight pages can be
35 marked as an exhibit.

THE CORONER: That document marked fire management
policy draft relating to the Department of
Conservation and Land Management in Western
40 Australia will become exhibit 0086.

**EXHIBIT #0086 - DRAFT FIRE MANAGEMENT POLICY OF
THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
OF WESTERN AUSTRALIA DATED FEBRUARY 2004,
45 TENDERED, ADMITTED WITHOUT OBJECTION**

MR JOHNSON: The only other document I showed

Mr Cheney was a copy of the Emergencies Act 2004. As it is part of a statute it does not need to be tendered. Thank you, your Worship.

5 THE CORONER: Thank you, Mr Johnson. Thank you, Mr Cheney, you can step down for the moment. We will adjourn until 2 o'clock.

LUNCHEON ADJOURNMENT [12.37pm]

10

RESUMED [2.00pm]

<CROSS-EXAMINATION BY MR PHILIP WALKER

15 MR PHILIP WALKER: Q. Mr Cheney, in your fuel management document, I am just trying to reduce it to what I understand might be the most important concept you are endeavouring to convey in that report. If you go to page 19, about 4/10ths of
20 the way down the page, the second paragraph under the heading "future fuel management".

A. Yes.

Q. If we were to try and distil what you say is
25 the most critical aspect for the future management for the fuel in ACT Forests, might we do better than what you said in the second sentence of that paragraph:

30 "The people who make the decisions must be aware of the consequences of maintaining high fuel loads and take responsibility for their own decisions as to whether or not they maintain a high fuel load."

35

Is that really the heart of what you are recommending?

A. Yes, I believe it is.

40 Q. Mr Johnson put some questions to you, the essence of which was there was an element of balancing the environmental considerations with the bushfire suppression considerations in the management of a particular area of native forest;
45 do you recall that?

A. Yes.

Q. I gather from what you say in that paragraph that I have just taken you to that it is your view that that balance is not properly struck unless the same person or organisation is responsible for making both sides of the decision - the environmental decision and the bushfire suppression decision; is that right?

A. Yes. They have to understand the difficulty of suppression in the type of fuels that they wish to maintain and that they have to then be equipped to handle that rather than leave it to a third party.

Q. That avoids the luxury which a decision-maker who has only responsible for the environmental side of an equation has of making his decision and saying, "Well, if it all goes south next bushfire season, that is somebody else's problem". That's the burden of what you are saying?

A. I believe it gets away from that, as has happened now.

Q. That you should get away from that, you mean?

A. I believe it should get away from it, yes.

Q. I take it you are not purporting to give most exquisite detail of the administrative arrangements which should be brought in to place in order to bring about that broad policy position, are you?

A. No.

Q. In the course of this inquiry we have had some evidence to the effect that sometimes fire trails have not been maintained or - you may have heard some of this yourself - other fire trails, when cut for the purposes of bushfire suppression, that there is sometimes a policy of allowing those trails to grow. You may also have heard some people say if fire trails are properly managed there can be a strategic decision taken that a fire trail will be of greater use in one area than another area so that they might be properly located. You have heard evidence to that effect?

A. Yes.

Q. You understand that sometimes the fire trails

to the west of the ACT were not maintained?

A. Some were not maintained, yes.

5 Q. At times fire trails are allowed to overgrow when they are cut?

A. Yes.

10 Q. You would agree, I take it, the introduction of fire trails is not a purely random exercise; there are sensible places for fire trails where they might be useful than they would be in a different location?

A. There are generally limited options of where you can place fire trails.

15

Q. Do you agree that sometimes some places are better than others though?

A. Yes.

20 Q. The logic about your position about fuel management that the person making the decision ought to see effectively both sides of the coin would apply equally to those sorts of decisions about fire trail maintenance and fire trail
25 introduction; would it not?

A. Yes. That is an integral part of fire management.

30 Q. I have certainly questioned people and there will be some evidence that people such as the Chief Fire Control Officer in circumstances where there was in fact no fire alight actually required permission before he could go through various gates to get to various parts of the mountains to
35 the west of Canberra; are you aware of that particular suggestion?

A. I'm aware of it, yes, and --

40 Q. That is obviously what you were trying to avoid by the future approach you are suggesting?

A. Yes, or if it is locked up, then the manager is fully responsible for that decision and he should then wear the consequences if that decision
45 hinders firefighting.

Q. You have given some evidence about the fuel loads and you were aware of issues such as trail

maintenance and issues such as gates being locked when there are not fires alight and so forth. Again, trying to distil the burden of what you are saying, did that situation in your view hinder the response to the fires in January of 2003?

5

A. Most certainly.

Q. From the point of view of those in charge of the Bushfire Service, however difficult their task was, it was made that much harder as a consequence?

10

A. I believe it was made more difficult, yes.

Q. I want to turn to a different matter. On the 13th of January of 2003 - to assist you, that was the Monday before the Saturday - you had a discussion with Mr Lucas-Smith?

15

A. Yes.

Q. I think your version of events was that you said that if the fire swung to the north-west the fire could burn into Canberra, or some words like that; is that right?

20

A. Yes, I believe I would have said if we got an extreme day with winds from the north-west, the fires would come into Canberra.

25

Q. At the time that conversation was had - firstly, it would have been a serious conversation, I'm sure.

30

A. Yes, because I had been approached by the press and I wanted to let Mr Lucas-Smith know what my opinion was.

Q. At that point in time, I take it you were discussing the matter at the level of theory rather than actual forecast, is that fair, on the Monday? I don't mean to deprecate what you have said by saying that, but it was theoretical rather than an actual expectation at that time.

35

40

A. It was my expectation if those circumstances arose then that's what would happen.

Q. At that point in time I think the weather forecasts were only through to about Thursday; is that right?

45

A. Yes.

Q. So whilst we do know that there is a propensity for the wind to blow from the north-west, you weren't aware of the extreme conditions which you were contemplating actually
5 being forecast at that time?

A. I did not know when the extreme conditions would arise, so that's why this statement is qualified that way. But it was my expectation that we get in Canberra three to four extreme days
10 per summer and we would probably get one in the not too distant future.

Q. From your answer which uses words such as "we would probably" and so forth, whilst it was
15 something which had to be in the minds of everybody dealing with the fire, I take it therefore it was at least at that stage still at the theoretic level, even though one that had to be given serious consideration; is that fair?

20 A. Yes.

Q. In your report - I will refer, unless otherwise indicating, to your most recent report with the amendments - I gather you are somewhat
25 critical of the decision taken by Odile Arman to withdraw from the Bendora fire on the night of the 8th of January; is that right?

A. Yes.

30 Q. You are aware that the concern which motivated that decision was one related to firefighter safety as a result of falling trees and dispersal in the dark?

A. Yes.

35

Q. In reaching your criticism of that decision, are you simply looking at it from the point of view of what would be the most expeditious way to contain and, if possible, put out this fire; or
40 are you also endeavouring to factor in considerations going beyond purely the fire suppression and including matters such as firefighter safety?

A. Firefighter safety is a decision that the
45 incident manager in the field has to take at all times. I said in my subsequent report it was reasonable for that incident controller, if she

felt that was beyond her competency to handle that fire, then she should have been replaced by someone who was. That's as I see the incident management system working. You can't stop the
5 fire suppression action just because one incident controller says "it is beyond my capacity to do it".

10 Q. Odile Arman actually indicated that a principal concern was safety?

A. I think you have to look at safety from both angles. You have to look at safety for the firefighter and you have to look at safety for the public as a consequence of the firefighters not
15 taking action.

Q. Indeed.

A. If it comes to a choice, and I think this is a decision that undoubtedly is a legal one, then I
20 think the weight has to be given that the risk to the firefighter must be expected to be higher [sic] because they are trained than the risk to the untrained resident or citizen of Canberra who may be threatened by the fire.

25 Now there is no doubt that firefighting is a dangerous business and there is no doubt that people can get injured in that situation, but that is a risk that is inherent in this job. If it is
30 not faced with the associated risk of the consequences of not controlling that fire, then we are not going to progress very much at all in the firefighting business.

35 Q. There is, however, of course a natural limit to what you say; isn't there?

A. Yes.

40 Q. Do you actually challenge the issue as to whether there was falling trees and so forth at Bendora on that night?

A. No. I would expect that that would be around. But my experience in that terrain is that that
45 occurs within inside the fire area, it doesn't occur principally right on the edge of the fire because it takes some time for trees to burn down.

As far as falling limbs alight in the tops of the trees, that is something which firefighters experienced and trained to work in that vegetation type and that topography should be trained to be aware of to minimise the risk. Obviously they are not going to completely eliminate it because they have to do a dangerous job, but good training and experience can minimise it.

10 Q. If you are actually in a situation where you are back in a control centre or something of that nature, I take it that one has to accord a good deal of breadth to the judgment of the person on the spot; perhaps I haven't worded that as well as
15 I could. Do you understand what I mean?

A. I think I understand what you mean. But it would be my opinion that an organisation running the AIIMS system should know the capacity, the experience and the competency of all staff
20 employed by it and be able to identify someone who had the experience and the capacity to undertake that fire suppression job that night.

Q. If the view of those who were responsible for the dispatch of the incident controller such as Odile Arman was that she was indeed an experienced incident controller in the field, would you modify your criticism?

A. I'm not sure how to answer that because, from my experience of incident controllers, that was not a particularly difficult or particularly dangerous fire situation for someone that was experienced in that fuel type. So if the opinion is that she was experienced then they were
35 mistaken because, by her own admission and her own actions, she demonstrated that she was not experienced.

Q. You form that opinion based on what she said and your view of her conduct?

A. Yes.

Q. You are aware, of course, that this lady has come in for some exquisite examination of her actions since she took them?

A. Yes.

Q. I will circulate a copy of a note in the documents recently discovered. This is a note in the discovered documents entitled "Canberra bushfires early fire spread of McIntyre's Hut fire at 8 January 2003, Peter Hutchins' notes and observations" indicating in attendance at the time Jim Gould, Peter Ellis and Peter Huchins and Sean Cheney. Were you aware, as is recorded in the second paragraph under the 2010 hours entry that at least those gentlemen were incapable of proceeding past some fires at McIntyre's Hut because trees along the edge of the road were alight and posed a hazard to them?

A. Yes, I see that written here.

Q. Were you aware that was the circumstance at McIntyre's Hut?

A. They told me that they didn't drive through the fire area because of the danger of falling trees within the area, as I understood it.

Q. In fact, so much is noted in the second last paragraph of that document:

"I walked approximately 100 metres up the trail with burnt forest either side to try and gauge its extent. But it continued on further up the ridge and was considered not drivable because of poor visibility and trees falling across the trail at this time."

The purpose for which these gentlemen were attending McIntyre's Hut, are you aware of what that purpose was?

A. The purpose was to locate the position of spot fires and try and pick up information on the distribution of spot fires ahead of the McIntyre's fire.

Q. They were there for a somewhat different purpose to the purpose of the bushfire fighters who might have attended frankly either McIntyre's or Bendora?

A. Yes.

Q. Nonetheless, I take it that each of the people who were in attendance - Mr Gould, Mr Ellis,

Mr Hutchins, and your son, Mr Sean Cheney - were people who were experienced being in and around bushfires?

A. Yes.

5

Q. At least as far as their comments were concerned, there was some hazard posed by the fires at least at McIntyre's Hut on that occasion?

10 A. Yes, inside the fire area. If they had the task of constructing a line around the perimeter of that fire, I believe their statements would be quite different.

15 Q. Could you just go to page 13 of your report - actually before doing that, you said inside the perimeter. I note the second paragraph under the heading "2010" the last sentence reads:

20 "We did not proceed any further past these fires because trees along the edge were well alight and posed a hazard."

That at least as it reads would seem to be around the perimeter, would it not?

25 A. That is certainly how it reads.

Q. If we go back to your report. The third paragraph on page 13 reads:

30 "Ms Crawford said in evidence that gale force wind could have brought down trees, blocked roads and made it unsafe for firefighters. However, by 2030 hours the area was under the influence of light variable winds and the
35 research team going to the fire did not feel under any threat and were not obstructed by falling timber on the way in along Two Sticks Road and Dingi-Dingi trail."

40 Were you talking there in your report in the middle of page 13 about the same research team that is mentioned in this note we have just been talking about?

A. Yes.

45

Q. Is the paragraph I have just read out of your report somewhat at variance with what is recorded

in Mr Hutchins' note?

A. No, I don't believe so.

Q. Why do you say that?

5 A. Because it says "on the way in along Two
Sticks Road and the Dingi-Dingi trail", it doesn't
talk about driving through the fire.

10 Q. In that paragraph, Mr Cheney, you would appear
to be taking issue with the comment made by Julie
Crawford of the New South Wales bushfire brigade
about there being a hazard from trees blocking
roads and it being unsafe for firefighters. If
15 you are going to take issue with Ms Crawford,
isn't it somewhat misleading to pick a particular
part of the travels of this research team and say,
"In that area they did not consider themselves to
be under any threat" when 20 minutes earlier the
20 same people considered themselves to be under some
hazard at the same fire? Wouldn't it have been a
fairer comment to say, "Well, it mightn't have
been a hazard in this area but it was certainly a
hazard in other areas"?

25 A. No, I don't think so, because you have to get
into the fire to make an assessment. If you were
to ask those people, "Could they have carried out
suppression by hand tools on the edge of those
fires," I am sure they would have said yes.

30 Q. Again, I direct your attention to the last
sentence of the second paragraph under the
heading, which certainly appears not to be inside
the fire but in fact a hazard posed at the edge of
the fire. Again, if one is to make a criticism of
35 Ms Crawford, wouldn't it be a more accurate
approach to indicate that at least your research
team did not proceed past the fires because there
was a hazard along the edge of them?

A. No.

40

Q. Why do you say that?

A. The very reason that I don't believe that that
is what they intended to say.

45 Q. Well, we only have what they wrote.

A. That's correct.

Q. Did you look at what they wrote before you wrote the comment in your report?

A. Yes, and I talked to them.

5 Q. You didn't refer to a hazard in any respect, did you?

A. No.

10 MR PHILIP WALKER: I tender the note from Mr Hutchins.

15 THE CORONER: Note prepared by Peter Hutchins under the title "Canberra bushfires early fire spread of McIntyre's Hut fire, 8 January 2003" will become exhibit 0087.

20 **EXHIBIT #0087 - NOTE PREPARED BY PETER HUTCHINS TITLED "CANBERRA BUSHFIRES EARLY FIRE SPREAD OF MCINTYRE'S HUT FIRE 8/01/03, TENDERED, ADMITTED WITHOUT OBJECTION**

MR PHILIP WALKER: Q. On page 29 of your report you refer, just a little below the middle of the page, to Mr Stevens --

25 A. Give me the title and the place, please, sir because I think my copy is slightly different.

Q. I am sorry. It is the Bendora fire on Wednesday 8 January.

30 A. Wednesday 8 January, okay.

Q. In the narrative under the subheading "fire behaviour" it is paragraph 3.

A. Yes.

35

Q. You say:

40 "Mr Stevens of ACT Forests was dispatched to locate the fire. When he first arrived at around 1750 hours, he described the flames at around 0.3 metre high in the litter fuel and burning up the lower trucks of the trees. Similar fire behaviour was photographed at 2030 hours."

45

You refer to Mr Cutting's photograph. You then go on to say:

"When the southerly change arrived after 2100 bringing in a moist air the behaviour of the fire would have reduced even further during the night."

5

What is your understanding as to how far up trees the fire was actually burning at 2100 hours - or 2030 if you like? Somewhere between 2030 and 2100?

10 A. On the fibrous bark of those trees up to the point where it breaks out into the smooth bark, which is about halfway up the tree.

Q. What height are we talking about? How many metres?

15

A. I would hazard a guess that it is probably going up 20 or 30 metres.

Q. When you refer to a fire burning up the lower trunks of trees, are we to interpret that as being fire that could be as high as 20 or 30 metres high?

20

A. Burning up the bark to that height, yes.

Q. It is a fact, is it not, that these trees actually often carry - I am sure there is a word you use for it, Mr Cheney but I will call it debris - debris and bark and falling leaves and branches and so forth some distance up the tree. It has effectively fallen and caught and not made the ground?

25

30

A. Yes.

Q. What is the word? I thought there was a term that was used for that?

35

A. I don't think so - suspended bark perhaps.

Q. In addition to the issue of trees actually falling, that of itself could constitute a hazard, could it not?

40

A. Only if it gets into a rotten part of the tree at upper level, which can happen, yes.

Q. Does it fall itself and create a hazard?

45

A. Excuse me?

Q. Does it fall itself, this suspended fuel, and

create a hazard?

A. It does fall but the primary problem is that it throws firebrands across the control line and is one of the elements in the difficulty of control in that forest type.

Q. Could I have Mr Cutting's photograph of Wombat Road at 2100 hours, please. It seems to cut off a portion of the photograph. Is that the photograph to which you were referring on page 29 at footnote 78?

A. Yes.

Q. That is a photograph of the fire edge?

A. Yes.

Q. Can you see approximately two-thirds of the way across the page to the right what appears to be at least a fallen branch of the tree or something of that nature? It runs approximately 60 degrees up to the right; do you see what I am talking about? Perhaps if I point out what I am talking about (counsel approaches the screen) - this area here?

A. This one?

Q. Yes. Is that the sort of material that is capable of actually falling and constituting a danger?

A. That is some distance back inside the fire. So if the firefighter is working on the fire edge it should not present a problem to him. The very bright burning shown in that photograph is part of a hollow tree burning out very vigorously which would probably fall within 15 or 20 minutes. But that is also well inside the fire area. It takes some time for this process to happen. If those trees or trees like that are on the fire edge then --

Q. You are quite sure that that tree that I pointed out to you really is inside, Mr Cheney?

A. I'm quite sure.

Q. You do a lot of your experimental work in Western Australia; do you not?

A. Yes.

Q. Were you aware in February, I think it was, of this year of a bushfire fighter over there in fact being killed by a falling tree?

A. I don't know the details of that.

5

Q. Do you know the broadest of details that a bushfire fighter was killed by a falling tree?

A. Yes, but I don't know any specific details.

10 It is not uncommon but it is usually firefighters in vehicles travelling along roads or firefighters felling falling trees. I don't know for sure, but I believe that was a case of the volunteer firefighter working, but I'm not sure of that.

15 Q. But you certainly - the details I'm not completely familiar with - were aware at least of the eventuality?

A. I am aware it was a real hazard. It was a real hazard in our experiments, which we had to
20 manage.

Q. Could I take you to some notes which you did yourself on a view of the McIntyre's and Bendora fire. Again these are documents produced from
25 those recently made available. How did you come to be on this view, Mr Cheney? Let me withdraw that and start again.

You went on a view on 20 August to McIntyre's Hut
30 and the Bendora fire sites; is that right?

A. That's correct.

Q. That was 2003?

A. Yes.

35

Q. How did it come to be that you went on that view? Somebody obviously asked you to do so, did they?

A. It was my suggestion to counsel assisting and
40 to the coroner that it would be a good idea to get a feel for the terrain that we were talking about, and I organised what I thought was a cross-section of some of the areas of concern and some examples of the fire behaviour that wouldn't be apparent
45 just by looking around the outskirts of Canberra.

Q. Can you go to a number of pages in and you

will see a heading "Stop 6. Wombat Road". If you go over the page to the second page heading "discussion included"; do you see where I am taking you?

5 A. Mmm-hmm.

Q. Could you just read that paragraph to yourself?

A. Which one, sir?

10

Q. The one "discussion included the difficulty of fire suppression".

A. Yes.

15 Q. Now in the course of this view there was such a discussion as you record it?

A. Yes.

Q. These are your notes, I take it?

20 A. Yes.

Q. Of the people who were listed as being on this view, who provided the information about the difficulty of fire suppression in tall alpine ash; who was offering a view about that?

25

A. I did.

Q. What did you say?

A. Pretty much as what is summarised there.

30

Q. That is, that it can be difficult?

A. It is a difficult job, yes.

Q. And that it required skilled chainsaw operators?

35

A. Yes.

Q. That construction with hand tools was difficult but not impossible?

40

A. Yes.

Q. Was that so on the location of the Bendora fire?

A. Yes.

45

Q. I take it you said and accepted that one of the skills required was in fact the identification

of hazardous trees?

A. Yes.

Q. Going down to the end, cutting down such trees
5 is dangerous even for experienced tree fallers?

A. Yes.

Q. Is the cutting down itself more difficult of a
night-time than it is of a day-time?

10 A. Yes. In fact I wouldn't do it at night.

Q. You mention there the possibility of trees
falling across the fire line. I think you, from
the photograph of Mr Cutting's, spoke about a tree
15 you thought might fall in 20 minutes; correct?

A. Yes.

Q. So insofar as you mention that sometimes these
trees are inside the fire line not on the fire
20 edge, I gather from the note that, well may they
be inside the fire line, they are still quite
capable of having an impact on the edge of the
fire?

A. Well that type of tree and that situation can
25 occur with a tree adjacent to where the fire line
has been constructed. That is a tree which would
be marked, have a safety zone marked around it,
and the firefighters probably would be stationed
there expecting it to fall.

30

Q. Indeed.

A. So that when it did cross the fire line that
break-away - effectively a break-away across the
line could be controlled.

35

Q. You recall that evidence you gave in answer to
my questions 10 or 15 minutes ago where, when
discussing the note made by Mr Hutchins, you made
a distinction between hazards at the edge of the
40 fire and hazards from falling trees inside the
fire. What I am putting to you is: if a tree is
alight, the fact that it might be some distance
from the fire edge does not remove it as a hazard
to those who are fighting fires at the fire edge;
45 does it?

A. It depends on the distance.

Q. Absolutely. But my point is correct, isn't it: it is not removed as a hazard merely by virtue of the fact that it is not on the fire edge?

5 A. If it is in tree height of the fire edge, then it has the potential to be a hazard to firefighters working on the fire edge.

10 Q. That's one point. Is it not also a hazard because in falling it may itself bring yet other trees or other branches down?

A. Yes.

15 Q. So in addition to the hazard posed within its own length, it has the potential of bringing other trees or branches down and therefore being a hazard beyond its own length, does it not?

A. It can do, yes.

20 Q. So the mere fact that trees such as the one you pointed out in Mr Cutting's photograph is behind the line of the fire, it all still has to be taken into account for the hazard which they present?

25 A. Yes. And this situation was no different to the situation faced by firefighters later on in the week. When they were burning out from roads and through the same sorts of forest they were faced with the same hazard of trees coming down across the road in the areas where they were
30 working and being a threat to them and falling on them. There is no real difference between this and doing burning out from a road where you have to patrol it to watch out for spot fires. The only difference in this case is that you construct
35 the fire edge along the line.

40 Q. There is one difference, isn't there, Mr Cheney, in that they do actually have the advantage of having firstly deployed in the light rather than deploy in the dark; correct?

MR WOODWARD: I object to that, your Worship. I don't think there is any - as I understood it, the evidence is that the firefighters that arrived
45 here at Wombat Road in fact arrived in the light. It got dark while they were there but they arrived very much in the light.

THE CORONER: Even after Ms Arman did her walk around, she still came back and it was just getting dark just towards the end of the light. But they did arrive in the light. That's as I understand it, Mr Walker.

MR PHILIP WALKER: I don't suggest that it was otherwise. But in terms of --

10 THE CORONER: Just a general proposition.

MR PHILIP WALKER: -- firefighters getting out and getting around the perimeter of the fire and working out where they were going to work and so forth, at least my understanding, there was a real possibility, given that it was, I gather, on that border line between day and night at one point of time that there would have been some deployment in the night-time. That's my understanding of it. I'm happy to be corrected if it can be indicated that all that would have been required of these firefighters could all have been completed in the light. That's not my understanding.

25 MR WOODWARD: I am sorry, your Worship, I thought my friend was starting to make a distinction in his question between firefighters arriving in the light and, as I understood his point, then continuing to work as it got dark; and people actually arriving in the dark and starting work while it was still dark.

MR PHILIP WALKER: Sorry. Perhaps the problem is in the way I have put the question. I think I used the word "deploying".

Q. What I meant to convey, Mr Cheney, so there is no doubt about it, that for some of these firefighters as they moved around the perimeter of the fire after they had got tools out and unfolded hoses and so forth, some of that would have been done at a point when night had fallen?

A. Yes, there were night shifts along roads where fire operations were being carried out. That's why I say they were facing the same problem as going in on direct attack.

Q. But when does ordinarily an evening shift come on? What time do they start evening shifts?

A. I don't know. Some time between 1800 and 2000 hours, I guess.

5

Q. The other advantage that firefighters who have been fighting a fire for some time have is - take for example the cutting down of the hollow trees which you said you wouldn't do in the night-time, some of that might have already been able to be done; correct?

10

A. Yes. Probably unsafely.

Q. A fuller reconnoitre of the entire site might have been done as well?

15

MR WOODWARD: Sorry, I will object to that as well. Does my friend mean a fuller reconnoitre than that conducted by Ms Arman on the night of the 8th when she physically walked around the entire fire? Is that what he is suggesting?

20

MR PHILIP WALKER: I am talking about not only the immediate perimeter and where people might go if they need to get out of the way of the fire but where people might be located, where the anchor point of a fire might be located. I don't understand Ms Arman had quite the luxury that one might expect in the day-time. That's frankly what I am putting.

25

30

THE CORONER: She was there. She got there in the day-time.

MR PHILIP WALKER: I appreciate that, but not somebody who has had some hours to conduct that examination. I gather she walked around it in the day-time and she finished her walk, if I recall correctly, at about 8 o'clock. That's my recollection. I appear to stand corrected on that.

35

40

I won't press the question. I have as much out of it as I want.

45

Q. Mr Cheney, if we go to page 38 of your report. At the top under the heading "suppression action",

again because your numbering might be different, these are the two paragraphs immediately preceding the heading "Thursday, 16 January for Bendora".

A. Yes.

5

Q. Is it fair to conclude from what you said there that, on the night of the 15th of January, the Bendora fire for all practical purposes was contained to the east? You mention a small section along Warks Road not being completed by the end of the shift.

10

A. Yes, I think apart from that last sentence there because as I understood it there was a small section along Warks Road that was not completed.

15

Q. That was not so much in terms of the containment line because Warks Road would suffice for that purpose itself, wouldn't it, it was the burning you were referring to rather than the actual installation of a line; is that right?

20

A. By that stage the roads were also used as control lines.

Q. Yes, that's my point. It is not that there was an absence of control lines. Your point in that last sentence was just there was a small section which had not been burnt; is that right?

25

A. Had not been burnt out, yes.

Q. My basic proposition about it being contained to the east, that point I understood you to have agreed with?

30

A. I don't like the word "contained". I prefer to consider it uncontained until the burning out is completed.

35

Q. While we are on that subject, "A small section along Warks Road was not completed"; what distance are we talking about, do you recall?

40

A. I don't recall.

Q. You use the term there "burning out". One thing that I have learned from this exercise is that some people draw a sharp distinction between back-burning and burning out. Did you mean a back-burn off Warks Road; is that what you required before you were content to say the fire

45

was contained?

A. I mean burning out from Warks Road. I take back-burning very strictly as burning in front of the head fire to stop the head fire, which means
5 the fire is approaching the control line with the wind behind it.

Q. Let me put the question another way: the small section of Warks Road which was not completed you
10 referred to there had been done, would you then accept that the area was contained to the east; that the fire was behind containment lines to the east?

A. Once that section had been completed probably
15 by the next shift, then you could say that that was contained at that point.

Q. Something Mr Watts touched on yesterday - if I could go through in a little more detail with
20 you - and that is your own practical experience in terms of firefighting. I have a recollection of you saying to Mr Watts yesterday that you last were a firefighter in 1972. I don't wish to get it inaccurately. Perhaps you would just run
25 through your history of bushfire fighting.

A. Starting as a kid?

Q. If you like. Depends on how far you are prepared to concede going back, Mr Cheney.

A. Being brought up in the country as a child,
30 burning out around the home to reduce fuels around the home was part and parcel of pre-summer activities.

Q. Where was that?

A. That was in New Haven in Victoria. When I was a forestry student I undertook some work with the Australian Paper Manufacturers and was associated with fire crews there that went out to some small
40 fires.

Q. What do you mean "associated with" and "small fires"?

A. Mostly they were small pine fires probably
45 less than a hectare, certainly less than 10 hectares in dimension. And one or two grass fires, if I recollect correctly.

Q. When are we talking about here, what period?

A. 1959. From 1962 onwards, almost every year I carried out experimental fires in a range of fuel types through the ACT, quite a few on Black Mountain, some at Cowen, some around Bulls Head, some in this type of fuel near Mountain Creek - and in all of those we had to suppress our experimental fires by hand tools. So I was in charge and doing the work on those fires as a firefighter.

In 1965 I got involved in a series --

Q. If I could stop you there. We will continue with the chronology. I think I read in some of your earlier evidence that you said you conducted experimental fires between what is now Calvary Hospital and Bruce Stadium; is that correct?

A. Yes.

Q. Taking that as an example, was that within this period of time from 1962 that you have just been discussing?

A. 1962 through to about 1967.

Q. What sort of size of fire are we talking about there?

A. If it was a --

Q. Taking Calvary to Bruce as an area we probably know.

A. Mostly they were experimental fires generally less than a 10th of a hectare which were burnt and then controlled. It was a combination of an experiment, plus experience for forestry students that I was supervising at that time and instructing on firefighting techniques.

Q. How many people would you have had present on a fire such as that?

A. In all the years there were somewhere between 20 and 30 students. They would be allocated. Sometimes we were burning two or three fires with different groups who had to observe the fire and then control it at the end. And similar experiments were carried out in the vicinity of Old Mill Road in ash forest, and in snow gum

woodland in the vicinity of Bulls Head.

Q. Taking those experimental fires, I assume safety would be one of the paramount
5 considerations in the conducting of those experiments?

A. Yes.

Q. And you would check the weather forecast
10 before you struck the first match?

A. Yes.

Q. You would select the area in which the fire was to be ignited with some care?

15 A. Certainly.

Q. You would have equipment deployed so that if anything looked even vaguely like getting out of hand you could jump on it rather rapidly?

20 A. In those days we did all our firefighting with hand tools, McLeod tools and we had a small trailer tanker with 100 gallons which was used for mop-up.

Q. Did you do any of these experiments, were they done in the summer or the winter or at any time?

A. Right through the summer months. The vacation period was usually January/February. Most of the fires were lit January/February. On occasions
30 when the fire danger was too severe at Black Mountain we would do the experiments at Bulls Head.

Q. I interrupted your chronology, Mr Cheney.
35 Actually it is probably a convenient time in any event, your Worship?

THE CORONER: Yes. We will take a short break.

40 **SHORT ADJOURNMENT** [3.00pm]

RESUMED [3.15pm]

MR PHILIP WALKER: Mr Cheney, as I said I
45 interrupted your chronology. Perhaps if you could just continue on with your practical bushfire fighting experience.

A. We are at '65, are we? Anyway, in 1965 I was investigating a series of fires in New South Wales and in north-eastern Victoria. On several occasions I got involved with the fire suppression operations on parts of those fires, generally as a sector commander or occasionally just as a crew member constructing rake hoe lines around parts of the fire.

10 Q. How many people did you have under your charge as a sector commander?

A. I was doing the research with one other assistant. I was then under the control of the organisation that was controlling the fires, either the New South Wales Forestry Commission or in those days the Victorian Forestry Commission.

15 Q. So do I understand you didn't exercise a command role?

20 A. No, no. Apart from being a sector commander where I was given control over a sector with crews under it - a number of crews, a number of people - probably two tankers and half a dozen men in those days. There was several kilometres of fire edge.

25 Q. How many times did this occur - I think you said a couple?

A. There were three major fires that I attended, one started at the Tumut River and burnt through to Adaminaby, another one was down in Swiss Creek and another one in the Geehi falls between Geehi and the Kosciusko Main Range - very steep ash country in that fire.

35 In 1966/67, I commenced the first trials of aerial ignition for prescribed burning of large areas in two areas down on the South Coast of about 5,000 hectares each, which were north of - I can't think of the name - Bemboka.

40 Q. Your role in that was as a scientist to undertake research --

A. My role in that was doing the whole operation, so effectively I was an incident commander of the whole operation. I organised the suppression crews from the state agencies involved - New South Wales Forestry Commission plus what was the local

bushfire brigades in those days in Bemboka and Bega areas. I'm not sure now whether it was before or after - I think the first burn we did was actually the whole of the Flea Creek catchment which was the area burnt, the northern half, by the McIntyre fire. But that was one of the first aerial ignitions in Canberra.

Again in that role, in today's terminology I would have been the incident commander and responsible for the fire and organising not only the ignition, which I also did as part of the experimental work, but also the resources to control the perimeter of the fire. That fire was carried out at Easter time, over the weekend. That effectively is the same sorts of tasks as a burning-out operation on a large fire. You have the same responsibilities to organise control lines, be aware of breakaways and have adequate suppression crews on hand to handle that fire.

In the 1970s, between 1972 and 1976, most of my fire work was in the Northern Territory lighting fairly high intensity grass fires, which were spreading up to 6 kilometres an hour in tropical grasslands. As with any experimental fire, once we had done the experiment, we had to put the fire out ourselves with minimal assistance from the Northern Territory Bushfire Council.

Q. Presumably on the same basis as the other experiments, you picked the weather and the spot to some extent?

A. We were trying to burn under the maximum weather. In the Northern Territory we burnt under the most dangerous weather we could find at that time of the year, which was probably the fire danger index 20-25. I think the worst day there was a fire danger index of 30, which is in the very high range.

In 1972 I got involved in the Pago fire, which I illustrated was in very similar fuel types to this fire, starting on a day of very high fire danger and followed by an extreme day the next day. The details of that fire are in the courtbook. I was involved in that basically as a sector commander

under Tony Fernside and was in charge of hand tool crews and later a bull dozer operator and the support people for controlling the line on parts of that fire.

5

My shift was through the first night on that night, and we faced what I would consider much more severe problems than was faced on the first night in the Bendora fire. And certainly if we had not controlled that on that night, that fire would have burnt into Canberra the following day as it was a day of extreme fire danger.

10
15
20
In 1979 I did an experiment in the Bushranger Creek catchment, which is the catchment immediately north of the Bendora Break of about a hundred hectares. The scientific objective of that was to fully scorch all the trees within the catchment, which included tall alpine ash trees. We had to generate a pretty high intensity fire within that.

25
30
35
We had to do all the burning of the buffer burning around that catchment. One of the areas that we buffer burnt was the area that this fire, the Bendora fire, started in. And that buffer burning was carried out through December/January and again leading into a period of fire hazard. I essentially was responsible as incident commander for the continuing work on that fire, both preparing the areas before we did the major experiment, which we did at a fire danger index I think probably somewhere around about 16 or 18 - I don't recall the figure; it might be in the notebook. The conditions that we planned for and burnt for was for that fire to throw spot fires up to 1 kilometre downwind of the particular weather conditions we got.

40
45
Through the summer of '82/83 I was carrying out high intensity summer fires in Western Australia, where in this case I was in charge of the experimental work and the suppression was carried out by the CALM fire control organisation.

Q. CALM is what?

A. Conservation and Land Management in Western

Australia. And of course I was intimately involved in the planning of the suppression action, although I didn't carry it out. That was handed over. But I was responsible for lighting the fires. I was responsible for the fire control if it escaped. One thing that sharpens your mind is that, if you light your own fires, you make sure you put them out.

10 In that year I was also supervising measurements of fire line construction using hand tools. We had an experimental team - I think it was about 20 volunteers - who volunteered to have all their physiological responses to heavy work measured. 15 So we wired these guys up and we measured the rate of fire line construction and the effectiveness of fire line construction. They worked - the most intense fires were probably about 10,000 kilowatts per metre of fire intensity. That is a full crown 20 fire in a jarrah forest.

Q. This is in Western Australia?

A. In Western Australia, yes

25 Q. Is jarrah a different sort of forest than the forests that are here in any respect?

A. They are different. It is a fibrous barked tree with a very high spotting potential, probably one of the highest spotting potentials of the 30 eucalypts in Australia.

The forest that we were working in had a heavy under-storey, a large mixture of shrubs up to about 3 metres high, which was in places a very 35 difficult hand tool operation.

Q. Is this the same sort of environment in which you conducted your Project Vesta experiments?

A. Yes, it was. We came back onto that block 13 40 years later, and they were the preliminary experiments which alerted us to the problems of the fire danger meter. The objective in those experiments was to make measurements of high intensity fire behaviour and also to look at 45 different methods of fire line construction to see whether we could determine what the upper limits of fire line construction were for different

methods.

Q. Just pausing there, I think you said the shrubs were 2 to 3 metres; is that right?

5 A. Yes.

Q. What was the nature of the shrubs?

A. It's a dense shrub type with a large number of species in them. The place is dominated by a
10 teatree-type shrub; it is not teatree but it is another species.

Q. If we think teatree, we will be --

A. If you think teatree you have got the idea.
15 It is a mixture of something like 150 or 180 shrubs in that complex, so it is quite a dense shrub. Under the forest it looks very similar to a heath land fuel in terms of the shrubs but it also has the additional forest litter layer
20 superimposed on it.

Q. That understory of shrub is a critical part of your findings in relation to Project Vesta, is it not? A fire is likely to spread more rapidly
25 than that, which was indicated by the MacArthur meter, if there is that shrub under-storey?

A. Yes, that's correct. The weighting within the MacArthur meter is not particularly specific for shrub types. There is a recommendation that you
30 add a certain fuel load. But the work we are working on is to determine a characteristic that is easily identifiable or easily measurable - or easily estimated, would be a better word - for that particular shrub type.
35

Q. In the publication you have put around and exhibited - it is exhibit 77 - I have some copies if anybody needs a copy of it.

40 The document you have just been given is a publication that you put out as a result of your work on Project Vesta?

A. Yes.

45 Q. Have there been any other pamphlets or this kind put around the fire authorities since this document, which would appear to have been

published in 1999?

A. No, we are still working on the analysis of that data.

5 Q. So from the point of view of the information available to fire authorities, with due concession to the fact that you are in the process of developing it, this document is the information they had to work on?

10 A. Plus the formal information. I have given lectures to a number of fire authorities, in fact all the participating agencies and some other people around Australia, both during the course of those experiments and later - for people that
15 contributed to the experiment.

Q. Looking down the left-hand side of that document, you say that, for the multiplication of three times which you have applied in your
20 calculations, it required a shrub layer of taller than 1 metre and fires in litter fuels with a low shrub layer can spread twice as fast as the MacArthur meter would indicate?

A. That's correct.
25

Q. Just to understand the rationale behind that, what is the reason for that?

A. I think it appears that the best predictive variable in the shrub component is the litter
30 which is supported on the base of the shrubs. When you move from a pure litter fuel to a fuel which contains a shrub component in it, the part of that fuel bed which appears to be most important in carrying the fire is the litter that
35 is suspended just above the surface litter. And this is the principal fuel creating the tall flames which is propagating the fire forward.

So it tends to be related to flame length,
40 although I can't give you a theoretical explanation because there is no good theory which covers the process of fire spread. But empirically it appears to be that part of the fuel bed which contributes to the tall flames.

45

Q. So suspended litter to some extent, is that a fair description of what you are talking about?

A. Yes. It goes under the common name of "trash". In the field it is leaf, bark and twig material and dead shrubs and that material which has started to collapse and is forming - it is an identifiable layer that you can see at the base of the shrubs.

Q. I assume that is because there is greater oxygen around the fuel or something like that; is that right? Is that why it burns more quickly?

A. I think in general terms, yes, it is aerated. So the spread from particle to particle within the fuel bed is optimised, and it goes under very quickly.

Q. Why is it so, if that is the case, that the spread is even quicker if that shrub is taller; is it just because you end up with a larger amount of this trash?

A. As the shrub grows and the fuels age - the shrub height is related to the fuel age because we were looking at the time since burning and the development of fuel structure over a period of up to 20 years. The taller the shrub, the more material is suspended in the base of them.

Q. That circumstance of shrubs up to - did you say 2 to 3 metres?

A. Well, greater than a metre here. That covers most shrub types in the ACT.

Q. Has that any relevance for pine forest areas in the pine plantations that we saw to the west of the ACT?

A. It does if there has been some harvesting operations within the pine forest where there is branch and material left from the harvesting operation which suspends the litter above the ground, which is apparent in most pine forests if they have been pruned. If they are unpruned then you are really very quickly looking at the fuel complex which involves suspending material on the bottom of the pine forests as well as litter on the ground.

Q. We are not really talking, are we, about something being equivalent to a shrub level of

greater than a metre though - that existed to the west of the ACT - in those pine plantations?

5 A. No, we are not. But if you look at the structure of an unpruned pine, it in structural terms has suspended litter on its lower branches and in the lower parts, especially when the trees are young. As they grow older, depending on the extent of pruning you then go to what is primarily a needle litter bed. But if it is unpruned,
10 unlike a eucalypt fire, a pine fire goes through a step-wise progression and changes very quickly from a surface fire to a fire that is involving the whole canopy of the pine tree.

15 Q. The question I really wanted to ask you is: your Project Vesta research, has it been conducted so as to give even a preliminary figure, such as you have given in this brochure, to the circumstances that pertain in the pine forests to
20 the west of the ACT in January 2003?

A. It may do. I don't know. We talked yesterday about validation of those results in extending that fuel type to other fuel types, so it may. But at this stage we don't have a great deal of
25 experimental data on pine fires. I may have carried out a hundred or so fires in pines but, in terms of wildfire intensity, most of the data comes from a comparison of wildfires in pines with wildfires in similar conditions in eucalypt
30 forests.

Q. The question I therefore put to you is: without the experimental data there is no reason to multiply the MacArthur meter by a factor of
35 three for the purposes of trying to predict fire spread through the pine plantations that existed to the west of Canberra at the beginning of 2003?

A. I don't have the data that would prove that in any way but looking from experience - and most
40 people that have had experience in dealing with pine fires and measuring the rate of spread - there is not a great deal of difference of the high intensities between the rates of spread through pine forest and the rates of spread
45 through eucalypt forests; that is carrying a heavy fuel load or comparable fuel load.

Q. With or without shrub layers taller than a meter?

A. With or without shrub layers, and generally the fastest spread is in unpruned forests, which
5 in many ways tend to burn more like a grassland than a eucalypt forest fire.

Q. In fact, do I gather from what you say that not only does Project Vesta not supply the
10 research material to warrant multiplication by three times in the pine forest plantations that existed but also it doesn't provide the research material to warrant multiplication by two times?

A. Not directly from that but, because that is
15 also related to the size of the fire, I think it would be prudent to take the similar behaviour that was exhibited in Project Vesta on large fires in eucalypt forests would also apply to pine fires.

20

Q. Maybe so, but the project itself at this point in time doesn't have a lot to offer in that respect?

A. No, it doesn't.

25

Q. In fact, on the second last third, so to speak, of this brochure, you say at the point in time when the publication was made there was no reason to change the MacArthur forest fire danger
30 rating system?

A. Yes, you have to discriminate between forest fire danger and the prediction of fire spread which comes from the tables at the back of the meter. The fire danger - the combination of
35 weather variables is still the same.

Q. Prediction is a different thing --

A. It's the prediction of the fire spread.

40 Q. You do not recommend any change to planning levels based upon previous experience?

A. Well, although this was a new finding for prediction, people have been dealing with that fire behaviour. The fire behaviour is not new.
45 It is just that we have been able to identify and quantify it somewhat better. So in terms of practical experience that is based on what is

required at a certain fire danger level, that experience still applies. All that it means is that people didn't know how fast their fires were spreading in most cases.

5

Q. The speed with which a fire would spread would have an impact on suppression; would it not?

10 A. Well, its intensity. The intensity - we try to relate the capacity suppressed fires to fire intensity because that takes in not only the rate of spread of the fire but also the amount of fuel being consumed.

15 Q. But getting back to my question: the rate of spread would have some impact on suppression difficulty?

A. Yes, it does.

20 Q. Yet again, at the back of your brochure you say, "Likewise, the degree of suppression difficulty at each fire danger class is the same as it always was". You weren't offering some warning in that regard?

25 A. It is the reason that we do not want to change the fire danger rating system because that's the combination of weather variables. It is important that that combination stays the same. It is the relationship between that index and the fuel load which is what we are looking at in Vesta, which is
30 the important factor.

35 Q. Perhaps you could just explain to me because perhaps I am misunderstanding something. If you had discovered that fires in certain circumstances could spread much faster than the MacArthur meter would suggest their rate of spread would be, why would one not say in these circumstances you will require a greater degree of suppression resources?

40 A. Because the people have made the association with fire danger and the suppression resources required under that fire danger. Now, that's operational experience that goes into that. We have quantified that in terms of fire intensity, but most organisations that have worked on fire
45 danger have worked on operational experience and what their firefighters can do at a particular fire danger level.

The fire authorities that we consulted, the fire authorities around Australia, by and large they were happy with the fire danger classes. For most of the time they haven't gone to the refinement of working out their suppression capacity in terms of fire intensity.

Q. On the fire authorities around Australia - the multiplication by a factor of three which Project Vesta recommends, that is not something that has been picked up by the New South Wales bushfire authority, is it?

A. I don't know what they have done with it. They received a large number of these brochures. I do know they have distributed them widely through their organisation.

Q. You do not know whether it is the official position of the New South Wales bushfire authorities to apply that which occurs in the paragraph under the heading "shrub fuel is important in fire spread"?

A. No, I don't know.

Q. Could I suggest to you the Department of Sustainability and Environment in Victoria - I think that is what its name is; you probably know it better than I do - has likewise not picked up and made it its policy to apply the same paragraph to the lands it controls in Victoria?

A. I don't know what their official position is. I do know that a number of their planners are aware of it and are using it.

Q. I have no doubt they would be aware of it, Mr Cheney, but they haven't said, "Henceforth when we find fires in areas greater than 1 metre shrub layer, we are going to multiply the MacArthur meter by three"?

A. Well, they should if they want to predict fire spread.

Q. But they haven't?

A. It is up to them to make that decision.

Q. Do you know if they have?

A. No, I don't.

Q. That department is responsible for fire suppression in Victorian parks?

A. Yes.

5 Q. And recreation areas - in fact a very large proportion of the state, is it not?

A. As I understand it, it is any land owned by the crown in Victoria.

10 Q. If one was to predict the rate of fire spread and not apply Project Vesta - withdrawn. There is no published report of Project Vesta at this stage?

A. Not at this stage, not as a formal paper.

15

Q. How long has it been undertaken?

MR WOODWARD: This is, I think, the fourth time this question has been asked.

20

MR PHILIP WALKER: Q. How long has the project been undertaken?

A. The project commenced - I commenced the planning for it in, I think it was, 1992 or 1993.

25

THE CORONER: Got approval in 1996 and got under way in 1998, I think.

THE WITNESS: That's correct, your Worship.

30

MR PHILIP WALKER: Q. Using your fire prediction model at the back of your report, you are aware, are you not, that the Weather Bureau predictions indicated for the 18th of January - I will just give you a precise reference - at 6.20am on Saturday indicated that there was very high fire danger predicted by late morning and reaching extreme in the afternoon.

35

A. Sorry, I missed the time of that.

40

Q. On page 35 of the Commonwealth Bureau of Meteorology submission to the inquiry into the ACT bushfires 2003 - the reference I have is [MLI.DPP.0005.0006] but experience has taught me that MLI doesn't work on this machine.

45

MR WOODWARD: It does. That version was the one

submitted to McLeod; there is another version which has a different number; but they are the same.

5 MR PHILIP WALKER: I have been given a brief that is obviously way behind the times.

THE CORONER: Do you need it brought up, Mr Walker?

10

MR PHILIP WALKER: Not necessarily. I can read it.

15 Q. It says, "At 6.23am Saturday, 18th January from 500-1200 metres". It refers to "fire danger rising to very high by late morning and reaching extreme in the afternoon; weather dry".

A. Yes.

20 Q. A very high fire danger index is up to 50; is it not?

A. Between 25 and 50.

Q. And extreme is above 50?

25

A. Yes.

Q. In your model you used an index of 80; is that right?

30 A. I was going through - the second example was based on the 0556 forecast, which forecast a forest fire danger index of 60, extreme.

Q. Sorry 556?

35

A. 0556, yes.

Q. I don't understand why I have one that indicates 1623 very high in the morning. Was it extreme throughout the entire day?

40 A. No. Normally you would say very high in the morning and rising to extreme.

Q. Just dealing with the first of your examples there where you use a fire danger index of 80 - taking that to begin with, why 80, Mr Cheney?

45 A. Again, without an early forecast of extreme weather, I would for planning purpose say, "Well it will probably get to 80". That's the reason

for using that.

Q. During what period of time that you make estimates based upon a fire danger index of 80?

5 A. That is assuming it would get into the 80 class I think after 1000 hours.

Q. Through to 6 o'clock; is that right?

A. Yes.

10

Q. There is in fact on the figures that you use there, correct me if I am wrong, not one instance where you use a fire danger index which makes some distinction between the very high bracket of fire danger in the morning and the extreme first danger in the afternoon; is that right?

15

A. No - sorry, that is correct.

Q. As a consequence, that is likely to overpredict?

20

A. In terms of making a prediction of that sort, I don't believe there is any wisdom in trying to be too precise about it. You are predicting for what are likely to be the most dangerous conditions for the day. You don't know and the Weather Bureau doesn't know when those conditions are going to start or to what level they are going to get to. In fact, I think you are kidding yourself if you try and make that prediction too accurately.

25

30

Q. Yes, indeed. I understand the point that you make. By the same token, the objective - if you are planning for people who must dispose or potentially dispose resources and provide warnings and inform police and urban fire brigade and so forth - is to achieve as far as possible a level of accuracy?

35

A. As the forecasts improve in their accuracy, yes, you can upgrade your prediction. But understand that there is still the potential for a considerable level of error. That's why I go to the high values.

40

Q. From the point of view of those who were trying to dispose of resources on Saturday the 18th, a fire prediction model which was

45

dramatically in excess of what might realistically occur, just to take one extreme, could in fact hamper fire suppression efforts; could it not?

5 A. I don't see how, because fire suppression efforts were not possible once it had got to those conditions - in fact in the very high fire danger range.

10 Q. There was some question about holding fires in the grasslands?

A. Fires were being held in the eaten-out pasture, yes, that is correct. It required a certain wind speed to be exceeded before that travelled through the eaten-out pasture.

15

Q. The prediction that you make at the back of your report that the fire could reach the suburban area between 1300 and 1400 hours, that is based on the assumption of a fire danger index of 80?

20 A. Yes.

Q. Its largest is some 20 points higher than what the Bureau of Meteorology predicted the fire danger index to be; is that right? Wasn't the fire danger index in the afternoon predicted at 62?

A. At 0556 it was predicted at 60, yes.

30 Q. You considered it was appropriate to increase the fire danger index by one-third?

A. Well, there was an error of at least plus or minus 25 per cent on the bureau's ability to predict wind speed. They admit to that. They give a value of a mean wind speed. As was shown on these fires, the wind speed was above what they predicted. So in planning terms that should be a known potential. If it goes less - if it is minus 20 per cent then you are lucky and should be grateful for it.

40

Q. The final figure that your estimate produces, I take it do we plus or minus 20 per cent off that; or is that built into the model by the inflation of the fire danger index?

45 A. Which one? Which final figure you are talking about, sir?

Q. You say in the very last paragraph:

5 "... the planning unit should have assumed a
fire danger index of 80 was possible and that
extreme weather would occur after 1000
hours."

A. Yes.

10 Q. You have, even on the afternoon prediction,
inflated the fire danger index by approximately
one-third. You have applied it two hours earlier
than the Weather Bureau says that it is
applicable. You have then multiplied your figure
15 by a factor of three for the Project Vesta effect,
and I understand you have made no allowance for
topography. Is that the way you have run your
model?

A. That's correct. It is assuming level ground.

20 Q. That's just not the case, is it? I mean it is
not level ground. There is a drop - from the base
of the Baldy Range to the Murrumbidgee River, what
sort of elevation are we talking about?

25 A. My map has gone. I don't know without looking
at a map.

Q. Something in the order of 400 metres?

A. To the very base of the river perhaps. I
don't know.

30

Q. Well, perhaps you might actually just have a
look, if you have got a map you can conveniently
lay your hands on, Mr Cheney.

35 A. I would say there is a 630 spot height in the
grassland where the fire had burnt out to in the
morning of the 18th. I can't read the contour,
unfortunately. It looks there is a figure of 500
on the Murrumbidgee on the line between that point
and Mt Stromlo. There is another spot height of
40 645 metres just above the Murrumbidgee about
three-quarters of a kilometre east of the
Murrumbidgee. So while the Murrumbidgee might be
at something less than 500 metres, essentially it
is a gorge cut into rolling hill country.

45

Q. Can I show you this photograph (handed). I
don't know if you recognise the photograph,

Mr Cheney. If I were to tell you it was a view from Mt Stromlo, would you accept that?

A. Yes, it appears to be looking from Mt Stromlo towards what I would think would be where the Ghengi's trail is located on the skyline at the back.

Q. So what are we talking - west, north-west?

A. I would say we are looking north-west - maybe a little west, north-west.

Q. Is that your idea of undulating country?

A. Yes.

Q. Can you tell me some of the slope on some of the ground that we see in this particular photo - not necessarily from the photo but from your knowledge of the area, whatever means you choose?

A. I would say there were slopes up to 15 degrees.

Q. And in the mountainous area in the back of the photograph?

A. Probably slopes up to 20 degrees.

Q. What does the MacArthur meter suggest is the effect of a 20 degrees slope?

A. A 20 degrees slope will increase the fire spread up that slope by four times.

Q. And reduce it to 25 per cent of its ordinary speed on the downslope?

A. That's correct.

Q. I think Mr Watts dealt with some of this yesterday, the net effect of that is that the time it takes if you have an upslope one side of the hill and a downslope on the other side of the hill both of which is a kilometre, the increase in speed on the upslope and the decrease in speed in the downslope give you ultimately a much longer period of time to cover the same distance than that which would be experienced if the ground were flat?

A. That would be true if the fire was not spotting.

Q. Well, let's come back to that. But if it were not the case, as a matter of mathematics if it took one hour to do a kilometre on the flat and two hours to do 2 kilometres, if you had a
5 20-degree upslope of 1 kilometre you would expect it to take 15 minutes?

A. Yes.

Q. And if you have a 20-degree downslope, it
10 being a quarter of the speed, you would expect the fire to take approximately four hours?

A. Yes.

Q. So the total time to cover the 2 kilometres in
15 those circumstances ends up being something in excess of four hours as opposed to two hours if it were flat?

A. If you were to calculate it that way and if
20 you had a fire and you had a recurved wind on your lea slope, you would find your fire would burn down hill even slower than a quarter of the rate.

Q. Yes, I think you said that yesterday. Why did
25 you pick 10am as the time for the increase in the fire danger index?

A. It is about the time that you get mixing down and that your high winds aloft come down to the surface.

Q. If you removed the factor of 3, the Project
30 Vesta effect from your fire model, Mr Cheney, what does it do to the amount of time that it would take the fire to progress over the ground which you have it covering?

35 A. It increases it by three times.

Q. So we are looking in the order of 8 or 9 hours to do the same distance?

40 A. I worked out three hours, so it would be nine hours.

Q. And therefore we would be looking somewhere around about 7 o'clock in the evening to get to the same spot?

45 A. If you use that figure, yes.

Q. If you actually used the fire danger index

provided by the Weather Bureau, what difference does that make in the period of time that it would require to cover the same ground?

5 A. I would say it would increase by about 25 per cent, roughly.

Q. So we end up with something then that is in excess of 11 hours?

A. If they used those figures, yes.

10

MR WOODWARD: I am sorry, while my friend is gathering his thoughts, there is one aspect of that last question which again might cause some confusion. I think as I understand it, the evidence earlier of the witness was that the "by three" calculation only applies to forest areas?

15

THE WITNESS: Sorry, yes.

20

MR WOODWARD: So it wouldn't affect, as I understand the evidence, that part of the area traversed which was eaten-out grasslands if it still travelled through that area.

25

MR PHILIP WALKER: I take Mr Woodward's point.

Q. Mr Cheney, that requires some adjustment to your answer.

30

A. It would. Sorry, I should have picked that up.

Q. It wasn't as simple as --

35

A. It would maintain the average spread of 5 kilometres an hour in eaten-out grassland and would reduce the rate of spread through the forest to 1.8 or close to 2 kilometres per hour.

40

Q. What are we looking at in terms of time - about 8 hours rather than 9 or something like that?

45

A. It was about equidistance of grassland and forest - the grassland would take perhaps an hour and a half and the 7 kilometres of forest four hours. So five and a half hours, a rough calculation.

Q. With the 25 per cent it is up somewhere 6 and

a half, 7 or thereabouts - 25 per cent for adjusting for the fire danger --

A. Yes.

5 Q. That is applying that index from 10am rather than in the afternoon?

A. Yes.

10 Q. The fire did, obviously, hit the suburb of Duffy at approximately 3pm. That was due to a substantial worsening in the weather to that which was predicted; was it not?

A. Yes.

15 Q. And the greatest moment of the fire occurred after 1300 hours?

A. Yes.

20 MR PHILIP WALKER: Your Worship, I probably have a little bit longer to go. I am just wondering rather than saying come back tomorrow for what wouldn't be a very large period of time whether it might be possible to just pick up 10 or 15 minutes longer. I think I can probably consolidate a bit
25 more of what I was going to ask and do that some time next week.

30 THE CORONER: Do you know whether Mr Whybrow is going to be here tomorrow? If he is, I will adjourn --

MR PHILIP WALKER: I don't think he is. I haven't spoken to him.

35 THE CORONER: I hope he is.

40 MR PHILIP WALKER: Other than at lunchtime when I indicated to him that I had informed you of what he asked me to inform you of, and he indicated he thought his matter would continue on tomorrow morning, contrary to what his earlier expectation was. I gather he is in some sort of running list or something of that nature and he got a start
45 some days later than what he thought he would.

THE CORONER: So what are you proposing, that we sit a little bit longer this afternoon to finish

and not --

MR PHILIP WALKER: What I was going to suggest, as
I have I think probably 10 or 15 minutes more,
5 that as we are resuming I think next week --

THE CORONER: We are on Monday.

MR PHILIP WALKER: -- with Mr Pike and
10 Mr Craddock, and I understand Mr Whybrow is
available on Monday --

THE CORONER: My understanding was that Mr Whybrow
was available tomorrow, but you have told me
15 otherwise and I don't wish to shoot the messenger,
Mr Walker. If you are confident, which I am not,
that Mr Whybrow is not available tomorrow, then
what you are suggesting is that you continue with
Mr Cheney on Monday, because we certainly are
20 resuming on Monday to continue Mr Cheney's
cross-examination.

MR PHILIP WALKER: Let me throw one other minor
spanner in the works in relation to that. I
25 personally cannot be here on Monday. I have a
medical specialist appointment in Sydney. If the
matter is to go on on Tuesday, then I would be
able to pick that up; or, alternatively, I have
probably only 10 or 15 more questions to ask so I
30 might actually ask Mr Whybrow whether he would
deal with those couple of matters and I dare say
he would do so for me.

THE CORONER: I still don't understand. Do you
35 want to sit longer today to finish today?

MR PHILIP WALKER: No, your Worship. Frankly, if
I cleaned up some of the questions that I was
going to ask at the end of it all, I think that
40 would make it more efficient than continuing on
with the last part of what I have here. What I am
suggesting is that I complete 10 or 15 minutes
more perhaps on Tuesday. But if by chance there
is some difficulty in me doing that, I will make
45 some arrangement with Mr Whybrow to say, "I just
want to know the answers to these questions."

THE CORONER: I understand. My only concern now is there is no-one else now, apart from Mr Whybrow, to cross-examine Mr Cheney before Monday which means that we are not going to be
5 able to sit tomorrow. As I say, I find that very unsatisfactory given that Mr Whybrow has not given me the courtesy of telling me that he is not available tomorrow and certainly gave me no indication of that on Tuesday when he was
10 suggesting that he would be available on Friday. But that is what you understand that he is not going to be available tomorrow - at any stage through the day?

15 MR PHILIP WALKER: That's the best information I have when I made an inquiry at lunchtime.

THE CORONER: All right. We will stop now with Mr Cheney's evidence. I apologise to you,
20 Mr Cheney, that you have not had a clear run and that you do have to be brought backwards and forwards like that. But it seems the matters are taken out of my hands as well.

25 I will do that then, I will adjourn until Monday, and I understand you are not available on Monday, Mr Walker. It may well be that unfortunately the evidence of Mr Cheney will continue until Tuesday. There is not much I can do. Perhaps you could
30 just pass on my concern that Mr Whybrow has not informed me of his availability himself and that he has misled me.

MR PHILIP WALKER: So that I am not accused of the
35 same thing, your Worship, if I am unable to be here on Tuesday, you will understand that I will have made some arrangements.

THE CORONER: I understand the position about
40 that, Mr Walker.

THE WITNESS: Do we have an estimate of how many days next week would be involved?

45 THE CORONER: I would appreciate that too. But without people here - it is Mr Pike and Mr Craddock on Monday, and Mr Whybrow - I can't

really say, Mr Cheney. I don't have any indication from those counsel as to how long they will take. You don't know how long Mr Whybrow is proposing to take, do you?

5

MR PHILIP WALKER: No, I don't really, your Worship.

10 THE CORONER: It is best not to speculate. What are your commitments, Mr Cheney?

THE WITNESS: I will cancel my appointments.

15 THE CORONER: Because it seems that everybody's commitments are being taken into account apart from yours, Mr Cheney.

THE WITNESS: I will try to get it over with as fast as I can.

20

THE CORONER: If there is any indication that Mr Whybrow is available tomorrow, are you available tomorrow, Mr Cheney?

25 THE WITNESS: A game of golf sounds good - I am available tomorrow, your Worship.

30 MR PHILIP WALKER: If it would suit your purposes, I could make a phone call and see if I can contact Mr Whybrow and I can let you know. There is not much I can do apart from trying to contact him.

35 THE CORONER: No, I understand that and it is not fair to put that on to you. My only concern is that if Mr Whybrow shows up tomorrow morning and the rest of us are not here then --

40 MR PHILIP WALKER: You would probably have had the last laugh, your Worship.

THE CORONER: What do you say, Mr Lasry? It might be safest if we adjourn until Monday?

45 MR LASRY: I think so.

MR WOODWARD: Based on what Mr Walker said earlier today, we had been proceeding on the basis that

there would be no evidence led from Mr Cheney tomorrow --

5 THE CORONER: That seems safest, doesn't it? I apologise to all of you for that, but it is not something that is within my control in any event. So if you are available on Monday, Mr Cheney, and I apologise for not being able to tell you how long you will be required next week. We will
10 attempt to make some inquiries to see how long counsel - I don't know whether that is possible - to ask Mr Craddock and Mr Pike how long they will be and some inquiries of Mr Whybrow just so that we can have some indication for Mr Cheney as to
15 how many days he will be required next week.

MR PHILIP WALKER: Your Worship, I meant to tender Mr Cheney's notes.

20 THE CORONER: The field notes?

MR PHILIP WALKER: Yes.

25 THE CORONER: The notes of the field trip on the 20th of August 2003 will become exhibit 0088.

EXHIBIT #0088 - NOTES OF FIELD TRIP ON 20/08/03, TENDERED, ADMITTED WITHOUT OBJECTION

30 THE CORONER: We will adjourn until Monday the 20th at 10 o'clock.

MATTER ADJOURNED AT 4.19PM UNTIL MONDAY 20 SEPTEMBER 2004 AT 10AM.

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TRANSCRIPT OF PROCEEDINGS

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**CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY**

10

MRS M. DOOGAN, CORONER

15

CF No 154 of 2003

20

CANBERRA

25

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
30 PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

35

DAY 78

40

Monday, 20 September 2004

45

7111

[10.04am]

5 THE CORONER: I haven't seen your email. Thank
you for responding, Mr Pike and Mr Whybrow.

MR CRADDOCK: A little bit late. Now that I am
here and I have seen the email, the news on the
10 batting order is that I am going to go first.
Timing-wise, Mr Watts, who we call "Killer" at the
Bar table, and Mr Johnson are guilty of theft of
my thunder, more a misdemeanor than a felony. But
the upshot of that is I am not going to be
15 terribly long. I may have three-quarters of an
hour's questions for Mr Cheney. Presumably he has
only got three-quarters of an hour of answers. We
will then go to Mr Pike and Mr Whybrow.

20 MR PIKE: I think the other way around. I am
bringing up the lead, because I will be quite
short.

THE CORONER: Mr Cheney did ask on Thursday, and I
25 said I would make some inquiries on his behalf. I
am grateful for your responses.

MR CRADDOCK: He has heard what I have to say
about equal time. I suspect his answers will be
30 longer than the questions.

MR McCARTHY: Before Mr Cheney resumes the witness
stand, there was a common interest amongst many of
the participants before you with regard to the
35 production of the documents giving rise to
Mr Roche's expert report. The territory's
position is that the documents described in the
letter of 22 July, with which your Worship would
be familiar, should be produced forthwith.

40
I have had discussions with Mr Lasry about the
production of those documents. He has indicated
to me an intention to produce them early this week
and also some questions about some of the
45 documents which ought to be produced.

The territory's position, I think I speak for

others at the Bar table, is that the documents should be produced in full per that letter of 22 July. We seek the production of those documents by no later than the rise or the
5 conclusion of proceedings tomorrow.

There are a number of practical issues that I would put forward as to why that is a reasonable request, your Worship. The first thing is, as
10 your Worship would know, Justice Whitlam made his orders back on 10 September. We are now 10-days on from there. As your Worship mentioned, the reasons really are ancillary to the question of the orders that were made.

15 Furthermore, counsel assisting informed the Court on the 10th of September at the directions hearing - I refer here to transcript page 6890 - where Mr Lasry commented:

20 "In anticipation of his Honour's orders on 9 September, a letter signed by Ms Drew on behalf of myself and Mr Woodward sent to the Government Solicitor's Office ... would be
25 available for collection."

They were made available that day, if I recall.

The concern obviously is the anticipation of the
30 need for those documents was as clear with Mr Roche's documents as it was with Mr Cheney's. In effect, therefore, counsel assisting have had the best part of 10 days now to produce them. The other concern, perhaps I am speaking for others,
35 is there is a logistical issue that some need to return to Sydney. It would obviously assist them greatly if those documents could be taken back with them.

40 The other thing I would raise, your Worship, at the conclusion of today, there are only nine working days before Mr Roche commences his evidence. The territory and, I think, everybody has an interest in avoiding the kind of practical
45 difficulties that arose for various parties in terms of their availability and readiness concerning Mr Cheney. It is obviously a situation

that the Court would like to avoid. We would seek the documents by close of business tomorrow in order that the inspection of those documents can be done, in order that everybody be ready to take
5 the evidence, et cetera, come 5 October. If it please the Court.

THE CORONER: Thank you Mr McCarthy. I will make some inquiries, Mr McCarthy, as to the state of
10 those documents.

MR PIKE: There is one ancillary matter which I might raise if it is convenient to do so. It really goes to the request which had been made for
15 those documents back on the 22nd, I think it was, of July this year. The list that we subsequently received from counsel assisting was dated 16 August 2004. It is probably a question of some miscommunication about the issue, your Worship.
20 On my reading of that list which has been provided, there is no reference made to notes taken by anyone in conference with Mr Roche; unlike the situation with Mr Cheney, where there were notes taken, it would appear, by solicitors
25 assisting or instructing counsel assisting.

It is probably a matter of miscommunication. It is difficult to understand that there would be absolutely no notes of all of those conferences,
30 which we understand were quite numerous. If there is any miscommunication or error about that, if that could be attended to at the same time so we can have all of these things raised fairly quickly.

35 I did raise this a while ago. It seems this is the appropriate time, now Mr Woodward has spoken. On behalf of the assembled parties I raise it for. Your Worship

40 MR LASRY: I should say, in relation to the documents, the documents in relation to Mr Cheney, as your Worship will recall, were assembled and provided in circumstances where it was possible
45 that more documents were provided than would actually be required by his Honour's judgment. We did that, of course, in the cause of getting on

with the evidence.

We have held back, as it were, in relation to Mr Roche's documents because we thought we might
5 receive some guidance from his Honour as to how we might apply a criteria to the selection of documents. I think it is fair to say we haven't received that guidance from his Honour's judgment and, therefore, we will have to make decisions in
10 accordance with what has previously occurred, and I propose to do so.

Of course we have anticipated that the documents will need to be provided, so documents have been
15 assembled. For myself, I don't see any difficulty at the moment about providing the documents we have assembled by the end of the day tomorrow. There may be some particulars which may need to be further discussed, but I don't anticipate a
20 problem in meeting that deadline, if your Worship pleases.

THE CORONER: Thank you, Mr Lasry.

25 MR McCARTHY: Your Worship, I perhaps might add one comment. I think it is fair to say that Justice Whitlam did make clear that the categories (a) to (e), which were acknowledged by his Honour as fair and appropriate classes of documents, were
30 to be produced. In my submission, the letter of 22 July properly reflects those classes of documents. I don't contradict anything my friend says, save to say that if a document falls within the classes of 22 July which match the classes
35 paragraph (a) to (e), then they ought to be produced.

MR LASRY: This game of ping pong will stop in a minute. But I should say, so it is clear, and if
40 we are in error we should be informed that we are, my impression of his Honour's judgment was that he obviously didn't favour what he described as the "prescriptive approach" taken in the draft orders submitted by the prosecutors. He seemed to be
45 suggesting that what had been proposed by the Director of Public Prosecutions Refshauge in his draft was an appropriate approach. He referred to

the fact that Mr Refshauge in his attempt to draft orders sought to accommodate the principles of law that he was operating under.

5 We are essentially working, as a guide for the purposes of Mr Roche's documents, to paragraphs (a) to (e) set out in the second of the proposed orders submitted by the Director of Public Prosecutions. They are appended to his Honour's reasons, so that any documents that fall within 10 the five categories set out on what is effectively page 17 of his Honour's judgment are documents that we will be making available.

15 Now, if I have missed something applying that criteria, I am happy to be informed.

THE CORONER: That should accord with what you said, Mr McCarthy.

20

MR McCARTHY: It may well do. I think it is probably more practical to wait to see what is produced. If it gives rise to an issue, we will take it up with counsel assisting.

25

THE CORONER: That is probably the smart way to proceed, Mr McCarthy.

30 The only other issue I will raise is: Mr Whybrow, you made a point about some notes that were made by Ms Drew and there were bits that I think you refer to as "blanked out bits".

MR WHYBROW: Excised, yes.

35

THE CORONER: I have a copy of those. I have had the opportunity in the last few days to have a look at those. I can say to you that those 40 blanked out bits do not relate to the original category of documents that was requested. They have nothing to do at all with any levels of instructions or assistance or any other reports or conversations reflecting any instructions that were given in relation to Mr Cheney in preparation 45 of the reports.

MR WHYBROW: I saw that in the transcript. I

will, and it is likely during the course of my cross-examination, call for those notes in any event, not because they fall within that original call but because it may be that they become
5 relevant to the cross-examination simply because they appear to record conversations had in the presence, including/involving Mr Cheney and where your Worship, at least on one of those, certainly the most relevant, was present at as well. In
10 that sense it may be relevant to know the information that Mr Cheney is becoming aware of and perhaps even your Worship is becoming aware of. Then it may become relevant in how his report develops.

15 I don't make that call at this stage because it may not become relevant in my cross-examination. I indicate at this stage that I may well be calling on those notes, not on the basis that I
20 disregard what your Worship said at all, but on another basis they may be relevant in that they reflect conversations had with a witness in the presence of a judicial officer relating to the course of his report generally, your Worship.

25 THE CORONER: Are you ready, Mr Craddock?

MR CRADDOCK: Yes, that 45 minutes or so of my questions start now.

30 THE CORONER: We will start the clock now, Mr Craddock. Thank you Mr Cheney.

35 <PHILLIP CHENEY, RESWORN

<CROSS-EXAMINATION BY MR CRADDOCK

40 Q. Mr Cheney, I just want to take you firstly something that you said in an answer to Mr Walker last week. You were asked some questions about your calculations of shrub layers and various things of that sort relating ultimately to the Vesta experiments. Just to put the thing in context, it is at T7092. I will read the relevant
45 bit. You said:

45 "So it tends to be related to flame length, although I can't give you a theoretical

explanation because there is no good theory which covers the process of fire spread but empirically it appears to be part of the fuel bed which contributes to the tall flames."

5

Now, the bit that I wanted to ask you some questions about in particular is where you said that there is "no good theory which covers the process of fire spread". Is it the case that the process of combustion and fire spread is something that is not perfectly understood?

10

A. That would be correct.

Q. Would it be a fair layperson's proposition that that is just something which is in the nature of fire; we don't understand it perfectly?

15

A. Yes.

Q. You made reference to the need for empirical study. Am I correct in thinking that your focus there is on making observations so as to determine what happens under certain conditions without necessarily expecting to discover why it happens?

20

A. With most empirical studies you try to measure as many variables as possible and those variables by observation you can see are affecting the fire behaviour, then try to draw correlations with the observations of fire behaviour with the weather and fuel variables.

25

30

Q. So that you carry out a range of experiments and in those experiments you try to control as best you can the variables that you want to study; is that a starting point?

35

40

A. Yes. Well, you try to limit the variation of some of the variables and optimise the variation on some of the others so that you can reduce the impact of some variables and exaggerate the range or the impact of another variable. But if you are doing empirical studies in the field it is very difficult, you can't control anything in the normal scientific sense of holding a control variable constant and then observing the impact of individual variables separately.

45

Q. That may complicate the process of empirical study in the field. Are you nevertheless at least

seeking, by a series of observations, to be able to sheet home an observation to either a variable or a number of identifiable variables?

A. Yes.

5

Q. What you are seeking to achieve by that process is ultimately to be able to produce a model with predictive power based upon the proposition that we have observed fire repeatedly to do this under these circumstances?

10

A. That's correct.

Q. That predictive power in a model that you hope to develop gains its predictive power by repetition?

15

A. Correct.

Q. At the end of the process you may not be able to say, "We know why it happens" but at least you might be able to say, "We know that it does happen and we can predict that in similar circumstances it's likely to happen again"?

20

A. Yes.

Q. So that course of empirical study is a species of scientific study that may be thought to differ from a process whereby you arrive at a theory and try and disprove that theory; is that fair?

25

A. Well, the purer or more traditional approach to science, you have a theory and you try to disprove the theory rather than prove it.

30

Q. But in the field of prediction of fire rate of spread you are not really after an E equals an MC squared moment but by repetition producing a predictive tool that is of practical use; is that fair?

35

A. That's correct.

Q. But in common with the process of science you nevertheless, once you have gathered your data and analysed it, need to write it up and to present it; is that right?

40

A. Yes.

45

Q. You need to publish it?

A. It needs to go through peer review before

that. That is part of the publication process.

Q. You would be wanting to publish a report of the Vesta project in a peer review journal?

5 A. That's correct.

Q. So that other experts in fire behaviour would first of all review your project or the report of your project and either indicate to the editors of the journal who publish it or come back to you and say, "What about X, Y or Z"?

10 A. That's correct.

Q. That can be a fairly rigorous process in the course of seeking publication of a theorem?

15 A. It should be.

Q. That is something that stands for the future of the Vesta project?

20 A. That's correct.

Q. It hasn't yet been published in a referee journal?

25 A. That's correct.

Q. Is it the case that there has not yet been a report prepared that you would be happy to submit for publication in a referee journal?

30 A. That's correct.

Q. I think in answer to either Mr Johnson or Mr Watts, I can't recall who, you made some comment about the process being perhaps slowed down a little by your involvement in these proceedings?

35 A. Indeed.

Q. To flesh that out, only a tiny bit, were you really indicating that there is much analysis work yet to be done on the data obtained by observation during the Vesta experiments that must first be done before a report can be prepared?

40 A. We have done one thorough analysis. We are now working over it again. We tend to find things that you miss in the first analysis when you go back over it. We are in the process of an iteration, of going through the analysis once
45

again. This should be the final one, with a bit of luck.

5 Q. When you are referring to this process of analysis and analysis, you are not merely talking about fixing up the typos, are you?

A. No.

10 Q. These analyses are aimed at detecting flaws in the methodology and flaws in the conclusions is that fair?

15 A. Basically running different types of statistical tests on it to see whether it stands up to the acceptable levels or confidence levels by different statistical tests.

Q. Mr Gould, one of your colleagues involved in the Vesta project --

20 A. Yes.

Q. The project itself, on the strength of its preliminary indications, sent out what I think has been referred to in these proceedings as a warning to fire agencies?

25 A. Yes.

Q. Apart from that document, members of the team have been on the Hastings telling people in the fire suppression industry about the project?

30 A. Yes.

35 Q. That included, I think, Mr Gould wandering off around the country some time towards the end of last year giving - I think it is called a Powerpoint presentation of the state of play with the Project Vesta?

A. Mr Gould and our other co-scientist, Dr McCaw.

40 Q. The document I have appears to be the Powerpoint slides. Mr Gould says the following things under the heading of "Implementing a new fire model research issues":

45 "Application ... winds greater than 25 kilometres an hour, fires wider than 120 metres, fuel moisture content less than 6 per cent, relevant humidity less than 20 per

cent. Unlikely to be addressed by experimental studies so wildfire validation remains important."

5 Then there are some references to some works by a Mr or Ms Werne and a Mr or Ms Redmond or perhaps they are places, I don't know.

A. Neither do I.

10 Q. Then, as a final point:

"Validation in south-east fuel types.

15 Now, they are all views, I take it, that you agree with?

A. Yes.

20 Q. As at some time in the second half of last year when these Powerpoint presentations were being given, those were still tasks for the future with respect to the ultimate task of using Vesta to build a better model; is that so?

25 A. We have to build the model and then the task for operational peoples to use the model. When we have to predict, we can't experiment at extreme levels, as you can appreciate, so we have to predict for that and we have to predict the high winds because that is the one factor we can't experiment under. So we produce the model and
30 then the normal process is to see how it stands up in different fuel types and see how it performs.

35 Q. The reference Mr Gould made to the validation of south-east fuel types draws attention to the fact that the experiments were done in fuel types other than south-east fuel types, is that so?

A. They were done in Western Australia.

40 Q. Amongst the other issues that he identified for future work includes a heading: "Spotting". Under that heading there appears:

45 "Characterise bark types for a broader range of trees including pine and eucalypt plantations. Validate spotting distance predictions for stronger winds. Further, validation of plume rise models."

As at the second half of 2003, so far as the effects of spotting were concerned, they were all tasks for the future in the course of Project Vesta?

5 A. Well, we had done some theoretical work and observations in a wind tunnel to measure the flight characteristics of firebrands. That is very basic data into a model that is designed to predict how far a firebrand will be carried
10 downwind.

The first trial that we used to test that was a limited trial at the end of the Vesta studies, which was looking at spotting from the last series
15 of our Vesta trials and the inclusion of some data from earlier trials. When we first started, that wasn't part of the program.

20 So, yes, there is plenty of work in fire science to do.

Q. I take it that although you were able to do some - I hope I don't mis-paraphrase you - limited spotting experimental work, fieldwork, in the
25 Vesta experiments in Western Australia, you wouldn't necessarily extrapolate those results to spotting from different fuel types in different conditions?

30 A. It really depends on the characteristic of the firebrand and how it burns. I think the initial work showed that there was far less difference between firebrands than we had originally expected. So, it may not require a great deal more work, but it is reasonable to expect that
35 many firebrands under certain conditions will react in very much the same way.

40 Q. But as an aspect of an empirical study based upon repeated observation, are you saying you are not yet in a position to say with any certainty that that is so; that is, that they may behave very similarly spotting from different fuel types?

A. I think we can say that now.

45 Q. You can say that now?

A. I think we can say that now. In the model that looks at the rate that firebrands burn as

they are carried up, and for different types you can apply different rates, it still gives you a great deal of variation in the process. I think it will be better than the current guidelines for spotting distances. That is yet to come. They haven't been replaced as yet.

Q. Has any work from the project in relation to spotting distances in different fuel types been published in a referee journal?

A. Not by our group.

Q. By anybody that you know of?

A. I am trying to rack my mind. Not a comprehensive analysis of the process. I think the work that Dr Ellis has been doing has been leading research in that area.

Q. Is that work undertaken independently of your studies?

A. He gained his doctorate with wind tunnel studies measuring actually the characteristics of firebrands. Some of that work had been done in the United States and in Spain.

Q. In other words it didn't grow out of Vesta. He is not taking up something that you have started with that last set of experimental fires where you had the opportunity to make some firebrand observations?

A. No. He had been working before that to build up information on the characteristics of firebrands.

Q. So his work on firebrands isn't part in any way of the Vesta project itself?

A. Only the final study where we tried to validate a model that he is producing, or get the data as part of the validation of the model that he is producing.

Q. There is yet no model, neither from you nor from Mr Ellis or anybody else that you know of?

A. Well, there is a - sorry, models have been produced by the Americans. Dr Albini has produced a spotting model. That was largely geared around the spotting from an individual pine tree that

flared up and produced firebrands and threw them downwind.

5 Q. On the strength of you lighting these fires in Western Australia, burning one tree doesn't seem to be a repetition of observation?

A. It is a good start as a theoretical model. He was a theoretical mathematician so he worked on a theoretical model that had not been validated
10 anywhere. He had applied it. In terms of our spotting problem, it didn't appear adequate to answer all the questions that we raised about spotting. So it was the reason why I directed Dr Ellis to take on repeating the firebrand work.
15 The main difference from previous work was previous people had used tethered firebrands. That was a firebrand which was --

Q. On a bit of string?

20 A. Almost. Stuck on a piece of wire with a balance on it so it wasn't falling freely through the air. The wind tunnel that we built was designed to be able to measure and observe the flight characteristics and the combustion of the
25 firebrand as it was falling freely through an air stream.

Q. But no new model yet?

A. Not yet, no.
30

Q. Dealing with another of Mr Gould's Powerpoint slides, under the heading "From Here" we have:

"Final project report by December 2003."
35

That's gone by the wayside, hasn't it?

A. Certainly has.

Q. "Wild land fire 2003 conference papers on fire development spread modelling and spotting." Do you know what that is a reference to?
40

A. A paper by Gould perhaps.

Q. Sorry?

A. A paper by Dr Gould and Mr McCaw, maybe myself, I don't know.
45

47

Q. Then he says:

"Scientific papers submitted for peer review over the next two years."

5

Is that the sort of timespan you would expect for that rigorous process of peer review that we were discussing earlier?

A. The process we would have to do is complete all the analysis and put it out to the agencies that contributed to Vesta and then take the individual papers and put them through peer review.

15 We want the report to be as close to the final papers as possible, but understandably there is a demand from our sponsors to get some results. They would like to apply them.

20 One of our considerable difficulties is people taking partial results before they have been peer reviewed and been using them. This runs the risk that someone will point out that we have made a mistake or there has been an error in the analysis and then we have to rescind what is already in and do it again.

Q. One step forward, two steps back?

A. Sometimes.

30

Q. Next:

"Field validation scheduled under program A of the bushfire CRC from summer 2003-04."

35

What is that a reference to?

A. Following the 2002 fires the government agreed to set up a cooperative research centre on bushfires called the Bushfire CRC, and Mr Gould is running one of the programs in that cooperative research centre. The organisation of that centre has taken him away from - not the research centre, but part of the organisation for that cooperative research centre has taken him away from the analysis that we had hoped to do when we completed the field studies. Dr McCaw likely has been involved in that program within the CRC and

40

45

another program which has also distracted his work from the Vesta results. That is, taking the Vesta work to do the validation studies is part of the Bushfire Cooperative Research Centre, because in
5 any of these studies we will need considerable co-operation with other agencies.

Q. So rather than just spending time crunching the numbers, it is seen to be a better way of
10 going about things to set up the CRC and use it as the vehicle, amongst other things, for doing some validation of the Vesta work; is that a fair summation?

A. Not really, I don't think, because you tend to
15 write off the importance of just crunching the numbers.

Q. Oh, no, I don't.

A. It is a matter of politics as much as anything
20 else that these were two of the current scientists that were going to be involved in that research period, and they needed to get in with the agencies and other research bodies to organise this cooperative research centre.

25

Q. Far from belittling the crunching of the numbers, it is the case, isn't it, that you are not prepared to publish and couldn't publish a final report until you have properly crunched the
30 numbers?

A. Not in a journal that we would be happy with, anyway. Someone might accept something lesser.

Q. Now, you were involved in making observations,
35 at least in the ACT, between the 8th and the 18th and no doubt on from there of the fires?

A. Partial observations, yes.

Q. Others in your team were doing the same?

40 A. Yes.

Q. I don't mean the same observations but those in your group were assigned tasks?

A. On different days, yes.

45

Q. Were you gathering data such as weather prediction, terrain, fuel, in relation to a

particular fire on a day-by-day basis and predicting fire spread?

A. No, we were not.

5 Q. The observations that you were making I think were in the main of fire behaviour?

A. That's correct.

10 Q. I think in answer to one of the questioners last week you indicated you would necessarily make some observations as to operational matters as you went along but your focus was fire behaviour?

A. That's correct.

15 Q. On at least two occasions between the 8th and the 18th you attended the planning unit at Queanbeyan?

A. Yes.

20 Q. Did you go with other members of your team?

A. Yes.

Q. Roger Good was the planner in charge there?

A. Yes.

25

Q. You are fairly well acquainted with him?

A. Yes.

Q. You have carried out research together?

30

A. No.

Q. You haven't?

A. No.

35 Q. He, to your knowledge, is a very experienced planner?

A. Yes.

Q. You were given full access to his unit?

40

A. Yes. We looked at the plans that they were preparing. We wanted to go and look at parts of the McIntyre's fire and he gave us information about where it was from the latest linescan information that he had available to him.

45

Q. He and members of his team spoke to you and members of your team about their observations and

their predictions and their plans?

5 A. We didn't go into any detail on what the predicted following day spread or following spread over any days would be. We rather looked at where it was at the present time and we wanted that information to find out what operations were going on. We didn't particularly want to get in the way of any operations but we wanted to look at what was happening on the fire ground.

10

Q. But you had full access to such data, such planning as was there at the times that you attended?

15 A. Yes. Well, that generally was observing what they had up on their planning board.

Q. At no time did you express any criticism of their approach?

20 A. No.

Q. Nor make any observation to them as to how they should be going about it? I am not suggesting it was your job to, but you didn't, did you?

25 A. Not at that stage, no.

30 Q. Can I show Mr Cheney a document. (shown) I hand up a copy to your Worship. I don't know whether this has ended up in evidence as an exhibit. There are other copies here for others at the Bar table. What you have before you is a page of emails backwards and forwards between yourself and Ms Drew of the DPP. In particular, I want to direct your attention to the letter at the top addressed to Ms Drew apparently from you, and in particular to the second paragraph. I should say, just to identify it, this is dated 35 15 May 2003 at 10.10am. The second paragraph reads:

40

45 "On the Canberra fires the important lesson will be how the topography strong - I think that probably should read 'strongly' - influenced fire behaviour in the first 10 days under moderate fire weather but under extreme fire weather had little influence on the overall spread pattern. It may well

5 illustrate different fire behaviour was
observed on different fires and parts of
fires around the ACT. While I can say these
things, I believe that a good illustration
goes a long way to giving a good
understanding of a fairly complex
phenomenon."

Now, that is an email that emanated from you?
10 A. Yes.

Q. Do you say at this stage --

MR LASRY: For the purpose of the transcript, I
15 wonder if this document could be tendered so if we
are searching for it we get the original
introduction.

THE CORONER: That makes sense.
20

MR CRADDOCK: I had intended to ask for it to be
admitted as an exhibit.

THE CORONER: I don't think it is on the system.
25 Do you wish to do that now, tender the document
now?

MR CRADDOCK: Yes.

30 THE CORONER: That email between Ms Drew and
Mr Cheney dated 14 and 15 May 2003 will become
exhibit 0089.

35 **EXHIBIT #0089 EMAIL BETWEEN MS DREW AND MR CHENEY
DATED 14 AND 15 MAY 2003 TENDERED, ADMITTED
WITHOUT OBJECTION**

MR CRADDOCK: Q. This document is now of some
antiquity. Is it still your position that
40 topography strongly influenced fire behaviour in
the first 10 days but had little influence
thereafter?

A. In a relative sense, yes.

45 Q. What do you mean "in a relative sense"? I
know you have spent just about every waking moment
studying these fires since then, but is that your

view now? If not, why not?

5 A. I would say it is my view, yes. Once you get into high winds, the impact of topography as it affects low intensity fire behaviour is overridden by another process, and that process is a spotting process.

10 Q. Is that another way of saying that in severe conditions - I am using the word "severe" to refer in the main to the weather - it is the weather that drives the fire rather than the fuel?

15 A. There is an old saying, "No fuel, no fire", so fuel is as important in the whole process as is the topography. But under extreme conditions, particularly in regard to topography, the relationships that are used probably still hold up on upslopes but the relationship of fire spreading downslope is over-ridden by the spotting process, if that is going on.

20

Q. The spotting process will occur whether your fire is going uphill or downhill as long as there is sufficient convection to carry firebrands into the air and put them down somewhere else; is that right?

25 A. Yes, that's correct. If it is going downhill, though, the convection is considerably less in most cases. So the spotting is generally reduced.

30 Q. Reduced going downhill?

A. Compared to the upslope.

Q. Less spotting generally with the fire going downhill?

35 A. Well, less distance of spotting, let's put it that way.

40 Q. I know you said in this email that it is a complex phenomena. I don't want to dumb it down too much just for my sake --

A. Where shall we start?

45 Q. Is it the case that there is less spotting as a general proposition if the fire is moving downhill rather than uphill?

A. Would it help you if I give my explanation of the process?

Q. I hope so.

A. Okay. The occurrence of the spot fire requires a generation of firebrand, which is most often a piece of bark. The distance that that
5 will be thrown ahead of the fire depends on its size, the rate that it burns out and the strength of the convection and the strength of the wind which is - to carry it forward ahead of the fire.

10 You have identified really two types of firebrands: one that is completely alight, which is a characteristic of most fibrous bark trees, and one which is alight perhaps only on one end or on one part, which is a characteristic of ribbon
15 bark trees or those gum barks which produce long streamers of bark down the tree.

In general terms, the ribbon barks are responsible primarily for the long distance spotting because
20 if they catch alight just on one end then they can remain burning slowly for a very long period of time, it may be 30 minutes or so, in which case there is potential for them to be carried very high in the convection column and flown a very
25 long way downwind before they go out.

The smaller fibrous firebrands that are produced from stringy barks, when you have very strong convection, most of them burn out within the
30 convection column. They have a much shorter life in terms of their combustion time. Most are burnt out in the convection column and only the largest of them or those that get tipped out of the convection column - it is a turbulent process -
35 some are thrown out before they go aloft, some will come out early, but most are burnt out.

The most severe spotting that occurs is when you have a temporary collapse of the convection
40 column. This primarily happens at the top of a ridge. If a fire is burning up the wind-ward side of the ridge, as soon as it hits the top it loses a lot of its convective energy and the convection column collapses. When it collapses the wind then
45 primarily is blowing, rather than being carried up within the convection column, and the convection column itself forms a barrier to the wind for some

distance downwind of the actual fire front. When it hits the ridge-line, the wind blows directly through - often directly through the vegetation of the tree tops, so a lot of the firebrands are then carried out horizontally rather than being taken up. That produces - they have much shorter flight times because they are only going from the top of the ridge and dropping down rather than being carried up in the air. So as a fire passes or comes as it is burning up to the ridge line, you tend to get occasional longer distance spots further downwind. When it reaches the top of the ridge line, there is a mass of spotting which is thrown a shorter distance downwind.

Q. To go the next step, because we were speaking earlier about the distinction between the spotting distances up and downhill, what you have just explained is why particularly nearing the peak there will be a larger degree of spotting; is that a fair summation?

A. That's correct, yes. As you reach the ridge line, reach the top, yes.

Q. To take it to the next step, as your head fire is now moving down the slope, is it the case that the spotting is less?

A. Well, if it is a low intensity fire and there is little spotting - because the amount of spotting is related to the intensity - generally then as the fire moves downslope on the other side, you get an induced eddy wind behind the ridge which tends to blow in the reverse direction. So firebrands which are being produced and only going a few tens of metres tend to be blown the other way in the direction of the eddy wind which is upslope, and because you are on the lee slope, the eddy wind - there is less spotting in that circumstance. Under high wind conditions, when you have had a mass of spotting on the lee slope it is truly a mass of spots and these spots then coalesce. They are burning together and they interact with each other and that has the effect of rapidly burning out that lee slope and producing again strong convection which produces more long distance spotting and carries - if the original spots hadn't carried to the next upslope,

the next valley, then the mass burning out of the spot fires generated at the ridge top tend to produce more spot fires that are carried on to the next ridge or the next upslope.

5

Q. So there is a differential there, as I understand it, between a high and low intensity fire. And in your high intensity fire, are you saying the spotting takes the place of the head fire?

10

A. You have a period, it appears, where you have the spots thrown often in a cone downwind. The longest spot tends to be directly opposite the point of the head fire and there is a cone of spots. The coalescence of those fires fills in that area and you tend to get the effect of the fire then forming a perimeter around the boundary of that cone and then continuing on.

15

20 On level ground a similar thing happens if the fire runs into a fire break or a bare area. As soon as it hits the edge of the forest, say, on a fire break, there is a similar collapse because there is not as much fuel and you get a mass of spot fires which again fill out and reform another head fire at some distance downwind.

25

If there is no barrier, the spot fires - and there can be lots of lulls where there are many collapses - the spot fires that are thrown downwind tend to be overrun by the head fire before they build up to a point where they coalesce.

30

35 Q. Going back to the email and to the paragraph that I read, is it that process that you have just now described that provides the analysis, if you like, the reason why you said that under the extreme fire weather the topography had little influence on the overall spread pattern?

40

A. Yes. When I wrote this, that was my expectation of what an analysis, getting all the data and trying to produce as accurately as possible a fire spread map, would show the coroner and assist her in understanding the process of fire behaviour that was going on.

45

47

Q. So the observations, or rather the analysis that you have undertaken subsequently, based in part on your own observations, based in part on the observations of others, supports the proposition that you have put in the email on the 15th of May 2003?

A. Yes. I would also say we found perhaps an illustration of a phenomena that we didn't understand much about, which was the spread of the fire south up to the Goodradigbee Valley.

Q. Perhaps if you just explain that, because I am afraid I still don't understand.

A. On the - under extreme weather there appeared to be a low level wind stream up the Goodradigbee River that was nearly at right angles to the prevailing wind direction - certainly to a high degree to the prevailing wind direction. I didn't expect that that phenomena would spread the fire so far laterally when I wrote this email.

Q. Is that - you were asked a question by Mr Watts on page 7008.

"Q. So that in your scenario one calculation is done from 10 o'clock. At least two hours of that nothing is really happening?

"A. Yes, because the eastern side burnt out onto the pasture country so it was spreading laterally both on the northern and southern flanks and wasn't proceeding to the east."

Is that the process that you have just now been describing; a wind effect that you hadn't anticipated?

A. The spread on other parts of the fire was more as I would have anticipated and would still tend to spread laterally. I guess the analysis of the scan data indicated that in fact the lateral spread of the fires generally was very low except for this one spot in the Goodradigbee River where it was relatively slow.

As generally you would expect to happen, most of the lateral spread was when there was brief spotting out to the side of a few hundred metres and then that formed another small surge on the

flank, and then continued on along the wind direction. But this spread in the Goodradigbee travelled some, I think, 5 or 6 kilometres to the south, which was surprising to me. I hadn't
5 observed that anywhere else. No doubt it has occurred before but I hadn't observed it anywhere else.

Q. It may have occurred elsewhere at other times
10 during this fire event but not observed?

A. Yes, it may have occurred - there seems to be a little bit of evidence that it might have occurred in the Cotter Valley, but certainly not to the extent that was illustrated in the
15 Goodradigbee. But then we only have a limited amount of scan data over those areas.

THE CORONER: If you are moving on to another topic, we might take the morning adjournment,
20 Mr Craddock.

SHORT ADJOURNMENT

[11.19]

MR CRADDOCK: You were asked a series of questions
25 by Mr Watts about things that go into the mix of fire behaviour. There is one answer in particular that I want to take up with you. Perhaps I won't even bother giving you the question and answer. I will ask you directly: what is your understanding
30 of the effect of atmospheric stability or instability on fire behaviour?

A. The stability of the atmosphere, which is the rate of temperature change in the air above the ground, has an influence on the rate of convective
35 rise or the buoyancy of the plume above the fire.

Under stable conditions, and the most stable condition is where you have an inversion at some altitude above the ground - and an inversion is
40 where the temperature which normally decreases with altitude in a particular layer increases by 1 or 2 degrees - has the effect of capping the convection and so smoke and convective activity tends to be held below that inversion level.

45 Under unstable conditions air that is heated at ground level, when it starts to rise - and the

normal adiabatic process is that when air rises it expands and it cools - but under unstable conditions the rate of cooling of the parcel of air that is rising is not as great as the drop in the environmental temperature or the temperature of the air around it. So it tends to remain hotter than the surrounding air and so it then continues to rise.

10 Q. Until it reaches a condensation point?

A. Well, at the condensation point both the rate of change of temperature as a saturated air mass is rising is different to the rate of change of temperature of a dry air mass. So you have a different rate of change there.

Also, the environmental temperature profile tends to be different. So usually when it starts - if the water vapour in the air that's rising starts to condense, it then will continue to rise. Depending on the air around it, it will go up and reach a certain level where essentially the air that is rising is getting colder than the air around it and it starts to sink down or it reaches some cap of the convection activity.

Q. That down movement of that air, will that or could that contribute to fire spread?

A. Yes.

Q. That is to say, to produce a rapid increase in fire spread?

A. It can. It is a bit difficult to see evidence of it. Theoretically, I guess, if the air rises to a great altitude and gets very much colder than the air around it then it can start to sink, and as it sinks it can gain speed. Particularly if it is associated with a bit of precipitation, as happens in thunderstorms, then you get this air sinking very rapidly and you get the effect of it, which is most commonly observed in thunderstorms, in thunderstorm downdraught.

This is usually associated with the rain in the thunderstorm cooling the air below the condensation level. When the rain starts, it immediately starts to evaporate out of the air and

takes heat out of the process. It then falls - it comes down very rapidly and spreads out laterally.

That tends to occur beneath the convective centre.
5 On a fire, the convective centre is usually forward of where the activity is happening.

Q. Is that always going to be the case?

A. Not always. On stationary fires or on fires
10 that are spreading under light wind conditions, particularly with heavy fuel loads where the convective activity tends to overcome the wind speed, it goes up more directly above the fire and then comes down on it. Under strong winds the
15 column, the convective centre, if you like, is usually ahead of the fire. Being a strong convection, it usually produces a low pressure zone, so it tends to be the air wanting to fill from behind into this low pressure zone rather
20 than the downdraught out of the convection itself.

Q. That produces a rapid increase in --

A. It can produce an increase in wind speed and depending on which way - where it is located, when
25 it comes down it tends to spread out radially. If it is ahead of the fire, its effect is to counter the prevailing wind. So most of the effect tends to be downwind of the fire.

30 Q. On that scenario, does that increase, decrease or fail to affect rate of spread?

A. I think in most cases it would tend to have little effect on the fire. I think that where the convection column creates a wind which assists the
35 fire spread - that is, it is coming down behind the fire - you need to replace the air that is being rapidly lifted by the fire itself, so you tend to get a downdraught behind the leading edge of the fire. This happens in all fires, whether
40 they are large or small. There is a little bit of evidence that suggests this may come down on occasions in a confined area, something like a jet. There was a little bit of work done in the United States which suggested this. Again, a very
45 difficult thing to observe or measure.

Q. So the fire itself may amplify the atmospheric

instability?

A. No. The fire tends to be dominated by the instability because the instability is spread over hundreds of kilometres. That is the characteristic of the air mass that you are dealing with. Under hot, really hot summer days you tend to have big areas, literally hundreds of square kilometres of an air mass which is unstable. The fire reacts to that air mass.

Other than the local wind effect that is happening close in around the fire, compared to the energy required to change those hundreds of square kilometres, the fire energy output is relatively small, even though it sounds big when we look at it in terms of the amount of energy released.

Q. You have been asked questions both in this section of your evidence and I think also in October about larger fuels. Do you see a role of the larger fuels obviously continuing to burn behind the fire front in producing or affecting the convection column contributing to the weather that is driving the fire itself?

A. Yes, I think they do. But the rate of heat release from the larger fuels is very slow. By and large, it is a sort of a generalisation, the rate of heat release from a fuel complex depends on the diameter or thickness of the fuel - individual fuel particle.

So most of the energy is coming from the zone that is flaming. A lot of that is released in a few seconds, which is contributing to the major updraft at the head of the fire. Both the more compacted fuels on the litter bed and the larger fuels which are really burning very slowly in terms of their rate of heat release are occurring behind that fire edge. That is often observed by the fact that behind the flames which are standing up right in front of the fire, the downdraught which is coming down behind the fire is sort of flattening those flames. They are really quite low because they are flattened onto the ground.

So the contribution - there must be some additional energy going in.

Q. That stands as a matter of logic. Has it ever been measured?

A. Well, some calculations have been attempted. We attempted to do it on some mass fires that we
5 were running in 1969 where we put different sized material on a weight-loss platform in the field and were measuring its rate of burning.

Q. Wouldn't you say presently the degree of
10 contribution is an unknown?

A. It is unknown but small. You would have to add the "but", sir.

Q. In your most recent report you make the point
15 at page 54:

"The most difficult weather element to predict is the wind speed."

20 Then you speak about needing an allowance for error plus or minus 20 per cent. Back at page 40 of the same report you said in the last paragraph --

A. What is the heading, sir?
25

Q. It is under the heading "Saturday 18 January".

A. Thank you.

Q. Can I approach the witness?
30

THE CORONER: Yes.

MR CRADDOCK: The easiest way is to show him my copy. It is this bit here: "At 1345 hours ..."
35

A. Yes.

Q. You say at my page 40:

40 "At 1345 hours the wind speed at Tidbinbilla increased sharply from 35 kilometres per hour to nearly 60 kilometres per hour with gusts over 75 kilometres per hour."

45 Now, is that an example of the observation that you made at page 54 under the heading of "Prediction of fire spread during extreme fire weather"; that is to say, that the most difficult

weather element to predict is the wind speed?

MR LASRY: While Mr Cheney is looking for that, I
have a spare copy of the amended report which I
5 think accords with Mr Craddock's page numbers.
Perhaps I can hand it up to Mr Cheney.

MR CRADDOCK: Thank you.

10 THE WITNESS: That was page 54, was it?

MR CRADDOCK: Q. Page 54, yes. Under the heading
"Prediction". The second sentence:

15 "The most difficult weather element to
predict."

Do you have that?

A. Yes.

20

Q. I took you to that portion on page 40 to see
whether that is an illustration of the proposition
that you put on page 54?

A. I guess on page 54 I am using the error that
25 the Bureau of Meteorology usually put on their
forecast of wind speed; if they are making a
forecast for Canberra that it can be plus or minus
20 per cent at Canberra, but further afield from
the airport site there is much greater variation
30 than often is apparent or you tend to think -
people tend to think that the wind that is blowing
past them is blowing just like that everywhere
else.

35 Q. The one I was interested in, the plus or minus
20 per cent, that has its origin in the
Bureau's --

A. Yes. The example at Tidbinbilla, I think, is
something greater than that. To me it looks more
40 like a possible lee-wave phenomena of the wind
coming down over the mountain range and hitting
ground level in the vicinity of Tidbinbilla and
probably Stromlo because that variation in wind
speed wasn't picked up on any of the anemometers
45 further afield. So a guess, if you like, on my
part, but I think it is probably more associated
with a lee-wave phenomena over the mountains,

which we know can produce localised very high wind speeds.

5 Q. The nearby, for want of a better word, anemometer is that at the automatic weather station at Canberra Airport?

A. Yes.

10 Q. That wasn't going to predict for the benefit of anyone who had to rely upon its prediction this effect that you observed?

A. No. It's --

15 Q. Neither that it would happen nor when it might happen, if it did happen?

20 A. Or how strong. Lee-waves, your Honour, is a wind that gets into a sinusoidal motion over the mountains and it can - it can be amplified so that the strong wind is brought down to ground level and occurs in very localised areas. It can be almost calm a few kilometres away from it and blowing a gale, a gale at the spot where this lee-wave is hitting the ground.

25 Q. Further on in that same paragraph, indeed in the same sentence, going back to what I call page 54 --

A. The same page, yes.

30 Q. You speak about the need for an allowance for error of plus or minus 20 per cent or plus or minus 10 kilometres an hour for forecast wind speeds above 30 kilometres per hour. My question is: is that part of the Bureau's forecast or have you chosen that threshold wind speed for some particular reason?

35 A. I think when you are aware of the likely error that is associated with a prediction of wind speed and you are making your prediction for fire purposes, I think you should err on the high side rather than the low side.

40 Q. Sure. That is a matter of simple logic. What I am asking you is whether this nominated threshold of 30 kilometres per hour in your report is based upon the Bureau prediction or is that simply your threshold?

A. It is more than 10 kilometres an hour, being roughly 20 per cent of something more than 30 kilometres per hour.

5 Q. Don't worry about that maths. I am talking about the 30 kilometres per hour threshold. Is that the Bureau of Meteorology's suggestion or yours?

10 A. No, my suggestion, but associated with the simple maths of 20 per cent.

Q. Continuing with the wind, in the second paragraph on that page, that is what I call 54, in about the middle of the paragraph you say:

15 "The highest mean wind speed measured in the ACT was at the Tidbinbilla Tracking Station between 1450 and 1510 at 15 kilometres per hour?

20 A. 55, I think.

Q. Sorry, 55 kilometres per hour; do you see that?

25 A. Yes.

Q. You refer back at page 40 to the sharp increase from 35 kilometres an hour to nearly 60 kilometres an hour with gusts over 75.

30 A. Mmm-hmm.

Q. Are you drawing a distinction there between measured wind speed and anecdotal accounts of wind speed?

35 A. That was the wind speed on the Tidbinbilla anemograph.

Q. Which was?

40 A. Both of those references. The mean on page 54, the mean for 20 minutes was - sorry --

Q. So the difference is in the reference to the mean?

45 A. The reference to the mean, yes. At 1345 it increased sharply from what was a mean at 35 to starting at a mean of 60 but over the next 20 minutes it maintained that speed at a mean of 55.

47

Q. Are you saying that that phenomena may have existed at other times at other places within the ACT, say on the 18th, without there being a measurement of it?

5 A. Oh, yes. Yes. I think at about that time the observers who were on Mt Stromlo who were measuring wind speed at 2 metres recorded a gust of 100 kilometres per hour which you didn't see the video, but it bowled all their equipment over.
10 It just happened at about that time. I am sure it did occur at other parts of the ACT.

Q. Of course none of that was predicted by the Bureau?

15 A. No. Not to my knowledge, anyway.

Q. You have seen all of the Bureau's predictions, the special fire weather reports, you have seen all those?

20 A. Yes.

Q. No prediction within the ballpark of those observations?

25 A. That's correct.

Q. If I could take you a little further into that paragraph, you say:

30 "It is not known how extensive this high wind was, but observations from Mt Stromlo suggest that it probably affected both the Bendora and McIntyre fires at around this time."

Do you see that?

35 A. Yes.

Q. I think you have just referred to the observation at Mt Stromlo at over 100 kilometres an hour?

40 A. Yes.

Q. That is the sort of wind that you were saying probably affected both the Bendora and McIntyre fires at that time. I am interested in the use of the word "probably". Is it that you, despite your analysis of these fires, are yet not sure (1) whether it did or (2) to what degree?

5 A. Well, both. One of the great problems with making measurements of fires is that you can't actually measure the wind that is blowing through the flame zone. It doesn't matter whether it is a small experimental fire, you have that problem all the time. So we can measure wind somewhere else out of the fire area. So I use "probably" because we don't know what exactly was affecting the wind on the fire.

10

Q. Is that another example of the need when building models to predict rate of fire spread for repetition of empirical studies, so as to see what certain factors did produce?

15

A. I think at these sort of wind speeds we are never going to be able to carry out an empirical study to study this. You just have to pick up observations wherever you can. I think, again, that it is prudent to be aware that the conditions and the fire spread can be much higher than the models predict.

20

Q. I take you to the final paragraph on that page. I note, I think, when Mr Watts was asking you some questions last week you were indicating to him that even at this point it is difficult to determine where the fire was hour by hour; is that a fair summation of that passage of your evidence? I am not suggesting you say that in that paragraph. I am just asking you about the questions you were asked last week at this point?

25

30

A. At what hour, sir?

35

Q. Any particular hour where you haven't got a linescan that says, "Bang, there it is"?

A. Yes. In those cases they were an interpolation between where we had positive and confirmed information by more than one source usually. But sometimes we only had one observation. I interpolated between those points.

40

Q. You say midway through that paragraph:

45

"When a fire burns into eaten-out grassland, the wind has to exceed a certain threshold value before it spreads consistently. The value of the threshold wind speed depends on

the extent of bare patches and on these fires it seemed to occur when the wind speed exceeded 25 kilometres per hour."

5 My question is: how did you work that out?

A. It was when the mean wind speed exceeded 25 kilometres per hour it seemed to be then moving out into the grasslands.

10 Q. Mean wind speed determined how?

A. Determined from Canberra Airport.

Q. I think you just established that there may be a substantial area of grey between --

15 A. Yes.

Q. -- mean wind speed predicted - recorded at Canberra Airport and in these eaten-out pastures?

20 A. Yes.

Q. Can I take you to table 1 on the following page. Can you just tell me whether those rates of spread are actuals or prospectives or estimates?

25 A. They would be estimates.

Q. Are they estimates, in part at least, because it is difficult to determine starting points and finishing points with any particular period of an hour or half an hour or any nominated time?

30 A. They were estimates based on the pattern that I produced from all the data that I had available, but to include my interpolations of where fires were at particular times.

35 Q. Just one more matter in relation to your calculations as to rate of spread. Obviously enough, to carry out such an exercise you had to have a start point and an end point?

40 A. Yes.

Q. The end point was easy enough to pinpoint, it was called Duffy.

A. Mmm-hmm.

45 Q. The start point I'm not so sure of. Can you tell me exactly where you started the process from?

A. The start point was 1300 hours.

Q. But where? Exactly where?

5 A. Where the 1300-hour perimeter was on the border of the ACT. Pretty much the border of the ACT.

Q. So we determine that from looking at the Powerpoint pictures that you have shown us?

10 A. From the map. Although, people at Uriarra at that time said the fire was in the hills just a little to the west of Uriarra.

Q. So that's one of the observations that you have put into the mix to determine the point of the fire at that particular time?

15 A. Yes.

Q. So not a great deal of need for interpolation there because you had a direct observation, or is there some need for interpolation there?

20 A. There was still need for some interpolation, but it wasn't a very great distance, I don't believe. I would say less than a kilometre.

25 Q. Less than a kilometre?
A. Mmm.

Q. Up to - when you say, "Less than a kilometre" up to a kilometre?

30 A. Probably up to a kilometre perhaps might be better.

MR CRADDOCK: Thank you, your Worship.
35

THE CORONER: Thank you, Mr Craddock. Mr Whybrow.

<CROSS-EXAMINATION BY MR WHYBROW

40 MR WHYBROW: Q. Just while that table is on the screen, Mr Cheney, that represents, as best you can reconstruct, how fast the fire was moving at these times through these particular fuel types?

45 A. Those were mapped periods from my map and looking at the topographic maps and the fuels that were in between them. They were associated with each fuel type roughly in those periods.

Q. Based on reconstructing how far the fire, through observations, line scans and things of that nature, seemed to have travelled, for example you have a figure there: "Rate of spread
5 11 kilometres per hour between 2 and 2.30 through ungrazed and uneaten out grasslands"?
A. Yes.

Q. That number 11 represents your assessment of
10 how fast the fire was spreading through those types of fuels at that time on the afternoon of the 18th of January?
A. Yes.

Q. In terms of what the MacArthur grassland fire index would predict for eaten-out grasslands at a fire danger index of 60, would that be a rate of spread of 3.5 kilometres per hour?
A. For eaten-out pastures 3.5 kilometres per
20 hour, that's correct.

Q. So the Project Vesta study relates to experiments in forest environments?
A. Yes.

Q. It is certainly not intended to lead to a change to the grassland fire index tables at this stage at least, is it?
A. No. We had revised the grassland fire spread
30 meter.

Q. When you had done your calculations using the preliminary findings from Project Vesta in your report, the only factors of rate of spread to be
35 multiplied by 3 is when it is going through forests?
A. That's correct, yes.

Q. On your expectations, moving through grassland
40 with a fire danger index of 60 would be on the latest information available, in terms of predictive devices, would be a rate of approximately 3.5 kilometres per hour?
A. That's correct.

Q. As it turned out from your work, the fire
45 travelled about three times of that between 2 and

2.30 through the eaten-out grasslands to the west of Canberra?

A. That's correct.

5 Q. In terms of eaten-out grasslands, these were probably heard described by some witnesses as "virtual dust bowels"?

A. Some witnesses have said that. There was considerable variation depending on the paddocks
10 you were standing in.

Q. Well, the speed through the grasslands between 2 and 2.30 was beyond your ability to predict, is what I am suggesting, from the available meters?

15 A. That's why I believe that the high wind speeds that were measured at Tidbinbilla also affected the area between, let's say Uriarra and Mt Stromlo, in those grasslands because, as later applied, the 55-kilometre per hour wind speed,
20 that came closer. So that's part of the reasoning why I think that those high wind speeds affected that part of the fire as well.

Q. That is with hindsight trying to work out how
25 that came about?

A. Yes.

Q. In terms of, say, 6 o'clock Saturday morning and making predictions that if the fire gets into
30 the grasslands, the best prediction that you would make at that time, not using hindsight, would have been, using the available meters, 3.5 kilometres per hour?

A. That's correct.

35

Q. I will just go back. The other day a map, I think it is exhibit 81, was tendered, which is here. I will just hold it up here. Do you recall being referred by Mr Woodward to this map?

40 A. Yes.

Q. You were in court, I believe, when Mr Woodward, in tendering this map, indicated that it was in fact a combination map which shows all
45 of the fire spreads in all of the areas from which the Powerpoint presentation had been produced?

A. Yes.

Q. Is this a map that you had produced early on in the piece to help you with your reconstructions and then the Powerpoint slide show was thereafter taken as snapshots using that map as one of the
5 tools?

A. That's correct. And as I explained, there were some errors in the Powerpoints.

Q. The exhibit which is exhibit 81, the first bit
10 of work that you did, does it contain the errors that subsequently find their way into some of the slides which you already explained?

A. They were mostly - the key errors, I think, were associated with the mapping of the break-away
15 in the Goodradigbee River where there was a different time to the mapping of the break-away at the front of the fire. I think it was particularly the 1200 contour line.

Q. The essential, I think in chief you explained the variations are what happened with the break-away to the west over Goodradigbee?

A. Yes.

Q. In your various conferences with counsel assisting and no doubt helping them understand your evidence, did you from time to time use this map as a guide, an overall picture of explaining where the fires were at various times?

A. It was under - versions were being produced as we were putting the story together. I guess more used as an illustration of where we were.

Q. Because it provided a useful overview as to
35 where the fires were in relation to the other fires and Canberra suburban edge more so than the Powerpoint presentations individually do?

A. That's correct.

Q. Were you in court when Mr Bartlett gave evidence?

A. Yes, for most of it, I believe.

Q. No doubt you will not be able to forget, but
45 if you look behind you there is a permanent reminder of how boring that afternoon was?

A. Yes.

Q. Do you recall the exercise I took Mr Bartlett through of where he spotted the different fire fronts; do you recall that? Were you here for that day?

5 A. My recollection is hazy, sir.

Q. Let me ask you this question: were you present when I requested that you produce, if possible, reproduce your various maps in the Powerpoint presentation into a document such that everybody, whether they are members of the public, her
10 Worship or members at this table can see at a glance without reference to this background material see where, according to you, the various
15 fire fronts were at various times?

A. No I don't recall.

Q. Don't recall my making that request?

20 A. No, I don't recall.

Q. This map would seem to be exactly the sort of request that was being made of you, if that's the terms in which it was made?

25 A. Yes.

Q. Were you ever advised that there had been a formal request by one of the parties for such a document to be produced?

30 A. I wasn't requested for that map. It was available.

Q. When you say it was available, what do you mean by that?

35 A. Someone had to ask me for it.

Q. Well, assuming there was a request on the 3rd of June for it, was that request passed on to you by counsel assisting; do you know?

40 A. I don't believe it was passed on in specific terms where I understood that that was the map that was wanted.

Q. It is not a document that appears in your other sources of information list, is it?

45 A. No.

Q. Because it is something that you yourself

produced along the way?

A. That's correct.

5 Q. It was tendered last week for the first time
in these proceedings?

A. Yes.

10 Q. It might be quite impossible for the purposes
of examination to work out from the key which
colours are represented, so if I might at some
stage when her Worship is not sitting approach you
to do that, Mr Cheney, so that I can understand
the matter a bit better.

A. Yes.

15

Q. Mr Cheney, your second report, and part of the
reason why you have come back to give further
evidence, could you explain - was it always your
intention that it was always envisaged that you
20 would sit through the course of the evidence in
order to be able to make comments or take into
account various pieces of evidence as they come
up?

25 A. Yes. The initial report I put up as a model,
which in some ways still is, this is a model that
I produced open for comment. If there is good
evidence that would suggest it be changed, then I
would look at that.

30 Q. In effect, your evidence falls into a couple
of categories. One, I suggest, is reconstruction
of what actually happened?

A. Yes.

35 Q. Your first report didn't include any
information as to about what should have been
known, but that has now been covered by your
second report?

A. Yes.

40

Q. Can you explain how it was that that part of
your second report came about, that there would be
a section in your second report relating to what
people should have been able to predict?

45 A. Yes. After hearing the evidence of
difficulties of prediction, I decided to add a
separate section on predicting fire spread.

Q. Was that something you did off your own bat?

A. It had been done during the course of the evidence. I did it during the course of the evidence for Mr Woodward.

5

Q. Had he requested that you provide him with some assistance in terms of understanding some of the other evidence that people were giving?

A. Not specifically. I anticipated he needed it and so I did it for him.

10

Q. Is it fair to say it particularly arose in relation to evidence of Rick McRae about fire prediction?

A. Yes.

15

Q. Was there ever any formal setting out of what you were asked to do or what you were asked to provide in relation to this second report?

A. No.

20

Q. What your report in that regard shows is, it would appear, that somebody could have readily sat down on Friday night or Saturday morning and predicted that these fires would have entered Canberra; that's in summary what that second part of the report is designed to show, is it not?

25

A. That is my - that was my approach, if I had been asked to do it. And what I believe a planner should do.

30

Q. You of course yourself had not made these sorts of calculations at the time?

A. No.

35

Q. You had not undertaken these calculations at the time?

A. No.

40

Q. Breaking them down simplistically, you will go 20 kilometres in three hours under extreme weather conditions?

A. Yes.

45

Q. You had not formed that view at all on Friday night or Saturday morning in relation to the McIntyre's Hut fire, had you?

A. Oh, yes, I had.

Q. You had?

A. My word.

5

Q. You had formed a view on Friday night or Saturday morning that the McIntyre's Hut fire would travel 20 kilometres into Canberra on Saturday?

10 A. If we got an extreme day. When it was apparent that we did get an extreme day, that's why I placed my team on Mt Stromlo to video what was happening. My job was to try and collect as much data as possible.

15

Q. Didn't you go down to Michelago area because that's where you believed the biggest fire break would be that day?

A. That's where I thought the first one would be.

20

Q. You thought the first one would be down there?

A. I thought it would cross the Monaro Highway before it came into Canberra.

25 Q. Before McIntyre's Hut came into Canberra?

A. Yes.

Q. You hadn't left for Canberra until 4 o'clock, had you?

30 A. That's correct.

Q. So, that's when the fire, the McIntyre's Hut fire, came into Canberra?

35 A. I believe it came - the evidence is that it came in at 3 o'clock.

Q. Indeed 3 o'clock; you hadn't indeed left to come back to Canberra for another hour?

40 A. No. I think I arrived back at about 4 o'clock. So I had left.

Q. I think you arrived back at about 4?

A. I think so.

45 Q. How long would it have been to drive from there?

A. We went down to Michelago and came back, took

some photographs, so I suspect about half an hour.

Q. I'm not sure if you have available to you in court a copy of, or copies of, but one of the documents that is over in the DPP room is a copy of your notebook for 17 and 18 January?

A. I don't have that with me.

Q. You understand that is one of the documents that has been made available?

A. Yes.

Q. You indicate at 1500 you have a notation of the Monaro Highway and there is calm wind at Monaro at 1500?

A. That's correct.

Q. Then you have got at 1520 what looks like "Spot watch of Williamsdale spreading strongly in timber"; is that a notation that you can recall making or an observation?

A. Yes.

Q. Then you have got "departed for Canberra" and then the approximate sign "1600"; so might it be that you hadn't actually left to go north to Canberra until about 4 o'clock?

A. That's correct.

Q. That would be, would it not, because it wasn't in your contemplation that Canberra suburbs would be burning at 4 o'clock or 3 o'clock that day?

A. I guess when I went to the south I was surprised at the low wind speeds that I encountered there. That's why I drove further south outside the effect of the plume to confirm whether there was low wind speeds at Michelago, which there were.

Q. When you say "the effect of the plume", what are you referring to there?

A. I believe that in part you do - well, you do get low wind speeds for a period ahead of a main fire coming through. So, because it was very dark, I had a view that possibly the strong convection further back in the ACT was blocking the wind in that part. So I wanted to confirm

just to whether there was still high winds outside
the effect of being downwind of the plume. So I
drove south outside of the plume area to where it
was in the open wind from the north-west and drove
5 into a location on a hill where I could observe
the wind.

Q. My question I think was: when you use the word
"plume" what do you actually describe? Just smoke
10 or a particular sort of smoke?

A. The convection of the fire.

Q. You wanted to get out of the plume from where?

A. From the junction of the angle crossing and
15 the Monaro Highway.

Q. So you had travelled down that morning to the
southern Tuggeranong area and were crossing Point
Hut Road?

A. No. I went down the Monaro Highway to - what
I expected was I would pick up the fire crossing
20 the Monaro Highway at about the time I got there.

Q. This is the Bendora fire?

A. It would either be - no it would be the
25 Stockyard Fire.

Q. What I suggest is that it was your expectation
on that day that in terms of research and fire
30 observation that it was that fire and in that area
which presented the best opportunity for data
gathering by you?

A. I thought that I would be able to get an
opportunistic crossing of the highway if I got
35 there because I knew the fire had been on
Mt Tennant in the morning and I expected as soon
as the strong winds got up it would blow across
the Monaro Highway. You only get a few
opportunities to make an observation. I thought
40 that's one where I would get the first
observation.

Q. You only had a few opportunities to observe a
fire burning into a suburban area in Australia,
45 only one?

A. Yes.

47

Q. You indicated notwithstanding you saw it coming this morning, you went and observed that, did you?

5 A. No. We broke up into two teams. One team was on Stromlo to observe the fire at McIntyre's Hut. I had hoped to go to Monaro Highway and then come back in time to catch the fire coming into Canberra.

10 Q. So you have an expectation that later on that afternoon/evening the fire would be coming into Canberra?

A. Yes.

15 Q. Obviously that wasn't an observation that was before 4 o'clock or you would have travelled north earlier?

20 A. I think I got conned by the fact that I drove into very light winds. I was really expecting to drive there and drive back. I delayed longer than I should have by investigating why the fire behaviour on the Monaro Highway was so benign.

25 Q. I see. Come Saturday lunchtime, your expectation is that a fire such as hit Canberra would hit Canberra that afternoon?

A. Yes.

30 Q. I think there has already been an indication that you told nobody that?

A. I just positioned my staff to --

Q. Not even your staff?

35 A. I positioned my staff.

Q. What I am suggesting is you didn't even tell your staff. You placed your son on Mt Stromlo. You didn't tell him this was going to burn over Mt Stromlo into Canberra, did you?

40 A. There was a potential there, yes. He knew that and Peter knew that.

45 Q. There is a difference between potential and complete expectation. Your evidence so far has been that you knew this was going to happen?

47 A. I expected it to happen.

Q. And you never even told your son?

A. I told my son for quite some time that I expected the fire to come into Canberra, many days before the 18th. He was aware of it and so was
5 Mr Hutchins who was with him and so was Mr Gould.

Q. Indeed, when you were here on the 15th of October you said by the 15th - you were asked:

10 "Is it the case that your confidence had grown as to the likelihood of this fire coming into Canberra?

"A. Yes, reluctantly."

15 You were asked:

"It is not a conclusion you come to lightly. I take it you were checking the Bureau reports around this time?

20 "A. Only the general weather forecast, not the specific weather forecast."

You said you do your own weather predictions from the general weather forecast. You agree you gave
25 that evidence?

A. Yes.

Q. The calculations you talk about there are calculations in order to reluctantly come to the
30 conclusion as early as the 15th that this fire was coming into Canberra, correct?

A. Yes.

Q. They didn't involve these fire spread
35 calculations using Project Vesta because you already said you didn't do those until afterwards?

A. That was just an expectation if we had extreme weather we could get fire spread up to
40 10 kilometres per hour.

40

Q. So when you referred to her Worship doing your own calculations from the general weather forecast, it was just this can go 20 kilometres in a few hours?

45 A. Yes.

Q. Based on that level of examination you formed

the view that the fire would burn into Canberra on the 15th, or thereabouts?

5 A. Yes. I formed that opinion when I saw that the fires would not be controlled within the period that it was likely to proceed in extreme fire danger. It was actually on the Sunday.

10 Q. Indeed, I think you went so far to say you had images in your mind that married up with the kinds of images that were shown on the Channel 9 video?

A. Yes.

15 Q. You attended at ESB at some stage late in that week, did you not, and attended one of the planning meetings?

A. Yes.

20 Q. Can you remember who was running that planning meeting?

A. I believe Mr Lucas-Smith was running the meeting.

25 Q. You have got recollection of Mr Lucas-Smith being there?

A. Yes.

Q. I take it it was a fairly packed area?

A. Yes.

30 Q. This was a meeting in the morning?

A. Yes.

35 Q. You have previously indicated that it was a Thursday or a Friday that you went and listened to the briefing. You have not been able to recollect whether it was the Thursday or the Friday?

A. I think it was the Thursday. That's my best recollection.

40 Q. If I were to suggest to that you on the Thursday Mr Lucas-Smith was giving a cabinet briefing and the morning briefing was not attended by Mr Lucas-Smith, might that tend to suggest that you were there on the Friday morning rather than Thursday morning?

45 A. It may tend to. I don't know.

47

Q. So it might be the Friday that you attended at ESB and listened to the planning meeting?

A. Yes.

5 Q. We are now two days past you having images in your mind of exactly what are to occur the following afternoon; are we not?

A. Five days past, I would say.

10 Q. Whom did you indicate your concerns to at ESB that day?

A. I had earlier talked to Mr Lucas-Smith and I told him of my --

15 Q. I am talking about the 17th of January, sir?

A. On the 17th, nobody.

Q. You had seen the weather forecasts?

A. I heard the Bureau present a forecast.

20

Q. At that stage I think the forecast was very high to extreme?

A. Yes.

25 Q. You had an idea where the McIntyre's Hut fire was?

A. Yes.

30 Q. You were aware that the Bendora fire was burning quite strongly towards the south-west?

A. Yes.

Q. As was the Stockyard fire?

35 A. At that stage it wasn't, but later on that day it did move.

Q. And I understand on the evening of the 17th it was a fairly dramatic firefighting night for the Canberra fire service down south?

40 A. Yes. Well, it started to move from 3 o'clock and a colleague of Dr Ellis had a friend with a house in Tharwa and he had been looking at the McIntyre's Hut fire.

45 Q. I'm talking about the Bendora fire on the 17th. No doubt there was an expectation that you had that that fire was going to cause some real

problems during the next 24 hours?

A. Yes.

5 Q. And no doubt you understood from being present at that meeting that first of all that fire was being fought by the ACT with assistance from New South Wales which had recently arrived?

A. Yes. I knew that New South Wales people were there.

10

Q. And that the ACT resources not only were stretched but had by that stage been assisted by outside units from New South Wales?

A. Yes.

15

Q. You were aware that McIntyre's Hut was still being fought by New South Wales?

A. Yes.

20

Q. And that the planning meeting you were at was concentrating on the deployment of the ACT resources to the ACT fire?

A. Yes.

25

Q. Did you not think to say to anybody there "Excuse me, Canberra is going to burn down tomorrow because of this fire up north"?

A. I thought that was obvious.

30

Q. So you went down south on the next day to observe the Bendora fire, the Stockyard fire where most of the Canberra resources were?

A. I went down there because it was the closest fire to an accessible road that I expected to cross fairly early in the afternoon.

35

Q. The fires that burnt on the 18th consumed an immense amount of fuel that day, did they not?

A. Yes.

40

Q. I think you are on the record as having said: "In the heart of the Canberra fire last year, in the hills where the fuel was heavy, it was around 250,000 kilowatts per metre. This massive energy release created a tornado-like vortex that cut a swathe 200 metres wide over 15 kilometres. When it ran into Canberra there was nothing they could

45

do except to try to defend individual properties."

Do you remember saying that to New Scientist?

A. Yes.

5

Q. 250,000 kilowatts per metre at the height of the firestorm; is that what you are saying?

A. That was the calculated intensity of the fire that ran between Bendora and McIntyre's fire.

10

Q. Mr Watts, I think, asked you some questions about energy and things of that nature. I will just remind you briefly before lunch, sir. In terms of doing the calculation of the energy that is released, it is a reasonably straightforward exercise in terms of the equations if not the parameters, is it not?

15

A. Yes.

20

Q. Take the total area that is burnt in a certain period of time so you then have a heat release in kilowatts per square metre?

A. Yes.

25

Q. Now, the amount of energy that was being released on 18 January?

A. Total energy.

30

Q. Energy is not created or destroyed, I understand?

A. Mmm-hmm.

35

Q. If over 10 days it took, consumed that amount of fuel, it is the same amount of energy released over a long period?

A. Yes.

40

Q. Part of the difficulties that everybody faced on the 18th was the huge energy release over such a short period of time?

A. Yes.

45

Q. I think the map that I held up, exhibit 81, the orange represents, does it not, by the end of 18 January at 6 o'clock what had been burnt?

A. That was the final area burnt.

47

Q. And it is a massive amount of energy being released at that time in those short hours at about 10 to 6?

A. Within the orange area.

5

Q. Well encompassing the orange and encompassing all the other colours that day?

A. Yes.

10 Q. Indeed the fires would suggest to you that the total number of hectares burnt from 6am to 6pm was in the order of about 90,000 hectares, would that be consistent with your studies as the amount of country burnt that day?

15 A. I haven't calculated but I can imagine that would be about right.

Q. Fuel loadings in terms of working out energy, would it be fair to use about 30 tonnes per
20 hectare?

A. I think for the calculation of the rate of the 250,000 kilowatts per metre, which is a line fire intensity, I used 25. Once the fire was burning in the grassland - which a lot of the orange area
25 is in the vicinity of the ACT - you would have a much lower fuel load, maybe 2-5 tonnes per hectare in the grasslands.

Q. What would you estimate, given your experience
30 in researching these fires now, as a fair average to estimate for the total burnt on that day?

A. Average of both, probably about 10.

Q. Using that, one can work out in a very general
35 sense the energy released on that day by 90,000 hectares approximately of fuel at about 10 tonnes per hectare?

A. Yes.

40 Q. That converts to kilojoules of energy?

A. Yes.

Q. Can I suggest to you then that if you were to use those figures and use those calculations, the
45 total energy released would be in the order of over 100,000 equivalent tonnes of TNT?

A. Those comparisons have been made.

Q. And that sort of comparison would equal about the equivalent of 8 Hiroshimas on that day, would it not, the amount of energy released and what firefighters in the community had to deal with?

5 A. Not quite. Because at Hiroshima they dealt with that energy release in a microsecond. In these fires, the energy release was over a considerable period of time. So, it is the rate of energy release that is important and not the
10 energy release per se.

Q. I thought I made it clear I was talking over 12 hours the amount of energy that was released in the ACT?

15 A. There is a big difference between whether you release that energy in a microsecond, as happens in a nuclear explosion, as to whether you release it in eight hours or 10 years, if you are dealing with rusting cars. You can still do that similar
20 calculation of energy release.

Q. Absolutely. All I am suggesting to you is it is an approximate amount of energy over that day as represented by those equivalents in nuclear
25 explosions, only energy released. I understand the time frames.

A. Okay.

Q. Is that a fair approximate of the type of
30 energy that that amount of fuel release equates to?

A. Yes.

MR WHYBROW: Might that be an appropriate time,
35 your Worship?

THE CORONER: Yes. Mr Whybrow, if you wish, I will give you some time to speak to Mr Cheney about exhibit 81. You will let me know when you
40 are ready to resume.

MR WHYBROW: Thank you, your Worship.

LUNCHEON ADJOURNMENT

[1.00pm]

45

MR PIKE: Your Worship, I was wondering, as a housekeeping matter prior to my friend continuing,

that map, exhibit 81, it certainly seemed to be a
very helpful document. I am wondering if I can
make this comment perhaps through yourself to
either Mr Cheney or counsel assisting, if that can
5 be provided to the parties on a disk, which would
then allow us to have it printed. It is certainly
something which a picture speaking a thousand
words helps very much in understanding what
Mr Cheney was saying in other ways in his
10 documents.

THE CORONER: That is possible, apparently. I
will make some arrangements for that to happen.

15 MR PIKE: I am grateful for that.

MR WHYBROW: Before I continue, I referred
Mr Cheney to one of his notebooks before lunch. I
understand for obvious reasons there is not enough
20 disk space in the world to put all of these things
into the Courtbook. I will have another copy made
so it can be provided to the Court and properly
tendered. It has been referred to and it should
be tendered. I have made sufficient copies of
25 other documents that are also in that category.

MR LASRY: I don't want to be pedantic about this,
but my learned friend cross-examined Mr Cheney on
the basis of what was in his notebook. Mr Cheney
30 agreed with every proposition that Mr Whybrow put
to him. It doesn't seem to me in those
circumstances there is a need for any document to
be tendered because Mr Cheney has given evidence.
It only arises when the document adds separately
35 to the evidence over and above what the witness
can say.

THE CORONER: Is there any reason why you want to
tender it, Mr Whybrow?
40

MR WHYBROW: For a start it would appear to be a
relevant document in that they are the entirety of
the notes he took on 17 and 18 January. Just
because I have cross-examined on this document, I
45 don't know whether any of my learned friends might
not wish to have the opportunity to make
submissions on the contents of this document

themselves. Being aware that I was going to raise parts of this document, they may have taken a view not to ask questions but to later refer to it in submissions. It is a document which contains
5 apparently the contemporaneous notes of Mr Cheney - I don't say, "apparently". He has indicated that it is. As many of the notes that are before you in the inquest, they are only there in many instances for certain entries, but to put
10 them into context and for you to understand it, the entirety are there. Given it is Mr Cheney's notebook and the importance of this particular witness to your Worship's fact-finding role, it should be in its entirety. It is only about
15 10 pages long, the relevant entries.

THE CORONER: When you get a clean copy you can tender it. Thank you.

20 MR WHYBROW: Q. Mr Cheney, before lunch I asked you questions about your state of knowledge before the 18th. You confirmed your earlier evidence of 2003 where in effect you had in mind pretty well exactly what occurred to Canberra happening to
25 Canberra on that day; do you recall those questions?

A. Yes.

30 Q. I asked you if you had informed your colleagues that were sent up to Mt Stromlo that this is what was going to happen. I believe you replied that they were aware of the dangers?

A. Yes.

35 Q. Just specifically yes or no, did you have any conversation with them whereby you indicated in your view that day Canberra and, indeed, Mt Stromlo was going to be overrun by fire?

40 A. That it could be would be what I would say. It depends on the wind direction at the time.

45 Q. So, it wasn't with the same degree of certainty that you were informing Mr Hutchins and Mr Sean Cheney, I think, with the relevant team that this is something that was going to happen?

47 A. It could happen.

Q. In your view it was something that was likely to happen, was it not?

A. Yes.

5 Q. Can I suggest to you that you didn't directly indicate to them that this was likely to happen?

A. I think I did.

10 Q. On the 15th of October when you last gave evidence, page 534, you were asked at line 35:

"Q. Had you discussed what was likely to happen to suburban Canberra with those colleagues?

15 "A. Not directly. But I sent them to Mt Stromlo to make as many observations as they could and to withdraw when they thought it prudent to withdraw. And our objective is to try and document what was happening."

20

Do you agree that that was what your evidence was on the last occasion?

A. Yes.

25 Q. Would you agree that would seem to indicate that you had not directly indicated to them that what the McIntyre's Hut fire did that day was, in your opinion, likely to happen?

A. Not to me.

30

Q. Sorry?

A. Not to me.

35 Q. "Not to me". Did you indicate to them that it was likely to happen?

A. It was indicated to them that the fire could come into Canberra.

40 Q. Was there any discussion about whether or not, for example, the sensitive infrastructure on Mt Stromlo being run by the ANU should be given some advance warning that they were in danger, indeed it was likely that they would be overrun by fire that day?

45 A. Not by me.

Q. Did you consider whether or not you should?

A. No.

Q. You were just there to watch and observe?

A. Yes.

5

Q. Just taking you back to your evidence in October last year, a few questions further on page 535, you were asked:

10 "Q. I don't intend for a moment to imply any criticism of you in asking this question, Mr Cheney, but would it have been appropriate for you to have advised someone of the opinions you had formed in those days?

15 "A. Well, I didn't attend the briefing and I got the tenure from the briefing that the Emergency Services people were aware of the situation except they weren't issuing the warnings at the time that I was briefing
20 them."

Now, that answer may contain some inaccuracies as to what you said. There seems to be some internal inconsistencies --

25

MR LASRY: For completeness, it is only about a third of the answer. The whole answer should be read.

30 MR WHYBROW: Q. Then you go on in that answer and say:

"I talked with Mr Koperberg at that time and we were both of the same opinion that a
35 serious situation was on our hands and I expected the Emergency Services Bureau to give the appropriate warnings at some time. And I still felt that it wasn't my role although immediately after the fires I did
40 feel badly and felt I could have done more. But in that situation I was hoping that the Emergency Services Bureau would give the warnings."

45 Now, that answer, when you refer to briefings, is that the briefing that you attended, it would appear, on the 17th of January at the Emergency

Services Bureau?

A. I guess so.

5 Q. Did you have any speaking role or did you take any speaking role on that day?

A. No.

10 Q. You seem to be indicating in that answer that ESB were well aware of this imminent risk to Canberra but just hadn't issued warnings at this stage?

A. That was my feeling, yes.

15 Q. Wasn't it the case that the McIntyre's Hut fire was something that was referred to in the briefings but in the sense that it was still being fought by New South Wales with New South Wales resources?

A. Yes.

20

Q. And that the main focus of these briefings was the ACT dealing with the fires that threatened the southern areas of the territory?

A. Yes.

25

Q. In that circumstance, was it not the case that the main focus of the meetings was toward Bendora Stockyard fires rather than the McIntyre's Hut fire?

30 A. Yes. They were dealing with their operational arrangements, it seemed to me at the time.

Q. And not appreciating that Canberra was going to burn down the next day from the McIntyre's Hut fire as you had concluded?

35

A. Yes.

Q. Did you not in those circumstances think that you could or should have brought that circumstance to their attention?

40

A. Perhaps I should. But my feeling was they knew about it and they were choosing their time to release the warning to Canberra.

45 Q. You have said in your second report at page 55:

47

5 "On any forecast of extreme weather, I would immediately assume that the fire danger would reach extreme at 10am and effectively assume it would continue for at least eight hours. The simplest calculation is to assume the worst recorded rates of spread as possible."

A. Yes, that is my approach.

10 Q. You were specifically asked to provide advice on the morning by Mr Castle on 30 January, were you not?

A. Yes.

15 Q. On 30 January the McIntyre's Hut fire was still burning out of control to the north-west of Canberra?

A. Yes.

20 Q. In the Wee Jasper area around Pig Hill?

A. Yes. Further north than that.

25 Q. It was posing for the 30th of January some significant risk to the north-western parts of the ACT?

A. Yes.

30 Q. Indeed, the predicted fire danger index for 30 January was felt could reach 140?

A. Yes.

Q. Do you recall that?

A. Yes.

35 Q. It would have been the worst meteorological conditions Canberra District could have experienced, if it had got to 140?

A. Yes.

40 Q. You are aware of Mr Hutchins making that particular comment about it being the worst meteorological conditions on record?

A. Yes.

45 Q. The fire at this stage was still in some parts of the forest to the north-west Brindabellas?

A. Yes.

47

Q. But it had significant areas of grassland to go through between where it was and where suburban Canberra was?

A. Yes.

5

Q. Given that it was travelling 11 kilometres per hour on the 18th of January through grasslands, what warnings, what calculations did you make as to what the likely impact on Canberra could have been by the McIntyre's Hut fire on the 30th of January?

10

A. I discussed briefly the fire danger rating system with Mr Castle and I believe I said there was a strong possibility it could run through the grasslands to the north of Canberra.

15

Q. Only a strong possibility?

A. It is a strong possibility, yes. It is always a possibility.

20

Q. You didn't have in your mind then, did you, the same sorts of images as have been shown occurred in Duffy on 18 January did you?

A. Not in terms of the pine forest burning, no.

25

Q. In terms of fires uncontrollably burning across burnt-out pasture and into suburban streets?

A. I didn't see it burning across burnt-out pastures but burning across the pastures between the northern suburbs and the area of the Bullan, which is - the fire was to the west of that area in the hills between Wee Jasper and the Bullan.

30

Q. Can you recall how far the fire actually moved on that day?

A. Very little.

35

Q. No doubt the stark difference between 18 January and 30 January is a fruit of much research and examination by you and your team?

40

A. It is part of what happens in fires, and yes, that is something that should be addressed as to why that happened.

45

Q. Indeed. Going back to the evidence that you gave, you were, subsequent to giving that

evidence, criticised by - comments were made about that evidence by the Chief Minister that you became aware of?

A. Yes.

5

Q. I think you attached a copy of the Chief Minister's comments that had been made during question time in the assembly on an email to senior counsel assisting?

10 A. Yes.

Q. Part of the comments that Mr Stanhope had made on 21 October concluded, did they not, that in relation to your evidence that you knew five days before the fire that it would behave in precisely the way that it did:

20 "I assume as a resident of the CSIRO on Black Mountain that he would have at least door knocked the CSIRO. I think that perhaps the most exposed Commonwealth instrumentality, building or workplace in the ACT, is the Black Mountain CSIRO facility. I'm sure Mr Cheney would have posted notices all over
25 the CSIRO saying 'The fire is coming on January the 18th. This is the most exposed workplace in Canberra. Pack up your valuables, move your files out because I can tell you now this place is going to burn down
30 on 18 January.' So one assumes he told his workmates, his colleagues and neighbours. I guess that is on the public record somewhere."

35 Leaving aside the obvious political sarcasm involved in that comment, did you advise anyone at CSIRO Black Mountain, that this fire from McIntyre's Hut could burn into Canberra?

A. Not at Black Mountain, no.

40

Q. Did you agree that if the wind had only been a few degrees further to the west than the north that Black Mountain itself would have been in danger?

45 A. Yes.

Q. Did you, apart from Black Mountain, advise any

other CSIRO facility or section?

A. Not outside the division of forestry and the colleagues who were around at that time.

5 Q. Is that to the same extent that you advised Mr Hutchins and Mr Sean Cheney?

A. In a similar vein, yes.

10 Q. Which I think we already established that you didn't directly tell them this was going to happen but it could happen?

A. It was a possibility, yes.

15 Q. You, on the 3rd of November, I suggest, sent an email to senior counsel assisting indicating the following:

20 "Hello, Lex. You might be interested on what the Chief Minister has said about me in Hansard from 21 October. I guess it is an indication of what their tactic will be. Phil."

Do you remember doing that?

25 A. Yes.

Q. What did you mean by "I guess it's an indication of what their tactic will be"?

30 A. I suppose to question what you are doing. A warning that I myself personally gave.

Q. You appreciate that the nature of the questioning is designed to examine the validity of your beliefs or the extent of your report?

35 A. Yes.

Q. Can you recall a reply that you got from Mr Lasry on that email?

40 A. I believe it was, "They'll get theirs, Phil".

Q. What did you take that to mean?

A. I didn't take anything from it. Nor did I discuss it further with Mr Lasry.

45 Q. Okay. You just covered my next question. There was no further discussion on that issue?

A. Not as far as I'm aware.

Q. It is a one-page document. I don't intend to attach the Hansard. I do intend to tender the email reply.

5 THE CORONER: What is the date of that email, Mr Whybrow?

MR WHYBROW: Sorry, the email from Mr Cheney is 3 November and the reply, it would appear from
10 Mr Lasry QC, is 5 November 2003.

THE CORONER: That email will be exhibit 0090.

**EXHIBIT #0090 - EMAIL FROM MR CHENEY OF 3 NOVEMBER
15 AND REPLY FROM MR LASRY QC OF 5 NOVEMBER 2003
TENDERED, ADMITTED WITHOUT OBJECTION**

Q. Mr Cheney, your role, I think I suggested, involved several functions. One was an
20 investigative role to find out what happened?

A. Yes.

Q. One was an interpretive role to interpret the data and provide some opinions as to the rates of
25 spread on 18 January and indeed earlier?

A. Yes.

Q. You were also asked to provide some opinions as to fire suppression at various points on
30 various days?

A. Yes.

Q. And generally to provide the type of reports that you have provided, at least in the first
35 part?

A. Yes.

Q. When you initially were approached to provide this sort of expert evidence, did you have any
40 preconceived views as to what had happened?

A. What had happened where, sir?

Q. In terms of how fast the fires had spread, in terms of the effectiveness and appropriateness of
45 fire suppression activities, things of that nature?

A. I guess my preconceived view has been always

that there is very little you can do when the weather is extreme in terms of controlling or stopping the fire.

5 Q. That view is one that you recently expressed in the 'Canberra Times' or was expressed in the 'Canberra Times'; the view there is little you can do in extreme weather?

A. Yes.

10

Q. In particular, on Monday September 6 this year, a mere couple of weeks ago, you are quoted in the 'Canberra Times' as saying:

15

"The Canberra fires would not have happened if they had been put out early. This would have only postponed the disaster because no matter how efficient we become at suppression, fires will break out under extreme weather conditions when suppression in forest or rural areas is impossible."

20

A. Yes.

Q. That was an accurate quote of what you had indicated to Tamara Kayali?

25

A. Yes.

Q. Notwithstanding having some preconceived viewed based on your experience and what you were already aware of, would it be fair to say that nonetheless you remained somewhat open-minded about particular issues until you had collected all the data and had an opportunity to examine it?

30

A. I believe so.

35

Q. For example, in relation to predictions of fire spread you would have wanted to have completed your examination as to what the actual spread was and to see whether it fell within recognised rates of spread?

40

A. I didn't do that. I calculated the rates after I had made those predictions that I put in the report.

Q. In terms of forming opinions or expressing opinions as to whether or not various predictions could or should have been made, one aspect of that

45

would be recourse to the currently and readily-used prediction tools?

A. Yes.

5 Q. For example, before lunch, the grassland meter for grass spread?

A. Yes.

10 Q. Whilst the Project Vesta preliminary data is a matter obviously close to your heart, I understand last week you accepted that to your knowledge the warnings that you had previously issued, you and your team, in various brochures have not been taken up as part of the established training by
15 New South Wales and Victorian bushfire authorities to your knowledge?

A. I'm not sure about that. The video that we sent out with that release has been widely distributed and has been widely played, I
20 understand, by rural fire authorities. I get this information through rural fire brigades, primarily in New South Wales, who have seen it. That does advocate the three times rate of spread. Now, I doubt whether it is in the formal AFAC documents
25 because I don't think they have been re-printed since.

30 Q. The other areas where you would have liked to have full access to material before forming opinions would be, for example, the decision of Ms Arman to withdraw from the Bendora fire on 8 January?

A. No, I don't see that. I don't agree with that.

35

Q. You didn't need to have any more information than you already had through your experience of the bushfires to form a view about that?

A. That's right.

40

Q. It wouldn't have been relevant at all what she had to say about the terrain, the conditions in the area, things of that nature?

A. I don't believe so. I think the task of an incident controller who is first out there is to
45 report on the fire and set about undertaking initial attack. As I have said in evidence, I

believe if she wasn't capable of making that decision or carrying out the initial attack she should have been replaced by someone who was.

5 Q. That wasn't my question. My question was: let me suggest, had you formed a view before even seeing a word of Ms Arman's statement that she should have stayed there and fought that fire?

A. Yes.

10

Q. To you it was completely irrelevant whether she, in taking the decision she did, had made references to terrain, to local conditions, to flame height, to any of those things, you will put those aside and say she should have stayed and fought the fire?

15

A. Even if she couldn't have fought the fire, she should have stayed and made preparations to fight the fire.

20

Q. In your opinion the decision to leave was something that you are comfortable in saying was wrong?

A. Yes.

25

Q. Without taking any regard to anything she might say about that decision?

A. I consider it was a wrong decision.

30

Q. Is the answer to my question "yes"?

A. Yes.

35

Q. Because in writing your report, you had not been out to the Bendora fire site for the 8th of January with Ms Arman?

A. No.

40

Q. You had been out with Mr Cliff Stevens?

A. Yes.

45

Q. Mr Cliff Stevens was one of the other firefighters who attended with her that night?

A. Yes.

45

Q. Are you aware that Mr Stevens had formed a view similar to yours that they should have stayed and fought the fire?

A. Yes.

Q. Were you only concerned with speaking to people who shared your opinion when you went out there?
5

A. No.

Q. You now know Ms Arman has given evidence about the circumstances and explained her decision to pull out?
10

A. Yes.

Q. You have already indicated that those matters were irrelevant to your view. Having heard them, though, do you pay them any regard in relation to it being a judgment call where minds might differ?
15

A. I think it is an indication of the training and experience that Ms Arman needs to have to tackle fires in that type of fuel.

20

Q. You predicate that statement, don't you, on the basis that if she had more experience and training she would have stayed?

A. Yes.

25

Q. Therefore, because she didn't stay she must not have enough experience or training?

A. Yes.

30

Q. Have you actually read Ms Arman's statement?

A. Yes.

35

Q. Have you read all of the attachments indicating all the training and experience she has had?

A. Not that I can recall in detail, but I have read her CV as attached.

40

Q. I take it then from an early stage and continuing up to today it has always been your view that the ACT Bushfire Service should have stayed on the 8th and fought these fires?

A. Yes.

45

Q. You went up to the fires with Mr Stevens on 16 May?

A. Yes.

Q. You also went up with the coroner and the coronial investigation team and counsel assisting on 20 August?

A. Yes.

5

Q. Would it be fair to say that you expressed then to those persons essentially what you have indicated to me, that come what may she should have stayed?

10 A. Yes. I on a latter field trip took to other areas where I fought fires in that terrain and where firefighting had been carried out overnight.

Q. You said "in latter field trips"?

15 A. In that field trip.

Q. I was about to ask you, was there another field trip up to the areas of the fires earlier this year?

20 A. I have taken a number of people around, including Mr Roche, to other parts of the fire. He wanted to reinspect other areas and in particular go down to the origin of the McIntyre's fire, which we didn't do on the first one.

25

Q. Did you do that with the coroner?

A. No.

Q. You have only been out with the coroner and counsel assisting on one occasion?

30

A. Yes.

Q. There is an email in the discovered documents that talks about a field trip next week from Helen Drew to you. Subject: "Field trip next week". The email reads:

35

40 "Phil, Ted and Sarah have decided they will be too pressed for time to do a field trip next week. So that just leaves Trevor who is interested. Maybe I should also check with the coroner? Trevor said he will give you a call about it tomorrow."

45 Is it about that time that you went on a field trip with Mr Roche?

A. Does that have a date on it?

Q. Wednesday, 4 February.

A. That is this year?

Q. Yes.

5 A. Mr Roche wanted to go to the origin of the -
the area of the Baldy fire and the Baldy track and
I am not sure - I think he and I made, including
the coroner's trips, three trips.

10 Q. In terms of perhaps refreshing my memory, is
it the case then that you and Mr Roche went to
a -- went on a trip around about that time up to
the areas?

15 A. And Ms Drew and a member of the AFP came along
with us as well.

Q. The coroner did not accompany you on more than
one occasion?

20 A. That's right.

Q. Just going back earlier to your opinions about
Ms Arman's decision to withdraw from the fire. I
take it you have not viewed her video walk-around
of that area?

25 A. No, I haven't.

Q. In that sense, you visited the area on the
basis that where Mr Stevens took you was the
correct area?

30 A. Yes.

Q. You understand that Mr Stevens did not walk up
and around the fire?

35 A. As I understand it, he was mostly on Wombat
Road.

Q. You have, from an early stage, obviously held
the view that this fire was eminently put out?

40 A. Yes.

Q. You expressed that view to the coroner and her
team, did you?

A. I believe so.

45 Q. To your knowledge, were investigations then
directed towards proving that issue?

A. No.

Q. Let me take you to notes of a conversation on the 4th of June last year. How long had you been retained by the 4th of June last year; can you recall, sir?

5 A. I'm not sure of that. No, I don't know.

Q. I take it you recall a number of meetings involving yourself, and including from time to time various parties Ms Barnicoat from the AFP and other police officers?

10 A. Yes. I went fairly early to talk to the project operation people, initially to give them a general outline on fire behaviour to assist them in their investigations. That was probably before we had signed a contract with the coroner's office.

Q. This was before the McLeod report had been released?

20 A. I think it was, yes.

Q. This was before any of the ESB logged for the 8th of January had been transcribe and provided?

A. Well before that, yes.

25 Q. To your knowledge, there hadn't been a visit up into the hills by the coroner or counsel assisting?

A. Independently of me?

30 Q. Independently of you?

A. To my knowledge, no. I didn't believe they had.

Q. You had not spoken to anybody within ESB about this decision by that stage?

35 A. No.

Q. You had come to the concluded view that Ms Arman should have stayed and fought and had expressed that view, I think you have already agreed?

40 A. Yes.

Q. Was there any discussion that you recall about testing that opinion of yours by way of getting hold of some of these other materials, like a statement from Ms Arman, the radio logs of

45

actually what occurred?

A. I expected them to come forward in due course when statements were collected, and I think certainly at the time I wrote the first
5 transcript - sorry, first report, I didn't have all of the transcripts. They had not been transcribed from the radio logs. But I did ask for a certain order as they were coming through at the time that I was preparing. So I limited it
10 to, I think, the first two days, and the 17th and 18th is what I wanted first so I could complete --

Q. The most important ones?

A. What I saw as the most important parts, yes.
15

Q. They were the 8th and 9th in terms of the put-out-ability - to invent a word - of the fires?

A. Yes.

Q. And the responses at about the time when the firestorms were coming closer to occurring?

A. Certainly on the 17th and 18th I was looking for logged times everywhere the fire observations - observations of where the fire
20 might have been primarily at that point.
25

Q. I show you this document, please, Mr Cheney. I don't know if you have seen it before or will recognise the handwriting. I can suggest it is a
30 photocopy of some notes made by Ms Drew of a meeting of 4 June 2003 involving Mr Woodward, Ms Drew, Mr Lasry, Ms Cronan and subsequently attended by yourself and the coroner. I don't know when they were taken. The first page has
35 nothing on it except for the fact that the first four people were present, Ms Drew, Mr Lasry, Mr Woodward and Ms Cronan. The rest of that page is blanked out. The following page starts "PC and MD 10.30"?

A. That is the page I have.
40

Q. It appears to be on the basis of when you entered the meeting. Do you see then there are some notes that appear to be taken by Ms Drew of
45 issues that were discussed during that meeting? For example, the second paragraph of the note says:

"Can we start 1/9/03? Experts - Phil Cheney and others in urban/rural interface;"

Do you see that entry?

5 A. Yes.

Q. Do you have any recollection of discussing when the coronial might be able to commence?

10 A. Not in any specific terms that I can recall.

Q. I accept that. That was obviously something that would have been discussed from time to time in these meetings, when will you be ready?

15 A. Yes. Setting their program as to when I could complete the material.

Q. You see two paragraphs further it has "TB", which I suggest would be Therese Barnicoat, "asked BM for reports - the Bureau of Meteorology - from people who went to ESB, report on weather conditions, what that did to fuel? Specific details weather 8-18 January. Matt Doyle to chase up"; do you see that?

25 A. Yes.

Q. Obviously getting hold of the actual weather conditions and forecasts and things of that nature were important issues for the coronial investigation?

30 A. Yes.

Q. You see the next line, it says:

35 "C - with a dash over the top - W, fire weather forecaster in ESB? No."

Do you see that line?

A. Yes.

40 Q. Could that read: "Conversation with fire weather forecaster in ESB? No." Do you recall any discussion about whether the fire weather forecaster in ESB should be spoken to in relation to this investigation?

45 A. No, I don't recall that.

Q. Do you remember a conversation about whether

or not you should speak to important witnesses, individuals, participants, call them what you like, at the ESB?

5 A. Only those people that would provide me with information on the fire spread basically, and initially collecting the field data to reconstruct the fires.

Q. For example, Ms Arman?

10 A. Ms Arman or Mr - sorry the name has slipped my mind.

Q. How about Mr McRae? Did you ever speak to Mr McRae in the preparation of your report in your
15 investigation?

A. No.

Q. He would seem to be a fairly relevant individual in terms of finding out what happened
20 and what was going on within ESB, wouldn't he?

A. More interested in what was happening in the field.

Q. Your second report seems to be very interested
25 in what Mr McRae did or did not do, does it not?

A. It was after hearing the evidence that he had presented.

Q. He made some criticisms of Project Vesta, did
30 he not?

A. Yes.

MR CRADDOCK: I object.

35 MR WHYBROW: Q. He made some comments about Project Vesta, did he not?

A. Yes.

Q. Indeed, he had published some comments in
40 relation to your brochure. I understand, just for the record, my C with a dash over the top is a "TW".

I asked you: your second report seems to be very
45 interested in what Mr McRae did or did not do, does it not? You said, "It was after hearing the evidence that he had presented" is that the

genesis of this second report, having heard Mr McRae's evidence?

5 A. Well, in the second report, as I amended it, I included those parts of information that I had heard in evidence in different parts of the report, and the question about how difficult it was to make a forecast of fire spread in anticipation of extreme weather came up in the course of the examination.

10

Q. In effect, would it be fair to say that his evidence was to the effect: "It is not as simple as saying 5 times 3 is 15, it will get there in 3 hours"?

15 A. That's right.

Q. Going back to my earlier questions, did you not at any stage seek to speak to Mr McRae in order to determine how he came about his predictions or what was happening in ESB in relation to the fire predictions?

20 A. No.

Q. Did you ever consider it might be a useful part of your fact-finding exercise?

25 A. No.

Q. Did you see a memorandum from Mr Lasry indicating that such a conference had been proposed to be convened?

30 A. I attended a conference with Mr Lasry and Mr Woodward and others at ESB.

Q. What I am asking you is: I suggest to you that in about August of last year - this is in a document, it would appear, prepared by Mr Lasry and circulated to relevant persons in the investigation team, which I suggest included yourself --

40

MR LASRY: Well then the witness should be shown the document rather than leaving him to guess while Mr Whybrow stands there clutching a document. It should be shared with him so his memory can be properly refreshed.

45

THE CORONER: Do you have a copy?

MR WHYBROW: Yes, I have a copy.

Q. For the record, it is in the discovered documents part 1, item 6, document number 10. It is headed "Coronial inquiry into the Canberra fires memorandum number 2", signed "Lex Lasry QC". Did you ever see that document?

A. I believe I have that, yes.

Q. The first item discussed in it is indeed yourself, is it not?

A. Yes.

Q. Then there is a discussion about the field trip?

A. That is the next heading.

THE CORONER: What is the date of that, Mr Whybrow?

20

MR WHYBROW: 22 August 2003.

MR LASRY: Does your Worship have a copy?

THE CORONER: I don't, actually.

25

MR LASRY: Neither do I. Is there no way that we can be let in on the secret?

THE CORONER: Do you have an extra copy?

30

MR WHYBROW: I do, your Worship. Have you seen that document before, Mr Cheney?

A. Yes.

35

Q. I take you to the bottom of page 2. In paragraph 7 (b) referring to discussions had with Mr Bayliss, it is indicated:

"Mr Bayliss had proposed that a conference be convened involving ESB personnel and Dr Phil Cheney. We have agreed to that subject to the coroner's approval. At this stage it is intended that the meeting will occur on Friday 29 August at the ESB office. The ESB personnel have a particular view of what the data shows. They wish to know early whether

40

45

their conclusions are supported by Dr Cheney. Their view is that the primary cause of the damage to Canberra was the McIntyre's Hut fire, and that it was not necessarily
5 predictable that it would travel the last 15 kilometres or so that it did as quickly as it did. Dr Cheney is the coroner's witness so her approval for this exercise is probably necessary."

10

I take it from what you said that no such conference took place, at least between yourself and Mr McRae, discussing his views of the line data and things of that nature?

15 A. Not directly one-on-one, but we did go to a meeting at ESB where Mr McRae presented a Powerpoint show showing what he believed to be the interpretation of the fire spread.

20 Q. My question is: you never sat down with Mr McRae and discussed it?

A. No. No, we didn't.

25 Q. It was about in April this year that Mr McRae had given his evidence that you were moved to make this next report in relation to his comments about fire prediction?

A. Yes.

30 Q. Mr McRae had previously published a response to your brochure warning about Project Vesta preliminary findings?

A. Yes.

35 Q. That was a document "Warning to bushfire fighters", and you are familiar with it?

A. Yes.

40 Q. To the extent that there had been anything published from Project Vesta, it was that pamphlet, was it not?

A. Yes.

45 Q. To the extent that there was anything capable of undergoing peer review, it was that document?

A. That sort of document would not normally undergo peer review.

Q. It makes recommendations to bushfire authorities as to how they should go about their predictions?

5 A. Yes, an opinion of mine and the team. So it is more of an opinion than a presentation of a result.

Q. Mr McRae had published a response as he saw it was relevant to the ACT position?

10 A. Yes.

Q. You, to put it bluntly, hold that response in contempt, do you not?

15 A. I don't agree with it.

Q. Peer review is about finding out what alternative opinions are, is it not?

A. Yes. And you respond to them.

20 Q. And your response, can I suggest, was as follows in an email from yourself to Ms Drew on 21 April 2004:

25 "Helen, would you pass this on to Sarah? It is McRae's response to the warning brochure that we sent to ESB, first posted on the ESB website and later transferred to the fire break web page posted by ESB for the volunteer firefighters. I think it explains
30 why McRae did not heed this warning and really did not know how to use the fire danger meters. He seems to have his own theories but cannot articulate them in anything useful.

35 In fact, it seems that the whole business of fire prediction is so complex that only he can do it."

40 That was your response to his document?

A. Yes, it was.

Q. You were hardly open to any of the ideas expressed there, were you?

45 A. No.

MR WHYBROW: I tender that email, your Worship.

THE CORONER: The email of 21 April?

MR WHYBROW: Yes. I have copies.

5 THE CORONER: Email of 21 April 2004 will be
exhibit 0091.

**EXHIBIT #0091 - EMAIL FROM MR CHENEY TO MS DREW OF
21 APRIL TENDERED, ADMITTED WITHOUT OBJECTION**

10

MR LASRY: There is a web page attachment to this
email, without which the email is perhaps not
terribly meaningful.

15 MR WHYBROW: I understood that that document had
been produced to the parties on about the 26th of
August this year for the first time. I assumed
that it had already formed part of the case book.
If that is not the case, then I am happy for it to
20 be tendered.

MR LASRY: I am not sure that it does or it
doesn't. Bearing in mind that the email refers
specifically to an attached web page, I would have
25 thought my learned friend would have dug that out
so that proper sense could be made of Mr Cheney's
response in this email. On its own, without
reference to that document, it is not terribly
informative. I don't object to the tender. It
30 should be complete. This is obviously not
complete.

THE CORONER: Can you make those inquiries,
Mr Whybrow?

35

MR WHYBROW: I have the attachment here. I don't
have copies.

THE CORONER: One will do for the moment. I will
40 just get Mr Cheney to identify it. This is the
appropriate one because it actually has the
highlighting referred to in the email.

MR WHYBROW: Q. Just before we break, Mr Cheney,
45 you have previously given evidence in questions
to Mr Johnson last week in relation to peer
review:

5 "In our research we like to go through a peer
review process - page 7034 - when we have
completed it so our research is criticised by
our peers. Then we make those corrections to
satisfy their comments and criticisms or we
fix up their criticisms as best we can. Then
we go ahead and publish. From the published
material, we would then like to work to a
meter like that."

10

Now, I appreciate that your brochure was not in
any sense published research for peer review, but
the response that Mr McRae published in relation
to it went into some detail, did it not, the
document I have just tendered?

15

A. It went into some detail.

Q. It referred specifically to the ACT
experience?

20

A. Yes.

Q. It referred to other studies in the area?

A. Didn't say what they were.

25

Q. Could I have the exhibit back? It says:

"A paper by Steve Castle using data from NSW
National Parks and Wildlife Service in 1990."

30

It refers to the Rothermel model. I suggest it
did in that response refer to other studies and
named them?

A. The name of the paper is not given. I
couldn't find it when I searched for it.

35

Q. I see. There is some discussion about your
preliminary findings about shrub fuel?

A. Yes.

40

Q. And more fuel means more speed but there are
some comments to the effect that more shrubs might
reduce the actual localised wind conditions under
the canopy; things of that nature are raised as
possible variables to the Vesta findings?

45

A. Yes.

MR WHYBROW: Might that be an appropriate time for

a break, your Worship.

THE CORONER: Yes. We will take the short adjournment.

5

SHORT ADJOURNMENT.

[3.03pm]

MR WHYBROW: Q. Mr Cheney, before the break I think I may have confused two issues: one, my
10 invented word of "put-out-ability" with a decision to stay or go concerning Ms Arman. You had, as you had already indicated, formed a view fairly early on that she should have stayed and fought on the 8th of January?

15 A. Yes.

Q. And you didn't need, you have indicated, to get hold of a great deal of data or any data to come to that view?

20 A. No, that's right.

Q. In relation to whether the fires could have been extinguished in the initial few days, that's a different situation altogether, is it not?

25 A. Well, no. That's correct.

Q. You need to know what the fuel was like, what the weather conditions were like in the local area, particular difficulties various firefighters
30 may have had, resource availability, things of that nature, you needed to investigate them?

A. Yes. It depends on what resources are allocated to the fire and how much effort is put into the firefighting.

35

Q. Indeed, what resources are available?

A. Yes.

Q. As a theoretical example, if a particular fire
40 could be put out with two dozers, D9 dozers or similar, if they are not available that is not to say they could have been put out without them, is it?

A. No. But that's part of the planning that has
45 to be done to assess what the difficulty of suppression will be and what is required to put it out.

Q. Certainly. But, it is an issue where you would have needed to do quite a deal of fact-finding to find out what the resources were, what the planning was, what the weather was like, what the fuel loads were like, things of that nature, to determine whether or not a particular fire in a particular topography could have been extinguished at a certain time?

5
A. Under the conditions, the behaviour is obvious: they assess the fuel. The person attending the fire should assess the fuel and assess the appropriate means of attacking it.

Q. I am asking you about forming your opinions. You weren't on the ground at Bendora on the night of the 8th?

A. No, I wasn't.

Q. Or the 9th, as I understand it?

20 A. No.

Q. So in order for you to come to an opinion as to whether or not those fires were able to have been put out by, say, the 10th of January, you needed to gather a whole lot of information to do that?

A. Yes, plus my experience in suppression of that fuel type.

Q. Indeed. Your experience in suppression, Mr Walker took you through. I think you have indicated that your last operational firefighting was in 1972, but since then you have been involved in countless experiment fires?

35 A. Yes.

Q. That's correct?

A. Yes.

Q. And those experimental fires, particularly Project Vesta, because of the nature of the fuel and your desire to get some intense burning, have to be performed under extremely controlled conditions?

45 A. You can prepare well for them, yes.

Q. You have had some difficulty in certain years

in being able to perform them because the weather conditions had been so severe that you weren't given the permission to light up?

5 A. It was more operational constraints that we had, plus political constraints.

10 Q. In part, you weren't able to get what others considered to be the appropriate level of resources to make sure that the fires didn't get away?

15 A. It was more a political decision on the first year of Vesta, that they had a fire on in the south-west and politically they didn't want to be seen lighting any more.

20 Q. These fires are all scientific controlled burns?

A. They are experimental fires done under fairly severe weather conditions.

25 Q. What is the maximum fire danger index that you have lit an experimental fire under?

A. About 25.

30 Q. 25?

A. Mmm-hmm.

35 Q. Going back to your task in relation to forming any views about whether fires could have been put out at earlier times, you have agreed that you needed to get hold of other material and then, using your experience and knowledge of fire suppression up-to-date techniques, things of that nature, form an opinion?

A. Yes.

40 Q. That would have involved seeing the statements of firefighters who were there over the first few days as to what they did, and you could form a view as to whether they should have done something else?

A. Yes.

45 Q. Is that fair?

A. Yes.

Q. Having a look at the logs to see what

resources were allocated as to what were available to what turned up, things of that nature?

A. Yes.

5 Q. Where 'Firebird 7' conducted water bombing as opposed to on another fire or whether it was effective, things of that nature?

A. I didn't consider that helicopter attack would be necessary. Operations could be carried out on
10 the first night.

Q. Given that operations were not carried out on the first night, have you then closed your mind to considering what has happened after that?

15 A. No.

Q. So knowing that they were not, did you then - having had that decision already having been made - examine all of the material in order to
20 form an opinion one way or another as to whether from the 10th onwards, or the 9th onwards, those fires could have reasonably been extinguished by the ACT Bushfire Service?

A. I think after the 10th I formed the opinion
25 that they were going to be very unlikely to be able to extinguish them within the time frame of 6 or 7 days.

Q. Was that having had a look at what they had
30 actually done on the 9th and 10th?

A. Well, I formed that opinion on the 12th. The 11th was the Sunday. I went up there and assessed for myself the extent of the fire and how far it had burnt.

35

Q. Sorry, I think we are at cross-purposes. I am asking you in relation to having been appointed or requested by the coroner to conduct an investigation and provide expert evidence in the
40 coronial inquest. Part of that task was to examine the fire spread. Part of that task, and you have made comment on it, is the fire suppression tactics used throughout?

A. Yes.

45

Q. In order to make comments about the fire suppression tactics used throughout, you needed to

collect what happened?

A. Yes.

5 Q. You weren't there on the first two days, for example, at Bendora?

A. No.

Q. On days that you were there, you only saw a small slice of the action?

10 A. Yes.

Q. So in order to form your views you needed, I suggest, to have a look at a whole range of material?

15 A. I've been dealing with looking at fire suppression operations for a long time. So one has an opinion about how they are going to go and what is needed to put out fires under summer conditions.

20

Q. So you were able to form a view, were you, without knowing what was done and what the conditions were like, whether or not the fire could have been put out, say, on the 10th of January?

25

A. I think you can say what would be a reasonable effort to have a reasonable effort of trying to suppress the fire.

30 Q. Was there a view amongst the coronial team that these fires were eminently put-out-able?

A. I don't know what the view of the other members are. I was providing my evidence.

35 Q. I refer you to the notes of 4 June 2003. I think you might still have them in front of you. Copies have been provided.

MR LASRY: Not to me they haven't.

40

MR WHYBROW: Sorry, copies haven't been provided.

THE CORONER: These are Ms Drew's notes?

45 MR WHYBROW: Yes, dated 4 June 2003. The first page hasn't been reproduced. If everyone was to note at the top of what they have been provided

"4603TWHDLLSC", they would have the entirety of the document.

5 On the second page that you have, do you see a notation about 5 lines down: "LL-fires eminently put-out-able - using what resources". Do you see that notation there?

A. Yes.

10 Q. Was that not an expression to that meeting, which included you, of a view that these fires were eminently put-out-able?

A. That appears as though that was a statement that was made.

15

Q. Was it not, before this meeting took place - which I think we have established was before the logs had been prepared, before the site visit had occurred, before the McLeod report had been released and before any of the statements of the relevant people who had fought that fire, the Bendora fire on the 8th, 9th and 10th, had been provided - was that not a bit premature to form a view that these fires were eminently put-out-able?

20
25 A. Knowing that the fire danger was low to moderate, people experienced in suppressing forest fires - should be eminently put-out-able under those conditions.

30 Q. Just as Ms Arman should have stayed and fought these fires, these fires should have been put out?

A. Yes.

35 Q. Mr Cheney, because the exhibit 81 has to be sent to Sydney fairly soon, if I could take you to the screen. I show you this document. I do apologise for the cumbersome nature. Do you agree that appears to be a to-scale map of the north-western portion of the Australian Capital Territory and going into New South Wales?

40

A. Yes.

Q. Which indicates terrain and vegetation?

45 A. There is no scale on the map that I have. I presume they are 1 kilometre squares.

Q. Yes. I was going to suggest to you - if I

suggest to you that each of the grid square lines is a 1-kilometre distance, based on your knowledge from the other maps, would that appear to be about right?

5 A. It appears to be right, yes.

Q. What is on the plasma screen, can I suggest, is a more readily discernible version of what the document you have in front of you is?

10 A. Depending on what detail you want to go to.

Q. Is it the same document up on the screen?

A. Yes, it is the same.

15 MR WHYBROW: May I approach?

THE CORONER: Yes.

MR WHYBROW: Q. Mr Cheney, I just want to ask you
20 some questions about your fire predictions which appear in your second report. You indicate at page 56 that a general classification of the fuel types between the ACT border and Duffy along the path of the McIntyre fire is 2 kilometres forest,
25 3 kilometres grass, 2 kilometres pine, 4 kilometres grass, 4 kilometres pine?

A. Yes.

Q. If I can do it, I will try to draw a line from
30 the Duffy interface, Warragamba and Eucumbene up to the ACT border as representing a stylised path of the McIntyre's fire on Saturday 18 January?

A. Yes.

35 Q. I don't know if what I have drawn appears on your screen or not?

A. It has, yes.

Q. You have indicated that the first 2 kilometres
40 from that point would be approximately forest. That would take us to about there; would you agree?

A. I think I would, yes.

45 Q. There is about 3 kilometres of grass which, if it took us to the next crossing into pine forest, would be about 3 kilometres as you have indicated?

A. Yes.

Q. Followed by 2 kilometres of pine which would seem to bring us out to the other side of the pines?

A. Yes.

Q. And 4 kilometres of grass taking us to the bottom of the Mt Stromlo pines?

10 A. Yes.

Q. And the final 4 kilometres of pines through to Duffy?

A. Yes.

15

Q. That's the initial basis upon which you have prepared this new report?

A. Yes.

20 Q. You have done two calculations, one using a fire danger index of 60 and one of 80?

A. Yes.

25 Q. 60 being what was predicted to have occurred that day and 80 being a 20 per cent or thereabouts worse case scenario?

A. Yes.

30 Q. If I can take you through some calculations for your predictions for 60. The first, you've indicated that you assume the onset of these conditions at 10am?

A. Yes.

35 Q. Then the fire, using your fire predictions, would then have to travel 2 kilometres of pine from the border to, if you like, the end of the first segment. It would travel at 4.3 kilometres per hour, being the forest rate of spread of 1.44 multiplied by the figure of 3?

40

A. Yes.

Q. Which gives us 4.3 kilometres per hour?

A. Mmm.

45

Q. I would suggest to you that to go 2 kilometres would take 28 minutes; does that sound about

right?

A. Yes.

5 Q. That would, if we started at 10, have on this prediction model the fire at the end of that first segment of pines at 10.28. We then move into the next segment of grassland which is 3 kilometres long, and you have that as a rate of spread for eaten-out pasture going at 3.5 kilometres per
10 hour?

A. Yes.

15 Q. To travel 3 kilometres at 3.5 kilometres an hour would, I suggest to you, take about 51 minutes?

A. Yes.

20 Q. Which would have, on this model, the fire getting to the next segment of pines at about 11.19am?

A. Yes.

25 Q. We then come into the next section of pines which is 3 kilometres long, and again the rate of spread would be predicted to be 4.3 kilometres per hour?

A. Yes.

30 Q. Sorry, it is 2 kilometres, which would again have it taking 28 minutes on those calculations to traverse that distance?

A. Yes.

35 Q. Getting us to the other side at 11.47 or thereabouts, I suggest?

A. Mmm-hmm.

40 Q. We then have the grassland leading down to the river and over the other side to the base of Mt Stromlo pines?

A. Yes.

45 Q. Of 4 kilometres. Again, the eaten-out grass pasture rate of spread would be 3.5 kilometres per hour?

A. Yes.

47

Q. To go that 4 kilometres at 3.5 kilometres an hour would take a little over an hour and I would suggest 59 minutes?

A. Yes.

5

Q. Which would have it, on this model, on the edge of the pines at 12.56. And then the final 4 kilometres of pine at 4.3 kilometres per hour would take about 56 minutes, having impact on the interface at Duffy at about 1351 hours?

10

A. Yes.

Q. These are the calculations of where the fire might be expected to be under conditions of 60 using Project Vesta?

15

A. Yes.

Q. If we were to do it - and I won't - using the other alternative which was a worst case scenario of 80, that would obviously get the fire moving further over a shorter period of time?

20

A. Yes.

Q. And I suggest if you go through those same calculations you would have the fire entering the suburbs at 12.46pm, an hour earlier?

25

A. Yes.

Q. Is that a fair representation of what your model on the map would look like?

30

A. Yes.

Q. If someone were to do the onion-rings type of map?

35

A. Yes.

Q. By reference to exhibit 81, and just from your knowledge of having spent very many hours doing this, what actually occurred on the 18th of January is that the fire started much slower from McIntyre's Hut?

40

A. Yes.

Q. The fire danger index did not get into the extreme area until after 1 o'clock or about 1 o'clock?

45

A. About 1 o'clock, I would say.

Q. And then rates of spread that were observed exceeded even those that you have predicted here?

A. Yes.

5 Q. If one was to do this at 7am on 18 January, this would have the fire getting to the Murrumbidgee River at about noon?

A. Yes.

10 Q. In terms of an operations commander being able to allocate resources and plan where crews should be at what times, one would want this model to be reasonably accurate in order to do that sort of planning?

15 A. If you are getting extreme weather, there is not going to be much suppression that they can do other than placing people for property protection under those conditions. I think that is well recognised amongst experienced firefighters.

20

Q. One of the experiences of the 17th of January by firefighters down south was once the fires came out of the pines the intensity dropped significantly?

25 A. Yes.

Q. One tactic that could be employed could be to try and fight the fire in the areas between the pines?

30 A. I think people would try to hold it up on the grassland as long as they could.

Q. That would be obviously a more likely scenario than trying to stop them in pine forests?

35 A. Again, I think trying to stop a fire in a pine forest even under moderate to high conditions is difficult.

40 Q. Could we change the colour to, say, red of the marker? By reference to exhibit 81, again - are we able to remove just this if I need to have it undone? From reference to exhibit 81, it would appear that there were two fingers of fire from the McIntyre's Hut fire approaching the
45 Murrumbidgee River at 2pm on the 18th of January?

A. Yes.

47

Q. At approximately these areas, I suggest
(drawing on map) around about there or perhaps a
little further north?

A. May I have a look?

5

THE CORONER: Yes.

MR WHYBROW: Could I ask Ms Miller to delete my
latest addition and ask Mr Cheney to do it, as he
10 knows the map a lot better than I do?

MS MILLER: I am unable to do that.

MR WHYBROW: Perhaps we can change the colour to
15 blue. Is that okay?

A. Yes.

THE CORONER: That is near enough?

A. That is near enough, yes.

20

MR WHYBROW: Q. That is near enough to where the
tongues of fire actually were according to your
reconstructions of the 18 January at 2pm?

A. The lower one also includes the spot fire that
25 is marked in there as well, yes.

Q. There is a small spot fire on Mt Tennant that
appears --

A. Mt McDonald.

30

Q. Sorry. Mt McDonald. Is this here? Certainly
to the west of the Murrumbidgee, is it not?

A. Yes. Your line goes through Mt McDonald. So
that is actually a bit further south than the maps
35 have mapped it: it is wider on this one than on
that one.

Q. It shows the front closer to Canberra than it
actually was then, does it not, by involving the
40 Mt Tennant spot fire as well?

A. At 11.47?

Q. No, no. I am not talking about 11.47, I am
talking about the red line. The red line
45 represents, I suggest to you, approximately where
the fire front was at 2pm?

A. Yes.

Q. Your Vesta prediction would have it there before noon?

A. Yes.

5 Q. In terms of being able to sensibly allocate resources and being able to plan where limited resources should go, it would not have been a very helpful prediction because it would have
10 underestimated by 3 hours or overestimated by about 3 hours where the fire actually was?

A. Well, the information that the planners would need is what time it started to run.

Q. You said 10 o'clock?

15 A. I said 10 o'clock as an example. The observations in the field from any of those accessible roads would have told you that it wasn't there at that time, as was the case from the radio logs.

20

Q. Can you perhaps add where it was at 12 o'clock?

A. (witness complied) 12 o'clock is not on there.

25 Q. What I have asked, 12 o'clock doesn't appear to be reproduced on exhibit 81. What does appear to be reproduced is 8 o'clock and 1 o'clock.

A. Yes.

30 Q. So 12 o'clock presumably would have been somewhere in between those. If it is of any assistance, it appears at 1 o'clock the fire has just gone under the transmission lines.

35 A. (Marking screen in a light blue colour close to the 10.28 time). The northern one was off the scale.

THE CORONER: That blue mark is where the main front of the fire was at 1 o'clock?

40 A. To the best of my relative interpretation.

MR WHYBROW: Just in relation to what we can work out, I have written on there "1300" and "1400" for the two latest markings.

45 A. Maybe just a wee bit north. (adjusting the mark at 1300)

47

Q. What you have just put on there in blue, we have the approximate position of the front at 1300?

A. I think, yes, that is my interpretation.
5 Certainly starting to move, and the tongue had travelled a similar distance over Doctor's Flat Road towards Mountain Creek Road but again off the scale of that map - or off the area of that map.

10 Q. Now, in terms of predictions I think you earlier said to me, sir, that you need to take account of when the run is going to commence?

A. Yes.

15 Q. For the point of your exercise, you commenced it at 10am?

A. Yes.

Q. One would need to take into account the actual
20 fire index as it increased during the day?

A. Yes.

Q. The closer you get to the real conditions, the more accurate your predictions are going to be?

25 A. Yes.

Q. If one were to use the actual predictions issued at 6.52am for 18 January, which are reproduced - I am referring to the MLI, [MLI.DPP
30 .0005.0122] which is page 116 of the Bureau of Meteorology submission. It indicates there, Mr Cheney, that the fire danger is rising very high by midday. That indicates it gets above 24 by midday, does it not - or in the range of 24-49
35 by midday?

A. I don't have that in front of me.

Q. In terms of your knowledge of how fire danger indexes relate to the particular fire weather
40 warning?

A. Okay. They are saying?

Q. They indicate at page 9 of the submission that the forest fire danger rating of very high occurs
45 between 24 and 49 and extreme is from 50 and above?

A. Yes.

Q. A forecast that indicates rising very high by midday would be indicating that it is at least 25 by midday?

A. Yes.

5

Q. Rising very high by midday and very high to extreme in the afternoon --

A. Yes.

10 Q. -- indicates getting towards the top of the very high range and into the extreme range?

A. Yes.

15 Q. Consistent with the established prediction of an FDI maximum of 62 for that day?

A. Yes.

20 Q. That would tend to indicate, would it not, that the forest fire danger rating or the FDI, sorry, in terms of doing this sort of prediction is going to be fairly low until noon?

A. Yes.

25 Q. Under 25?

A. Yes.

Q. So one might expect that the fire is not going to make the sort of runs that your model predicts earlier in the day?

30 A. That's correct.

35 Q. In terms of being able to assess where to allocate resources, if one was to know that's the forecast and has some actual properties threatened down south by Bendora, it would make sense to send more of the resources south in those circumstances, would it not?

40 A. Allocation of resources as to where they are needed, you are facing extreme weather and I think that all the fires would be expected to move. You have to try and cover both areas or have arrangements that they are covered.

45 Q. Fight the fire you have got rather than the one you might have?

A. No. You have to be prepared for what is going to happen as far as you can estimate it.

Q. By 2 o'clock this fire is just getting a bit of a run on, shall we say?

A. It is steaming along at 2 o'clock.

5 Q. Before 1 o'clock it has moved very little between the morning and 1pm.

A. Yes. It was held up in areas of grassland and you had flank fires spreading, and the two tongues that were spreading were basically the flanks
10 coming around areas of eaten-out pasture where it had been held.

Q. Is it possible that that document be saved? I don't mind it being doctored to remove our
15 touching the screen but be able to be printed out in some form to show these marks on the map and tendered?

THE CORONER: I am sure that can be accommodated.
20 You want to tender that map?

MR WHYBROW: Yes.

THE CORONER: Map showing Mr Whybrow's notations
25 and Mr Cheney's notations will become exhibit 0092.

**EXHIBIT #0092 - MAP SHOWING MR WHYBROW'S AND
MR CHENEY'S NOTATIONS TENDERED, ADMITTED WITHOUT
30 OBJECTION**

MR WHYBROW: Q. Just before we break for the day, Mr Cheney, whilst those who are following on the weather conditions, you have no doubt spent some
35 time going through the Bureau's submission as to what the actual issue forecasts were?

A. Yes.

Q. I suggest at page 114, which is [MLI.DPP
40 .0005.0120], the prediction in the special fire weather forecast for the Bendora and Stockyard Fires to Mr McRae, which are the predictions being given to the ACT ESB as opposed to the section 44
45 fire reports, indicate a fire danger "rising to very high by late morning and reaching extreme in the afternoon". The following morning that's been revised to "rising very high by midday and very

high to extreme in the afternoon"; would you agree that the change in phraseology tends to a less extreme weather day than a more extreme weather day?

5 A. Yes.

MR WHYBROW: Might that be an appropriate time, your Worship?

10 THE CORONER: Yes. We will adjourn until tomorrow morning at 10 o'clock.

**MATTER ADJOURNED AT 3.58PM UNTIL TUESDAY,
21 SEPTEMBER 2004**

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TRANSCRIPT OF PROCEEDINGS

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CORONER'S COURT OF THE
AUSTRALIAN CAPITAL TERRITORY

10

MRS M. DOOGAN, CORONER

15

CF No 154 of 2003

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CANBERRA

25

INQUEST AND INQUIRY INTO
THE DEATH OF DOROTHY MCGRATH,
ALLISON MARY TENNER,
PETER BROOKE, AND DOUGLAS JOHN FRASER
AND THE FIRES OF JANUARY 2003

30

35

DAY 79

40

Tuesday, 21 September 2004

45

7209

MR LASRY: Can I just indicate the documents in
relation to Mr Roche will by the end of today, as
5 we discussed yesterday, be available. There are
two broad categories. There is one folder of
documents which will be copied and which will be
available to be taken away which includes
miscellaneous documents, emails, draft reports,
10 things of that kind that come within the five
categories.

There are then four folders of tagged and marked
transcript which, in effect, those folders are
15 created as a result of Mr Roche's handwritten
notes, as I understand. He will sit in court,
make notes of the witnesses' evidence and find
that evidence in the transcript, particularly the
things that he was interested in, and then copy
20 the relevant parts of the transcript into the
folder. It is then highlight and tagged. Over
the period of the evidence, he has accumulated
these four volumes of transcript.

25 In order that the parties see how that process
works, because they already have his notebooks and
they know what the initial note was, in the event
they are interested, for example, in marrying the
notebook to the relevant parts of the transcript,
30 they can do that. But we are not willing to make
multiple copies of four volumes of transcript when
the parties have all of this material. So we are
proposing at this stage that those four volumes be
available for inspection at the DPP. Parties can
35 make such use of that material as they wish.

The additional problem with that is that Mr Roche
is in the process of still preparing to give
evidence, of course. As is known, he has been ill
40 at one stage. He is going back over the material
with a view to giving his evidence. I might say,
so that there is no secret about it, that process
will probably include a conference with me in
relation to his report next week. The reason I
45 mention that is because he needs access to that
material in those four volumes. There is no way
around it. He either takes it home with him

today, because I anticipate Mr Cheney's evidence will finish today, or he leaves it here and makes do with some other form of transcript somewhere or some other form of the transcript.

5

I said to him yesterday that it seemed to me that the four volumes needed to be left here so the parties could inspect them. I would urge that that inspection be carried out by the end of this week, that is Wednesday, Thursday, Friday of this week. If that can be done, then those volumes can be returned to him so he can continue his preparation.

15 It isn't feasible really to copy it because a copy of it will have no meaning. All of the highlighting is in yellow, so the yellow won't show in the copies. There are tags and I think in some cases there are some handwritten annotations on the pages. I assume the parties would want to see those in their original form rather than in some copied form and miss one of the elements they are looking for.

25 THE CORONER: It is transcript in any event?

MR LASRY: It is transcript. The process someone looking at it would want to follow is: They have Mr Roche's note. If there is some issue arising in relation to some note he has made during the course of listening to the evidence, they might want to check that through and see what he made of the transcript and whether he made annotations on the typewritten transcript in these four volumes. That is easily done, those portions of the transcript are easily located in those volumes. It isn't feasible for to us make multiple copies for them to be taken away.

40 I would suggest, armed with that information, and perhaps armed with Mr Roche's notes, the parties prepare themselves and go in and see whether the things they are interested in looking at in relation to that are of some use to them.

45

I think also there are, in those four volumes, transcript summaries, which are something that we

prepare as we go for the purpose of keeping on top
of what is becoming quite a sizeable transcript.
Mr Roche has also had reference to those from time
to time. The relevant parts of those summaries
5 are also in those volumes, as I understand it.
They are, of course, open to be inspected. We
haven't and are not prepared to cut down the
number of trees that would be required to make
multiple copies of it. And it perhaps isn't
10 useful anyway. It would be a copy of Mr Roche's
material rather than his original material, which
is the thing in which I presume they are most
interested.

15 There are a couple of matters to be finalised in
relation to the documents in the one folder which
the parties will be able to take away, just to
make sure that they all come within the five
categories that I mentioned yesterday that I was
20 working to. As far as I can see, everything that
is relevant to Mr Roche's activities is in the
folder. That will certainly be done by the end of
the day, if not sooner.

25 THE CORONER: Presumably if we finish today some
parties will be returning to Sydney, so it would
be useful for them to have those documents when
they return.

30 MR LASRY: I understand at least as at last night
there was some optimism that we finish by lunch
time. I will endeavour to have those materials
available by lunchtime, subject to my own review
of what is in the folder.

35 MR McCARTHY: I thank counsel assisting for the
indications he has given regarding production of
documents. The Territory will certainly avail
itself of the opportunity to look at those folders
40 before the end of this week and as soon as
possible.

THE CORONER: Thank you, Mr McCarthy.

45 MR McCARTHY: I could perhaps indicate two things:
firstly, the Territory does not accept that the
appropriate approach with regard to the production

of documents is as per the order 2 in the DPP
proposed orders that were put before Justice
Whitlam. It seemed inappropriate to get into that
sort of debate if the production of documents
5 doesn't have any practical purpose in having that
debate. I wish to preserve that position with
regard to completeness of production or not.

10 The second thing is, it is obviously difficult to
know whether there are other documents which the
Territory might wish to see until we have seen the
documents that have been provided. We will take
that opportunity. If there are any difficulties,
we will obviously raise them with counsel
15 assisting as quickly as possible. I thought it
was important to record those two matters. Thank
you.

MR CRADDOCK: Before we move on, as I am one of
20 the people who likes to get on an aeroplane as
soon as the evidence finishes --

THE CORONER: I have noticed that, Mr Craddock.

25 MR CRADDOCK: That is a practice I hope to
continue. Would your Worship allow me a couple of
minutes to speak to Mr Lasry? Because I am going
to be leaving Canberra, if I could have a couple
of minutes with Mr Lasry I could organise somehow
30 to attend to that task so at least my side of the
looking at is out of the way.

THE CORONER: You want to do that before we start
this morning?

35 MR CRADDOCK: If I could have a couple of minutes
with Mr Lasry.

THE CORONER: I will hear what Mr Pike has to say
40 and then I will give you that time.

MR CRADDOCK: Thank you.

MR PIKE: I simply wanted to raise an issue now.
45 I have been in the habit of trying to raise issues
in advance so they don't interfere too much with
our timetable. One of the groups of documents

that we had asked for in relation to Mr Cheney
have been notes of conference either taken by
himself or counsel assisting or instructing
solicitors where there have been conferences. It
5 is not clear to me whether the material now to be
provided in relation to Mr Roche will in fact
include documents fitting into that category.

Given the torturous history we have had so far, I
10 am simply trying to do as best I can to avoid the
situation whereby we are going to need some
further dispute about that issue. I ask, if those
documents have not been included in the bundle,
that further consideration be given to that
15 because certainly that is in the category of
documents that we have wanted. I don't want this
issue to in any way further disrupt proceedings.
Thank you.

20 MR WHYBROW: Before you rise, your Worship, in
relation to what Mr Lasry said about the four
folders and that the parties should try to inspect
those four folders this week, that is not going to
be possible in the practical sense that
25 Mr John Nicholson is a person being retained on
behalf of Mr Lucas-Smith and Mr Castle to provide
a report hopefully in relation to some of these
matters. He is going to be in Canberra from next
week to do that. He is the person who really
30 needs to look at these materials.

I am not suggesting for a moment that Mr Roche not
take them back in order to prepare, but it may be
as we get towards the time for Mr Roche giving
35 evidence that we will need to ask for some sort of
capacity to get hold of those documents later in
the week, next week, if that is possible, because
it is just not going to be possible this week,
unless we are allowed to take them away and send
40 them to Melbourne for a few days in order to do
that.

I just raise that now that it is not going to be
possible for the interests that I am representing
45 to be able to undertake that task this week
because the person that we would like to have
access to those documents is physically not able

to this week.

THE CORONER: Again, it is always very difficult
to try to accommodate everybody. What can I say?
5 As I understand it, they are transcripts. Perhaps
if you have a look at them - you will have an
opportunity to have a look at them this week - you
might be able to gauge exactly what is in them and
make some notation of the relevant pages of the
10 transcript which you have.

MR WHYBROW: One thing that could probably solve
the problem for everybody if there is an index of
what the pages are. That is requiring us to do
15 all the work, your Worship.

THE CORONER: No, it is requiring the DPP or
someone else to do all the work.

20 MR WHYBROW: I am saying we can't look at them
this week.

THE CORONER: Your expert can't, but maybe you
can. Have a look at them and you can satisfy
25 yourself.

MR WHYBROW: It may not be sufficient, that is all
I am saying.

30 MR LASRY: I will deal with that last matter
first. My learned friend may not know it, but he
already has the index. I have endeavoured to make
clear that in the handwritten notes of Mr Roche he
has written in those notes those pages. That is
35 why I outlined the process that I did, so in order
to go to the relevant page you need to find the
relevant part in the notes that is of interest to
the particular represented party, including
Mr Whybrow, see what Mr Roche has written, see the
40 reference to the page number. Then it is simply a
matter of going to the page number. That can be
done without these volumes, you can go to any
version of the transcript. The only difference
between the original transcript and Mr Roche's
45 volumes is that these are tagged and highlighted.
Mr Roche just informs me there are no handwritten
annotations on any of this material. All it

really does is complete the exercise to establish that the bit that he noted in his book is in fact the evidence that was given and is transcribed. It is as simple as that.

5

THE CORONER: That may be the path you may have to follow, Mr Whybrow.

MR LASRY: As far as issues raised by Mr Pike are concerned, I will make a specific check about notes. I accept that if there are notes of conferences with Mr Roche discussing the relevant issues and the compilation of his report they are within the call and certainly with the spirit of Justice Whitlam's judgment, in the same way that the notes, what I might describe as the eminently put-out-able notes which were produced yesterday, would be. There may be some of those. If there are such notes, it may be there will be similar deletions because they contain irrelevant material. If there are such notes, we would anticipate producing them and leaving out what is irrelevant and showing them to your Worship for that purpose.

25

I might say, in relation to my own proposed conference with Mr Roche in the next week or so, I have prepared a list of issues that I want to raise with him. I don't expect to be taking any notes frankly, but rather taking him through aspects of the report in preparation for him giving that evidence. I don't propose to hand over my preparation because it is prepared by me, not by him.

35

I think that actually deals with everything that needs to be raised.

THE CORONER: I will give Mr Craddock a few moments --

40

MR PIKE: On that last aspect, I am picking up on what my friend said. The document he is preparing is prepared by him and not by Mr Roche. I take my friend's point. I am not raising that as an issue. The calls, as I understand it, extended to notes of conferences which were either taken by

45

Mr Roche or by counsel assisting or by instructing solicitor, notes taken by other people --

5 THE CORONER: We are now talking about a conference that hasn't even happened yet.

MR PIKE: I wanted clarification of making sure we were ad idem of what is the call.

10 THE CORONER: I think Mr Lasry understands that.

MR PIKE: I am grateful for that.

15 MR WHYBROW: If we are going to have a break now, I will make the call that I foreshadowed yesterday since the point has been raised. Mr Lasry, in relation to Mr Roche's documents, has indicated that conference notes will be excised to leave out irrelevant material that doesn't relate to the
20 preparation of his report. I make no comment about that until we can see the notes.

I indicated yesterday that I foreshadowed that I would be making a call for the complete notes of
25 conferences which involved Mr Cheney at which your Worship was present. I do not suggest that I should be given notes taken between Mr Cheney and counsel or just for counsel themselves. Hence one of the documents on 4 June seems to be the first
30 page of notes between those assisting you only. That is not obviously within the call.

However, at a later stage in that meeting and in some other meetings, your Worship was in
35 attendance with the witness. There are discussions that are taking place, some of which have already been subject of cross-examination. There are other parts of those discussions which have been deleted on the indication that they are
40 irrelevant to the preparation of Mr Cheney's report. With all due respect, your Worship, any conversations had in your presence involving a witness are potentially relevant to the parties and again, with the greatest respect, I would
45 submit that it is not for counsel assisting to indicate what may or may not be relevant, especially in some of the circumstances where such

claims have been made and shown to have not been sustained when the documents have been provided and have certainly been of great relevance at least to my client.

5

The particular call I make today and I foreshadowed yesterday are firstly the notes of 4 June 2003 from the point when your Worship is present in the conversation. There is only a page, it would appear, of that conference note that has been deleted. Then there are two further conferences, one on 28 July and one on 29 July 2003, where there are parts of that conference --

15 THE CORONER: What date was the other one?

MR WHYBROW: 28 July and 29 July. They are documents in part 1 of area 6, documents 2 and 3 in folder 1 of Mr Cheney's material. It may be that if I was granted access to the original for 10 minutes that I could look at those parts and that is the end of the matter.

Given that they are conversations had in the presence not only of your Worship but also the witness, even if they don't relate directly to the preparation of the report, they may contain assertions about other matters. Mr Roche certainly, it would appear, went on a view with Mr Cheney. No doubt there have been discussions there. It relates to other aspects of the coronial inquiry. I would like the opportunity and believe the entitlement exists for me to see those notes.

35

Just finally, I do refer to the comment by Justice Whitlam in his judgment that in circumstances where the rules of evidence do not apply, this is at paragraph 13:

40

"Indeed, the fact that the respondent is not bound to observe the rules of evidence is an important reason for a cross-examiner to be given generous access to any material available to or generated by the expert in connection with his report."

45

47

Now, conversations such as those that I am making the call on, in my submission, fall squarely within that principle.

5 THE CORONER: Do you have me at that meeting on 29 July, Mr Whybrow? The page I have there is some initials at the top, is that what you are looking at?

10 MR WHYBROW: Yes.

THE CORONER: I think the MD is HMD. I think that is possibly Ms Drew. I was not at that one.

15 MR WHYBROW: I don't pursue it on that document. There are the two, 4 June and 28 July. There are only a small number of pages. It may be if I am able to view those at morning tea, that is the end of the matter.

20

MR LASRY: Your Worship, the position - it is not a matter of us making the decision - as I understood it is what occurred in relation to the notes of the conference of 4 June, I think,
25 Mr Woodward took your Worship to those last week. Then they were submitted to you. It is your judgment of whether or not the material which has been excised is properly excised because it is for all intents and purposes irrelevant to this
30 inquest. We are content with that process.

As far as we are concerned, in any of those notes if there is material in your opinion which is relevant to the issues as they arise in this
35 inquest then we have no problem with them being disclosed.

THE CORONER: I don't have a difficulty either. I have no difficulty at all in you seeing these
40 notes.

MR LASRY: We are content for your Worship to make that judgment's as to whether or not it is appropriate.

45

THE CORONER: I have no difficulty in making available these notes.

MR PIKE: Might the same approach be taken in
relation to Mr Roche? It may be better as a
matter of complete transparency that we all have
them, or else there may be people that want to
5 say, "We weren't shown things, we don't know". I
am sure there is nothing of any problematic nature
in them. It may be simply better, in my
submission, if some consideration was given to
taking the same approach that was indicated a
10 moment ago in relation to the Roche documents too.

THE CORONER: Do you want these now, Mr Whybrow?

MR WHYBROW: If they are available. If I finish
15 before morning tea, it might save a break.

THE CORONER: I will hand the page or so, the
front page, even before I join the meeting on
4 June. You can have that as well as 28 July.

20

MR WHYBROW: Thank you, your Worship.

MR LASRY: Could I see 28 July? I was at that
conference I think. I hope to refresh my memory
25 with contemporaneous notes. I know Mr Whybrow is
important, but I would like to see them before he
does.

THE CORONER: I will take a brief adjournment.
30 Just let me know when you are ready.

SHORT ADJOURNMENT

[10.25am]

MR CRADDOCK: I am grateful to your Worship for
35 that time. As a consequence of discussions, in my
judgment my time is best used off looking at
Mr Roche's volumes rather than - it would be
terrific to stay here for the rest of the day.

40 THE CORONER: I am sure you mean that too,
Mr Craddock.

MR CRADDOCK: Things being what they are, may I
take my leave?

45

THE CORONER: Yes. We will see you on the 5th of
October.

MR CRADDOCK: Certainly.

MR LASRY: Those notes to which Mr Whybrow
referred I have left in his place at the Bar
5 table. They probably should be marked in some way
at least for identification. At the moment they
are provided to him for the purpose of perusing
them. Perhaps they should be given some kind of
identifying number. If they could be marked for
10 identification 93.

THE CORONER: They will become MFI 93.

**MFI#93 - MR ROCHE'S UNEXPURGATED NOTES RE MEETINGS
15 ON 4/06/2003 AND 28/07/2003, ADMITTED WITHOUT
OBJECTION**

MR LASRY: The other matter, Mr Cheney provided me
this morning with a digitised version of exhibit
20 81 which is done in both low and high resolution
form, depending on the printer being used. This
is available to be copied by anyone who wants it.
It is the map, of course. It might be appropriate
that I produce it and ask your Worship to add it
25 to exhibit 81 and parties who want access to it
can have access to it.

THE CORONER: That disk will become part of
exhibit 81. It can be made available to those who
30 wish to look at it.

Are you ready, Mr Whybrow?

MR WHYBROW: Yes, rather than delay, I will
35 continue looking at these at morning tea. Perhaps
if possible a copy could be made?

THE CORONER: They are just an MFI at the moment.
I will leave them in your custody. Can you flick
40 through them at morning tea?

MR LASRY: At the moment the process is that
Mr Whybrow is looking at them to see what has
been - the Americans say "redacted", and satisfy
45 himself that there is nothing in that material
that he wants to use. Subject to the outcome of
that perusal, we may have to discuss it again, but

I would object to copies being made. The idea is that he simply reads them and then hands them back. Perhaps we can take it stage by stage.

5 THE CORONER: I don't intend that copies be made.

MR WHYBROW: Is there any difficulty with me showing them to Mr Pike?

10 THE CORONER: I don't have a difficulty with Mr Pike seeing them.

<PHILLIP CHENEY, RESWORN

<CROSS-EXAMINATION BY MR WHYBROW

15

MR LASRY: I understand Mr Cheney has a matter that he wants to raise in relation to his evidence.

20 THE CORONER: Yes, Mr Cheney?

THE WITNESS: Yes, your Worship, yesterday I discussed the energy output from the fire and I wanted to make sure that there is a clear
25 distinction between a calculation of total energy and a rate of energy output, which is the power of the fire. Because with the publication in yesterday's newspaper, I believe it is quite misleading and not something that I would agree
30 with.

We calculate the energy output of the fire or the power of the fire or the intensity of the fire - these are all terms that are used to basically
35 describe the same thing - which is the rate of energy output at a point around the fire perimeter. It is expressed in kilowatts per metre of fire perimeter.

40 This is useful because it is that rate of energy release around a point of a fire which can be related to damage within the forest or damage to vehicles, for example, that might be caught up within the fire.

45

The total energy calculation is not related to that. The very simplest example is where a fire

is spreading uniformly in a circular pattern and the intensity around the fire is all the same because it is spreading at the same rate if it is consuming the same amount of fuel.

5

The total energy released calculation is increasing all the time as the fire expands in size. So a total energy calculation would indicate that the energy release from the fire is increasing exponentially and that is inappropriate. So it becomes inappropriate when you try to compare an energy release, a total energy release, of something like a bushfire with something like a nuclear explosion.

15

If we go back, the maximum fire line intensity released from this fire, which was parts of the head fire that was travelling at 20 kilometres an hour through forests carrying around 20 tonnes per hectare was of the order of 250,000 kilowatts per metre. If we were to use that same nuclear - same comparison, that same unit and compare it to a nuclear explosion, because the energy from a nuclear explosion is released in something around a millionth of a second, and that is where any explosion gets its explosive power from, it is the time in which the energy is released, we would be talking of an energy output at the point of explosion somewhere in the terms of billions of kilowatts per metre.

30

Not wanting at all to diminish the importance of the fires or the impact on houses or the terrible burns that some of the victims suffered in these fires, but to make a comparison with the Hiroshima bombings is totally inappropriate --

35

MR WHYBROW: I object, your Worship. I am in the middle of cross-examination and this witness is making a speech about something that is properly re-examination. I object.

40

THE CORONER: Your objection is noted.

MR LASRY: Save for the fact that Mr Cheney is clearly referring to this morning's 'Canberra Times' and wanting to correct, among other things,

45

the public record. In my submission, it is appropriate that he do that.

5 THE CORONER: I agree with that. It is appropriate that Mr Cheney explain that because I am a bit disturbed about that comparison as well, so I am interested in what Mr Cheney has to say.

10 MR WHYBROW: It has to be made clear whether the article misrepresents the evidence or whether he is making a comment about the appropriateness of comparisons. There are going to be some more questions on this, your Worship.

15 THE CORONER: Please continue, Mr Cheney.

20 THE WITNESS: Well, we measure the impact of any disaster or release of power by the result, the damage that is done. As I say, with great reference to people who suffered in these fires, it really can't be compared to where 70,000 people were killed in the initial blast, 140,000 people died by December 1945 and something like 340,000 people were dead by 1952.

25 The importance of this is because this trivialises the impact of nuclear war. It grossly exaggerates the threat to the general public of bushfires in general. It gives the impression that absolutely nothing can be done about it, and people did survive in their houses in the worst parts of this fire. For that reason, this comparison was put to me by a reporter soon after the fire and I gave the same explanation. I would just like to correct that on the record.

35 THE CORONER: Thank you Mr Cheney. Yes, Mr Whybrow?

40 MR WHYBROW: Q. Just on that speech, Mr Cheney, you understand that I was asking you questions about the total amount of energy that was released over 12 hours?

45 A. Yes, indeed I do but I don't think --

Q. I was comparing that to the total amount of energy --

MR LASRY: I object. My learned friend asked a question. Mr Cheney began to give an answer. He should be permitted to complete the answer, not be spoken over. I don't appreciate it either.

5

THE CORONER: You should let Mr Cheney finish the answer, Mr Whybrow.

MR WHYBROW: Q. You understand that I was asking you questions yesterday about the total amount of energy that was released as a result of these bushfires on 18 January, I think, from 6am to 6pm?
A. Yes.

15 Q. I started by asking you whether you agree over that period approximately 90,000 hectares of Canberra, if you like, the ACT, was burnt by fires?

A. I agreed with that. I said I hadn't done the calculations. That was unwise of me, I suspect.

20 Q. It was all predicated on your assumption that it was approximately 90,000. I accept that.

A. Yes.

25 Q. You agreed that an estimate of the amount of fuel on average over - assuming 90,000 hectares - would be about 10 tonnes per hectare?

A. Yes.

30 Q. I think you also agreed it was a simple physical calculation to get a figure for the total energy the consumption of that amount of fuel would cause?

A. Yes.

40 Q. You would agree, I suggested to you, that what I was seeking to compare was the energy that was released by that amount of fuel over 12 hours is a figure of kilowatts or whatever, kilojoules or whatever unit?

A. The unit is joules.

Q. Kilojoules?

45 A. Or kilojoules if you multiply it by a thousand.

47

Q. Or mega joules but it is joules?

A. It is joules.

Q. It comes out as an amount of joules released?

5 A. Yes.

Q. So does a nuclear explosion, depending on the size of it, it comes out as a number of total joules released?

10 A. Yes.

Q. What you have indicated today is there is a distinction between 100 joules being released in a split second and 100 joules being released in three hours?

15 A. That's correct.

Q. Taking you to the report in the 'Canberra Times' today, the first paragraph says:

20

"The amount of energy released by the fire which devastated Canberra on January 18 last year was equivalent to 8 Hiroshima atomic bombs, the ACT Coroner's Court heard yesterday."

25

You, I assume, take umbrage with that without any qualification that there is a need to differentiation between energy time over periods?

30 A. Absolutely. I believe it is a quasi-scientific representation that has been coming out of ESB for some time that has led us into this situation.

35 Q. Thank you, Mr Cheney. The thing that needs to be clarified from paragraph 1 of that article is that that amount of energy at Hiroshima was released over milliseconds rather than other hours?

40 A. Absolutely.

Q. The second paragraph says:

"But the difference was that the fire's energy was released over a number of seconds rather than a millisecond."

45

47

That seems to clarify that, does it not?

A. No, I don't think it does. I don't think it clarifies it to the general public. I don't think it is helpful to the public or to the coroner.

5

Q. Is that because it might give the public an idea as to the total amount of energy that was released on that day?

A. No. Because it gives the public an indication of the damage and the conditions that they went through that was totally inappropriate.

Q. In your opinion?

A. Absolutely. And the way it was reported, I would take issue with the hundred kilo-tonnes too. From a quick glance at the website, the Hiroshima bomb was about 12 and a half kilo-tonnes which, by using that comparison, would say we suffered 80 Hiroshimas in the ACT, which is so patently ridiculous that it is unbelievable.

Q. Thank you, Mr Cheney. Moving on, you said yesterday that your second report came about, it was something which you did off your own bat during the course of the evidence for Mr Woodward in relation to fire spread predictions?

A. Yes. The fire spread predictions were done for Mr Woodward while Mr McRae was giving evidence.

30

Q. You were sitting in court then?

A. Yes.

Q. No doubt you were taking notes and providing notes to Mr Woodward so he was in a position to counter any suggestions that you felt were misrepresenting positions?

A. I said to Mr Woodward I would go back and calculate the figures for him. That's what I did.

40

Q. My question was: were you making notes and providing those matters to Mr Woodward as the examination and cross-examination of Mr McRae --

A. Yes.

45

MR WHYBROW: I could call for those notes. They have not been produced.

THE WITNESS: My notebook has been given to the DPP.

MR WHYBROW: They are in your notebook, are they?

5 A. They are in one of the notebooks that have been provided to the DPP.

Q. They are notes that you provided to Mr Woodward during the course of --

10 A. They are the notes that I took in court.

Q. So they don't contain comments in relation to that evidence?

15 A. I don't know.

Q. Is there any document apart from the text that appears in the report that you prepared in relation to this issue?

20 A. If there was a draft document, you would have it. But if you haven't, I have deleted that - obviously deleted that draft and reproduced it in the report.

25 Q. Let me show you one document. That appears to be an email where you are attaching to Mr Woodward that part of your report number 2?

A. Yes, I would say it was.

30 Q. That seems to be in reply to an email from Mr Woodward, the subject being "Re: final para"?

A. It says, "The final pages are attached, prediction of fire spread".

35 Q. Is the subject of that email: "Re: final para"?

A. Yes, it is.

Q. That would indicate that it is a reply to an email to you, subject: "final para"?

40 A. That is the final pages of that report.

Q. What I am interested in is the email you to for the subject "final para" which you seem to have replied to by attaching your report?

45 A. That is under "Ted Woodward re: final para", that's what it says here.

47

Q. What I am asking is was there an email from Mr Woodward to you on that subject to which this is the reply?

5 A. I don't know whether there was an email or a telephone conversation with Mr Woodward. I didn't delete any emails from my disk. They were taken off by an officer of the DPP.

10 Q. So apart from that page of email and whatever notes you took of Mr McRae's evidence, is it your evidence that there is not a scrap, there is no notation anywhere, other than these, representing your working out this second part of the report on the fire predictions using Project Vesta?

15 A. There are no other emails and no other notes that I made.

20 Q. What you went to, apart from any drafts that may have been deleted, is essentially out of court straight to the final product?

A. Pretty much, yes.

MR WHYBROW: Might that be returned, your Worship?

25 Q. Mr Cheney, taking you back to the notes of the meeting of 4 June 2003, which we covered yesterday, we got to an entry relating to a comment apparently by Mr Lasry that the fires were eminently put-out-able; do you recall that?

30 A. Yes.

MR WHYBROW: I am not sure that these notes have been tendered yet. I think copies have been distributed.

35

THE CORONER: I don't think they have been tendered.

40 MR WHYBROW: Q. Do you still have a copy of those notes there, Mr Cheney?

A. This is the notes headed "PC and MP10.30"?

MR WHYBROW: Yes.

45 THE CORONER: For the record, these are the notes made by Ms Drew of the meeting of 4 June.

47

MR LASRY: I might say, in relation to the way -
it was attributed to me - that meeting is
portrayed by Mr Whybrow, he usually leaves off the
second part of the line. It actually says:

5

"LL - fires 'eminently put-out-able' - using
what resources."

I am not going to offer my opinion as to what I
10 said, but it is not a comment by me, it isn't
portrayed necessarily as a comment by me that in
my view the fires were unput-out-able.

MR WHYBROW: I object.
15

MR LASRY: He may object, but I object to his
portrayal of what is written on the page.

MR WHYBROW: If Mr Lasry wants to go into the
20 witness box, your Worship, he can do that.

MR PIKE: He should simply describe what is on the
page rather than interpret it in a way that suits
him. That is what I am objecting to.
25

THE CORONER: You should at least quote the full
line, Mr Whybrow, and not part of the line.

MR WHYBROW: I will take you to the transcript of
30 yesterday where I did that. I was taking
Mr Cheney to that part as it might be something
that he might recall and I will now, with
your Worship's leave, go through the rest of the
comments there.

35

Q. Do you have the document there, sir?

A. Yes, I do.

Q. "LL - fire is 'eminently put-out-able' - using
40 what resources."

Do you see that?

A. Yes.

45 Q. Then follows some notes:

"Know what brigades exist and list, leading

to people who could be used independently.
What resources are around? First four days
critical. Standby. People on camp town".

5 Do you see those notes?

A. Yes.

Q. Then there are further entries which start:

10 "Arrangements for fire bombers, section 44,
New South Wales"?

A. Yes.

Q. Another entry:

15

"Identify resources. What kind of tankers
are available? Defining particular areas."

A. I think this is a list of things that probably
Ms Barnicoat was reporting that they had been
20 investigating through Operation Parrell.

Q. You agree they are the sort of issues that are
relevant in order to determine whether or not
these fires could have been put out in the first
25 few days?

A. Yes.

Q. Over the page there is reference to various
reports that may be relevant including McBeth
30 report?

A. Yes.

Q. Then, "1995/96 high risk poster" is noted?

35
A. Yes.

Q. And then, "Val Jeffery, predictions in his
submission"?

A. Yes.

40 Q. Were these matters that were being considered
at that time as matters for further investigation?

A. These are, I think, again more things that
Ms Barnicoat had collected. It appears to me that
Mr McBeth had contacted the coroner and sent his
45 report, which that refers to. I don't know what
the high risk poster was about. Mr Jeffery has
been making predictions for a long time, which

have been well published in the newspapers and elsewhere.

Q. They were discussed, were they?

5 A. Just the fact that he did it, from my memory.

Q. You are aware that that description was described - there was some comment made about it in this inquiry when he was first proposed to be called to give evidence based on that submission?

10 A. Yes.

Q. I take you to what was said then, page 4130, stated by myself in relation to this issue of Mr Jeffery being called:

20 "As far as I am aware, apart from the pro forma-type statement that many people have filled in, Mr Jeffery has provided a submission to your Worship in the content of this inquiry which contains a lot of comment and doesn't seem to detail a great deal of what he did, where he did, and who he spoke to and things of that nature."

25

Further on:

30 "My submission is that Mr Jeffery, given from what his submission is, the apparent explosive nature of that material, he should, like every other person, in effect be required to provide a statement."

35 Do you recall being in court when this discussion took place?

A. Just that I was in court. I don't recall that discussion.

40 Q. Do you recall that in response to that Mr Lasry said:

45 "It was intended to call him today. What my learned friend has said about Mr Jeffery's material is correct."

And then he indicated a statement should be taken from him. Do you recall that?

A. Words to that effect.

Q. Can you remember whether or not the submission
that was being discussed in this meeting in June
5 of 2003 is that submission that was being
discussed at that time on 28 April 2004?

A. No, I don't know.

MR WHYBROW: I won't tender that at the moment
10 because there is the other material that I haven't
had a chance to look at. I might come back to
that.

Q. Mr Cheney, yesterday I took you through maps
15 of where the fire was at various times. In your
first report - I apologise I haven't had this
brought up - if I could have the Powerpoint
presentation, the first one that Mr Cheney
20 displayed. Do you recall, sir, there is a slide
which appears to be a satellite photograph showing
smoke at 2.30 on 18 January in south-eastern
Australia?

A. Yes.

MR WHYBROW: It is probably about halfway through.
25 So your Worship knows what one I am referring to,
I will hold it up.

THE CORONER: Does it say 12 January?
30

MR WHYBROW: 18 January 2003, 1430. There are
two. One seems to be a lot tighter. It has what
appear to be fire areas marked on it.

THE CORONER: That is the second one that you are
35 referring to?

MR WHYBROW: Yes.

THE CORONER: Do you have a copy of that,
40 Mr Cheney?

THE WITNESS: Not with me your Worship.

MR WHYBROW: Q. (shown) Mr Cheney, could you
45 explain what this shows and where particularly the
Canberra fires are?

A. It shows the smoke columns from a number of fires. The areas marked in red are portions of flaming combustion but only portions of flaming combustion that are visible to the satellite
5 Modis. A considerable amount of that is obscured because of actual fire. I have not worked out the precise location of those, from where those smoke columns are coming from, but I would hazard a guess that by and large the area burnt by the
10 McIntyre's fire is the northern part of that photograph.

Q. The top-most red circled area, there seems to be one to the right and one to the left at 2.30?
15 A. Yes.

Q. I take it you put the red marks around these for illustrative purposes?
A. No. The red marks were straight off the
20 satellite. That's the way they reproduced detection of parts of the fire that are emitting flames that they can see. So it is incomplete in terms of being able to detect all of the fire that was burning.

25 Q. In relation to your analysis, would it appear, though, that that top - it almost looks like the outline of a pair of glasses - that the top-most figure 8 on its side would be the McIntyre's Hut
30 fire and the break-out towards the west at 2.30?
A. Yes. I would say that is probably what it is.

Q. The other red outlines going down to the middle and south-west are Bendora and Stockyard
35 fires?
A. Well, the most furthest west is probably the Broken Cart Fire to the west of Brindabella.

Q. The most westerly outline there?
40 A. The most westerly outline in that top group.

Q. Yes, in that top group of four or five outlines?
A. That's right.

45 Q. At this time strong westerly winds were blowing?

A. Yes.

Q. Immediately to the right of what you believe would be the Broken Cart Fire, there appears to be
5 a huge amount of smoke being generated?

A. Yes. There is a very tall convective plume from which people have tried to estimate the height of that by the shadow, which is the black section just immediately east of that plume.

10

MR WHYBROW: May I approach the screen, your Worship?

THE CORONER: Yes.

15

MR WHYBROW: Q. This is a satellite image taken at 2.30 on the 18th?

A. Yes.

20 Q. This area here is the smoke that we have just been discussing, (indicating) just so we are on the same understanding?

A. Yes.

25 Q. Does that appear to be smoke that has been generated as a result of the Broken Cart fire and perhaps some other contributions by Bendora and Stockyard fires, this main body of smoke?

30 A. The main body of smoke, I believe, would be - because the smoke is displaced because of the wind to the east, that very tall convection is probably coming from the southern part of the McIntyre's fire at that time, where it was burning in the Uriarra pine plantation and going through
35 Mt McDonald and those areas.

Q. We previously identified this top sideways figure eight as the McIntyre's Hut and break outs towards the west?

40 A. Yes.

Q. In your interpretation?

A. In my interpretation, very much to the part down at the very back. I can't be sure without
45 translating that accurately onto a map.

Q. This is a real-time photograph from an aerial

photograph of what was happening at 2.30?

A. Yes. I have preferred to use real-time linescans that were taken at the time.

5 Q. On the south-eastern corner of the McIntyre's Hut - what you suggest would be the McIntyre's Hut fire - that is the front that is approaching Canberra at this time, 2.30, approaching Duffy, sorry?

10 A. I would say that south-east corner is the remanent forest burning out in the area of Dingo Dell, and most of it had burnt out by that time and there was only a portion on the flank. I think the rest of that, spread across the
15 grassland and to the area further south, is the areas that were burnt by the southern side.

Q. Can I suggest to you the main body of smoke is being generated particularly by the Broken Cart
20 Fire which at this time was burning ferociously over the Brindabellas and eastwards?

A. No, I disagree with that.

Q. I suggest there is this break in the white
25 body of smoke and that there is a smaller apparent smoke column arising on the south-eastern corner of that sideways figure eight that appears to be on the photograph?

A. I'm not quite with you there.

30

Q. Right here appears to be three mushroom cloud shapes which appear to be smoke columns at 2.30 on the south-eastern - the pixels show them up, there are at least two close there and one there that
35 seem to be separate to the main body of smoke; do you agree with that?

A. Yes.

Q. What I suggest is at about 2.30, and indeed
40 perhaps half an hour earlier, the McIntyre's Hut fire started to demonstrate a significant acceleration in its ferocity and rate of spread?

A. Yes.

45 Q. And I suggest that these are the smoke columns that are representing that change in the rate of spread and increase in activity?

A. The very northern one may be part of it. But I think that the southern one has contributed because the position of that top cloud is transposed quite a long ways east and is well over - the top of that is well to the east of the city of Canberra, I would suggest.

Q. If this is the McIntyre's Hut fire (indicating); do you agree with that?

10 A. Yes, I agree that --

Q. To the extent that you can interpret this photograph?

15 A. That's right.

Q. That would appear to be the logical position of the McIntyre's Hut fire?

A. Yes.

20 Q. The south-eastern portion of that fire, if it is correct, would logically be the portion that is heading towards Canberra?

A. Yes.

25 Q. This would logically be the smoke coming from that fire, would not, those two dots at the south-eastern end?

A. No, I would say that is coming from the north-eastern side of it.

30 Q. I see. I suggest that this larger column is the Broken Cart Fire as it is roaring through from the west at about 2.30?

35 A. No. The bulk of that smoke is probably coming from between the Bendora and the Stockyard Fires.

Q. The bulk of this smoke between Bendora and Stockyard?

40 A. Mmm-hmm.

Q. Which are these ones here?

A. Mmm-hmm. Well Stockyard is - it is the most southern part of Stockyard. We have already considered it was larger than that at that time.

45 Q. Does there appear to be at least a change in the density of that smoke from the smoke which you

just said appears to be Bendora and Stockyard and the other more intense areas up near McIntyre's Hut?

5 A. Yes. And the reason why I disagree that it is the Broken Cart Fire is because the linescan image showed quite clearly that the Broken Cart Fire ran in a pretty narrow front into the back of the Stockyard fire.

10 Q. It was running fairly ferociously at that time, wasn't it?

15 A. No. It actually ran slower than I would have expected up that slope. It picked up and filled in between the Stockyard fire and the Bendora fire some time later because the wind - the photographs taken by residents of Brindabella indicated that while initially the run of Stockyard was north-west - sorry from the north-west to the south-east, which took it straight into the back of the Stockyard fire sometime shortly before - at 20 about this time, I would guess, but certainly the 15 linescan which I have mapped elsewhere in my report --

25 Q. Whilst you are finding that, did you visit areas where the Broken Cart Fire burnt vegetation?

A. Yes.

30 Q. Those areas display high intensity fire damage, do they not?

A. Yes.

35 Q. They are areas where there has been no epicormic re-growth from the trees due to the extremely high temperatures that were generated as that fire came through?

A. There are areas of snow gum, which is a thin bark tree, which is relatively easily killed by fire.

40

Q. Is the answer "yes"?

A. Yes.

Q. Sorry, you were going to --

45 A. If you look at the Stockyard and Broken Cart Fires, 18 January at 1500, you will notice that the map in the area of the Stockyard fire was

recorded by linescan. In the area of where it is written "Broken Cart Fire" is where it has run into the back perimeter of the Stockyard/Gingera fires. And after 1600 the observations - as the photograph at the end of the report shows, that area between Stockyard and Bendora subsequently burnt out.

The Bendora fire broke away not only on a run but on that day it also broke away towards the northern end of the Bendora Dam and made a very strong run. I was only able to map portions of that beyond Bendora where the Stockyard is. There was an area in between where it is unclear just how fast or far that had spread. I would suspect most of that area was filled in by the Bendora and the Stockyard fire joining, and that in fact the Broken Cart Fire probably didn't contribute very much to burning in the ACT at all.

20

Q. The image of the McIntyre's Hut and Bendora fires 18 January at 1500 - have you got that slide there?

A. Yes.

25

Q. The shape of the McIntyre's Hut fire with its break-out to the left, you would agree appears to be similar to the aerial photograph in the sense that it is a sideways figure eight, if you take the outline of it?

30

A. Sorry, it is the McIntyre's Hut fire you are looking at?

Q. It is one of the last slides, "McIntyre's Hut and Bendora fires 18 January 1500". In that first presentation it is the ninth last slide.

35

A. Yes.

Q. You agree that the representation of the fire seems to match pretty much with the aerial photograph outlines that we identified a few moments ago?

40

A. As far as one can look at the back of the fire, yes, it is approximate.

45

Q. I suggest to you, sir, that the Broken Cart Fire was a very high intensity fire, and Flea

Creek, on the afternoon of 18 January and, but for the fact that those fires ran into a lot of burnt-out country from Bendora and Stockyard, they could have burnt down towards Tuggeranong on the
5 18th of January?

A. The parts of the Broken Cart Fire that I inspected, which was only along the Mt Franklin Road where parts of that fire between the Bendora and Stockyard fire were burnt and in the extension
10 of the Brindabella Road going north from the cleared area and most of that area burnt after 1500 in the Brindabella Valley, those areas were not nearly as intense as the fire that ran through
15 between the northern part of the McIntyre's Hut fire and the northern flank of the Bendora fire.

MR WHYBROW: Thank you Mr Cheney. Is that an appropriate time, your Worship?

20 THE CORONER: Yes.

MR McCARTHY: Before you rise, just regarding the notes that have been made available for Mr Whybrow and Mr Pike to look at, as a matter of caution, is
25 your Worship content for me and others at the Bar table to look at those notes over the break?

THE CORONER: Yes. I don't want them taken out of the room. You can't copy them, but you can look
30 at them, certainly.

MR McCARTHY: Thank you, your Worship.

SHORT ADJOURNMENT

[11.25am]

35

MR McCARTHY: Your Worship, thank you for that opportunity to look at the notes over the break. Having done so, I would like to take some
40 instructions from our client about some of the matters that are in the notes. For that purpose I respect your Worship's direction that they be neither copied nor taken from the room. In that
45 circumstance, I would like to take a note of some of the aspects that are in there for the purposes of taking those instructions. I have spoken to Mr Lasry about that course. He has no objection

to it. He suggested I inform you and I rose, therefore, to do that.

5 THE CORONER: Thank you for that courtesy. You can do so, Mr McCarthy.

MR MCCARTHY: Thank you, your Worship.

10 MR WHYBROW: Can I indicate I made some notes of those documents and I intend to bring parts that may be relevant to Mr Walker to his attention. To that extent, I will be publishing them to Mr Walker, and for the purpose of taking
15 instructions from my client, but no further than that.

I think when I was reading from the 'Canberra Times' article this morning I may have inadvertently said, "seconds" rather than "hours".
20 The second paragraph of that article says:

"But the difference was that the fire's energy was released over a number of hours rather than a millisecond."

25 Apparently I may have said "seconds" by mistake.

Q. Mr Cheney, you have in your first report made comments about the fire suppression that was
30 undertaken by both New South Wales on McIntyre's Hut and ACT in its fires?

A. Yes, I did.

Q. At various points you had been critical of
35 some of the tactics employed and some of the decisions made?

A. Yes.

Q. In particular, you have been sitting in court
40 as we discussed yesterday, in order to hear the evidence, including from the number of firefighters who gave evidence about things that they did?

A. Yes.

45

Q. With a view to presumably taking on board anything they said in relation to some of your

comments and, if appropriate, amending your comments for the second report?

A. Yes.

5 Q. In your first report on page 35 you make, relating to Sunday, 12 January, the comment halfway down:

10 "In my opinion there appeared to be an over-reliance on the use of helicopters to control spot fires with water dropping and a lack of appreciation of the need to use these aircraft to support fire line construction on the ground."

15

Do you see that?

A. Yes.

20 Q. In the last paragraph, after going on to discuss the spot fires, you say:

25 "In my opinion it was obvious that spots would occur across Moonlight Hollow Road if the fire intensity increased, but there was no scout placed above the road to look out for spots. The spots that occurred could have been easily put out with hand tools within the 5 minutes from ignition if crews had been in place and ready for direct suppression with helicopter support. It appears that crews were not permitted to work beneath helicopter drops which, if correct, almost completely negates their effectiveness."

35

A. Yes.

40 Q. I think you were in court when one of my clients, Ms Vivien Raffaele, gave evidence in relation to that comment?

40

A. Yes.

Q. You understand that she was the person who did not order that a scout be placed at the top of the hill?

45

A. Yes.

Q. I will just remind you of her evidence. The

last thing I asked her was:

5 "You attended when Mr Cheney gave evidence or
became aware of a particular part of his
report that you would like to make some
comment on."

10 That is page 3939. I then referred her to some
transcript of your evidence last time. I will
read it out for you, sir. I think the relevant
part in terms of transcript is page 408. It
arises from the evidence of 13 October last year.
I will just read out a short part of that
15 transcript. Mr Lasry was asking Mr Cheney some
questions. It is in relation to the afternoon of
14 January - and subsequently that is corrected:
it is meant to be 12 January - the question is at
line 10:

20 "Q. Just in relation to that area, in your
report you say that in your opinion it was
obvious that spots would occur across
Moonlight Hollow Road, which is the road you
were referring to if the fire intensity
25 increased, which it of course did. But
you're critical of the fact that there was no
scout placed above the road to look out for
the spots. Do you recall reading that part
of Mr Cheney's report?

30 "A. Yes, I do.

"Q. You were aware a similar comment being
made about the lack of a scout being in place
at some stage?

35 "A. Yes.

"Q. Was that in relation to a fire ground
that you were involved in?

40 "A. Yes. I was in charge of that sector on
that day.

"Q. What comments do you have in relation to
the particular criticisms that may have been
directed to the way you ran the fire ground
45 on that day?

"A. Well, I actually did have a scout and
that scout was actually standing on the back

5 of the tanker. I refused to let them go into
the unburnt country because I knew the fire
was below us and travelling up. It was
starting to increase in intensity. It was on
an uphill run and we were about halfway on
the fire trail. I wasn't prepared to put
anyone high up into that area because it is
what we call a classic 'dead man zone'. I
knew that once the intensity started to
10 increase and if we didn't have communications
with any person that was up there they were
in an extremely dangerous situation."

15 I think you were in court when Ms Raffaele gave
that evidence?

A. Yes.

Q. Did you make a note of her response to your
criticism?

20 A. Yes.

Q. Did you consider it?

A. Yes.

25 Q. You did not make any amendment in your report
in relation to that criticism, did you?

A. No.

Q. You did not even refer to her explanation?

30 A. No.

Q. I take it you did not accept her explanation
at all?

A. I didn't, no.

35

Q. Your last actual suppression of uncontrolled
fires, you indicated, was in 1972?

A. In the ACT, yes.

40 Q. I don't think you limited it yesterday when I
asked you. You accept that Ms Raffaele has been
involved in actual suppression activities for a
number of years, culminating in her being awarded
the Australian firefighter medal in January this
45 year?

A. Yes.

47

Q. You completely dismissed without reference to it in your secondary report her explanation as to why she didn't have a scout at the top of the hill?

5 A. Yes.

Q. Have you been open-minded in relation to people's explanations for their actions throughout the course of this inquest?

10 A. Yes.

Q. Why is it that you did not see fit to even refer to that explanation in your updated report?

15 A. Because I believe Ms Raffaele has misinterpreted the concept of the dead man zone.

Q. What about in relation to having a scout? She said she had a scout; you said she didn't?

20 A. She had a scout on the back of a truck which makes it difficult to see where the spot fires land and the danger that she referred to, that if someone was on the hill and had been trained about fire behaviour and had been trained as a scout, there was very ready access back to the road and
25 back to that portion of the fire which had been controlled along Moonlight Hollow Road and wasn't a threat to uphill. So in my opinion she had misinterpreted that.

30 If she had said that she had no trained people that she could put up there, that she was confident to put up there, that would have been acceptable.

35 Q. You didn't think it fit to put in your report: "There was an explanation but for these reasons I disregard it"?

A. She didn't have a scout up the hill.

40 Q. End of story?

A. End of story.

Q. If she didn't have a scout up the hill, that's a failing?

45 A. Yes. It is a standard firefighting practice in forests almost anywhere.

47

Q. Of course, whilst you are a fire behaviour expert, sir, your expertise is not actually in fire suppression, is it?

5 A. I do a lot of fire suppression in the course of my experiments, as I have explained.

Q. That would be that you have done a lot of fire suppression in the course of your experiments. That is, with respect, akin to flying a flight simulator, you have controlled conditions --

10 A. Not at all.

Q. -- you know what is going to happen?

15 A. It is on the ground, seeing what people do, having the proper people in place and observing the suppression tactics.

Q. So you would consider yourself to be a relatively up-to-date expert in fire suppression?

20 A. Yes.

Q. To the extent that witnesses like Ms Raffaele, you don't even need to comment on their responses to your criticisms?

25 A. Not in this particular case.

Q. Were you aware of any questioning of your fire suppression expertise by the investigation team, the coronial investigation team, earlier in your involvement?

30 A. Not specifically, no.

Q. Specifically, it would appear on 4 June there had been some suggestion that you were a fire behaviour expert and not a suppression expert. Were you made aware of that?

35 A. That came up in relationship to the AIIMS - ICS, which I felt there were better people than me to explain AIIMS - ICS to the coroner. I believe that led to the appointment of Mr Roche. That's my understanding of the context of such discussions.

45 Q. The setting out of alternative points of view and then dealing with them in coming to your conclusion is not something that you have generally done in the course of your report, is

it?

A. No.

5 Q. You have set out what you have found to be the facts and what your opinions are?

A. That's correct.

10 Q. And where there have been other points of view or other arguments put, you haven't reproduced those in order to differentiate them from your findings, have you?

A. Only where they have been relevant to me.

15 Q. Yesterday, one of the areas that I questioned you about was the decision to remain or go on the fire ground on 8 January?

A. Yes.

20 Q. In effect, your position was that you should have stayed. Factors such as terrain, fatigue, things of that nature were not relevant. It was just a matter of in that situation you should stay was your opinion?

25 A. Those factors must be - should always be taken into account but it is a matter that experience in firefighting is an important thing and I believe if the person in charge is not experienced then it is the duty of the Incident Management Team to replace them with someone who is.

30

Q. You said that?

A. And I believe that there were experienced people available.

35 Q. You also agreed with me that the fact that Ms Arman did not stay demonstrated to you lack of experience and training?

A. That's right.

40 Q. Without any more. You didn't need to know any more information about her training or her experience. The fact that she didn't stay was enough?

A. Yes.

45

Q. Can I suggest to you during the course of your investigations you became aware of a number of

factors which were being put forward as relevant to exactly that issue, whether to stay or go on the first night at 8 o'clock?

A. Yes.

5

Q. You haven't referred to any of those in your report or in your evidence to date really, have you?

A. No.

10

Q. Because it is the decision itself that is relevant. Those other factors were not relevant?

A. If I was quizzed on those factors, I would answer them.

15

Q. But you didn't see it relevant to include them in your report as "matters that have been raised but for various reasons I dismissed them"; you haven't done that either?

20 A. I haven't done that in my report.

Q. Can I show you a document, Mr Cheney? This is a document you prepared in relation to a document or a paper that came into your possession relating to arguments why the fires could not have been fought successfully on 8 and 9 January.

25 A. Yes.

Q. Apart from the decision to withdraw on the 8th, you have also indicated that the fires should have been successfully fought on 8 and 9 January?

30 A. Yes.

Q. Again, you haven't included the arguments that have been put forward by various persons as to why that may not have been such an open and shut answer that you have given?

35 A. No.

Q. You haven't canvassed these alternatives that are outlined in this paper, have you, in your report?

40 A. No.

Q. Would you agree that over four pages there is quite a detailed discussion by yourself of various submissions that came into your possession as to

why the fires could not have been successfully fought on 8/9 January?

5 A. This was related to, as I said, the discussion of firefighting strategies earlier in the fire event, which I understand from evidence was a draft paper which Mr McRae had produced.

10 Q. You didn't refer to it at all in expressing your opinion that the fires or what you said about the Bendora fires in the early days, have you?

A. No.

Q. Is that because you didn't see it relevant to raise any of these matters?

15 A. Because they are matters that should be part of the training of an incident controller and a firefighter, it should be --

20 Q. Aren't they matters that are relevant to have brought to the attention of her Worship in your report, if only to highlight them on what occurred?

25 THE CORONER: I don't understand the status of this paper? What is this document, Mr Whybrow? I haven't seen it before. What is it?

30 MR WHYBROW: It is a document that comes out of part 3, document number 5 of the folders that were provided. Now your Worship knows as much as I do. It is just amongst those documents.

35 THE CORONER: It is "Comments on paper 'discussion of firefighting strategies early in the fire event'?"

MR WHYBROW: Q. This is something prepared by you, isn't it, Mr Cheney?

40 A. Yes, it is.

Q. Which discusses various issues relating to, I think, about eight issues that arise as to justify withdrawing fire suppression on 8 January?

45 A. That's correct.

Q. You go through them one by one and make various comments about them?

A. Yes.

Q. You don't refer to any of those matters in your report, do you?

5 A. No. This was, your Worship, a paper I produced when Mr McRae was being examined. I produced it for either Mr Woodward or Mr Lasry as issues they might want to take up with Mr McRae.

10 Q. Is that because to you, because of your opinions it was very important that her Worship form the view that there should have been firefighting on the 8th of January and that the fires should have been put out by 10 January?

15 A. Absolutely.

Q. And anybody suggesting anything to the contrary, you would do your utmost to ensure that her Worship didn't come to that view?

20 A. I wanted her Worship to be aware of what I considered to be good firefighting practice in forest.

Q. You are not suggesting - I think her Worship has already said she has never seen this document before - you provided that document to counsel assisting; did you?

A. I did.

30 MR WHYBROW: I tender it, your Worship.

THE CORONER: "Comments on paper: discussion of firefighting strategies early in the firefighting event" will become exhibit 0094.

35

**EXHIBIT #0094 - COMMENTS PAPER: DISCUSSION OF
FIREFIGHTING STRATEGIES EARLY IN THE FIREFIGHTING
EVENT TENDERED, ADMITTED WITHOUT OBJECTION**

40 MR WHYBROW: Q. At the bottom of page 2 after some discussion about, dare I say it, energy and fire intensity, there is a paragraph at the conclusion of that discussion on your analysis of whoever the author of this paper was indicating:

45

"This does suggest that fires in Montain forest, (Bendora) would be difficult to

control overnight by hand tools."

A. Yes.

Q. You have then gone on to say:

5

"However, there are known problems with the MacArthur fire spread, which is why I carried out the research in Project Vesta."

A. Yes.

10

Q. It continues:

"The model predicts reasonably well for small fires in early stages of development at mid-range wind speeds."

15

A. Yes.

Q. Well, on any account that is what the Bendora fire was on 8 January and 9 January, was it not?

20

A. Yes.

Q. So the MacArthur fire spread model was a reasonable basis to conduct this analysis at that time?

25

A. Yes.

Q. You then go on under a paragraph "Safety issues used to justify withdrawing fire suppression", at page 3; do you see those?

30

A. Yes.

Q. Number 1:

"They expected other fires from lightning strikes to be reported."

35

That was something that had been suggested to you as a contributing issue?

A. Yes.

40

Q. Your comment:

"Sleepers are unlikely to start up at night when burning conditions are mild."

45

In each of these cases, nearly each of them, you make a comment as to why is it is not a relevant

issue?

5 A. Yes. In that case you tackle the fires that you know about and you look out for additional ones. If you don't tackle the ones that you know about because you think there might be other fires starting up, then you don't go anywhere.

10 Q. In each of those eight discrete safety issues you have firstly made some comments in this document as to why they were not relevant, correct?

A. Well, most cases, yes.

15 Q. And secondly, you have failed to refer to them at all in your report?

A. Yes.

Q. In the last paragraph you say:

20 "There will always be risks associated with firefighting. These need to be minimised by sound training, putting experienced people in charge of the operations and adopting safe work practices on the fire line. Governments
25 need to recognise that firefighting is a hazardous occupation and that the possibly of accidents exist even when firefighters adopt safe work practices. A suitable scheme for compensation needs to be put in place,
30 otherwise we will not be able to get people to do the job."

Is that what your comment on this finishes as?

35 A. That's what is written there, yes.

Q. That is authored by you?

A. Yes.

40 Q. Mr Cheney, you have given evidence in a number of other inquests and proceedings of various natures?

A. Yes.

45 Q. Are you familiar with something called the Expert Code of Practice?

A. Yes.

47

Q. Did you sign an undertaking under the Expert Code of Practice in relation to your reports in this matter?

A. No.

5

Q. I think we have already established that you yourself did not at any stage sit down with Mr Lucas-Smith or Mr McRae in order to find out any comments that they might have had about the suppression activities or the predictions?

10

A. That's correct.

Q. Was that a decision that was made early on that there would be no such contact between yourself and the ESB senior staff?

15

A. Only by me.

Q. Only by you. You don't recall any discussion about that in any of the meetings you had with counsel assisting or with the coroner?

20

A. No.

MR WHYBROW: Might I have access to the discovered documents this morning?

25

THE CORONER: Which documents?

MR WHYBROW: It is one of the three that was made available this morning.

30

THE CORONER: You mean **MFI 93**?

MR WHYBROW: Yes. Might I approach, your Worship? This is the only copy.

35

THE CORONER: Yes, certainly.

MR WHYBROW: I am referring you to notes of 23 July 2003. Could I just ask you to read that section of the notes to yourself, please?

40

A. I'm not sure that I have interpreted this right entirely.

Q. Can I ask you this: would that suggest if that was a meeting you were present at that there was some discussion about not interviewing senior Emergency Services people and indeed leaving them

45

until last so they could be locked in?

A. There is "last locked in", I can see that.

5 Q. Do you have any independent recollection about discussion about this sort of issue?

A. No, I don't. Well, perhaps vaguely from general conversations with Mr Lasry and Mr Woodward perhaps, but not specifically relating to that meeting.

10

Q. There are some notes of another meeting of 12 January, which were towards the end of part 1 of the documents that have been provided. I will distribute some copies of this. This is a meeting of January of this year. You had already given evidence in phase 1 by that stage?

15

A. Yes.

20 Q. It would appear from the notation that the persons present were: "PC", being yourself. "TB" being Ms Barnicoat. Do you know who "KM" might be?

A. No. Unless it is someone in Ms Barnicoat's team at the time. I don't recognise the initial.

25

Q. Ms Drew, and then "MT" which might be Mark Travers?

A. Could be Mark Travers.

30 Q. The gist of this document, would you agree, appears to be setting out a plan for the fuel management phase of the inquest?

A. Yes.

35 Q. You see in the bottom left-hand corner and the bottom part of the page under the title "interviews", there is a list of people that might be considered relevant to have interviews with on this issue?

40

A. Yes.

45 Q. You see the names "Bartlett, Long, Cooper, Kendall, Woodruff, Raffaele, Corrigan, Amos, Lhuede and Farnham" on the right-hand side at the bottom?

A. Yes.

47

Q. Are you aware that at least most of those people and perhaps all have been interviewed in a record of interview on the issues of fuel management?

5 A. Yes.

Q. On the left-hand side there are further names "Tony B, Ian Long, Tony C, PLS, McRae, Maxine Cooper/Thompson". Do you see that?

10 A. Yes.

Q. You see there is a bracket around the two lines "PLS, McRae" and two crosses next to that?

15 A. Yes.

Q. Is it your recollection that those two persons were not to be interviewed on this issue?

20 A. Not by me. I think this is a list of statements that were to be collected by the Operation Parrell team.

Q. Your understanding was that those two persons were not going to be approached to give statements in relation to fuel management?

25 A. Apparently so.

Q. Would you agree, though, that Mr Lucas-Smith and Mr McRae may be probably the two towards the top of the list of relevant people to give statements on fuel management?

30

MR LASRY: It seems to me it rather over-simplifies the process in a way which is misleading. Perhaps Mr Cheney should not be in court while I am saying what I am about to say.

35

THE CORONER: Would you mind waiting outside please, Mr Cheney?

40 MR WHYBROW: I am happy to withdraw the question to save time.

MR LASRY: That is an economical use of Mr Whybrow's time.

45

THE CORONER: There is always a difficulty in interpreting notes that somebody else has made.

MR LASRY: I should still say, just for the record, Mr Cheney is being cross-examined on the basis of people that he, at least in the opinion of Mr Whybrow, might have appropriately spoken to for the purpose of his report. That is to be contrasted with at least what is open to be concluded about this list, which is that this is now a list of people to whom the police might speak for the purpose of conducting interviews concerning fuel management.

It needs to be borne in mind that historically, so far as these proceedings are concerned, the making of statements by people like Mr Lucas-Smith, Mr McRae and Mr Castle, for that matter, were very much in the hands of the ACT Government Solicitor. It was clear in the early stages that any material that was provided to us by those witnesses would be provided after they had made statements, as in fact in the end they did, to people under the control of that office.

Now, that's a possible reason why they weren't on this list. But to conflate the two processes, that is, Mr Cheney's own process of preparing his report on the one hand and the activities of the police investigation team on the other, does have the potential to make the whole representation in these notes somewhat misleading. I appreciate my learned friend has withdrawn the question so perhaps the point doesn't arise. That clarification, I think, is relevant to what has gone before.

THE CORONER: Yes.

MR WHYBROW: Q. One point: their names appear on the list, don't they, sir?

A. They do.

Q. There are two crosses next to their names?

A. Yes.

MR WHYBROW: I tender that document, your Worship.

THE CORONER: Why, Mr Whybrow? What use is this? What do the crosses mean? Mr Cheney doesn't know

what the crosses mean; you don't know what the crosses mean. How will I be assisted to know what these crosses mean? Why would you tender this?

5 MR WHYBROW: They are suggesting the people who are not to be interviewed --

THE CORONER: Who is suggesting this? Who wrote this note?

10

MR WHYBROW: Ms Drew.

THE CORONER: Maybe Ms Drew is the one you should inquire from, not Mr Cheney.

15

MR WHYBROW: If she gives evidence, I will, your Worship.

THE CORONER: I am not accepting this as a tender. It is a meaningless document. It is a list of names.

20

MR WHYBROW: As your Worship please.

25 Q. On the 18th of August 2003, I suggest you received an email from Ms Drew again on this issue of whether or not Mr Lucas-Smith and Mr McRae might be spoken to. I show you this document, Mr Cheney. This is an email dated 18 August 2003. Do you see that, Mr Cheney?

30

A. Yes.

Q. Which is, I think, two days before the site visit that you conducted with the coroner and others?

35

A. If you say so.

Q. To your recollection, about August 20?

A. I would have to look at my diary.

40

Q. Do you see that in that email Ms Drew indicates to you the following in paragraph 2:

45

"Russell was wondering whether it might be useful for you to speak to the ESB people. He suggested Peter Lucas-Smith and Rick McRae in relation to their views of the fire

spread. Apparently they have seen the
linescan data from New South Wales and have
concluded that it was the McIntyre's Hut fire
that hit Duffy. I explained to him that you
5 have had access to the same data and that you
have no doubt already formed your own views
but said I would pass the message on. I was
being very polite."

10 Do you see that?

A. Yes.

Q. At this stage, was there some concluded view
amongst the investigation team that those two
15 persons should not sit down with you and talk
about their interpretations of the linescan data?

A. Not to my knowledge.

Q. The reference to "being very polite" was not
20 in effect humouring Russell, who would be
Mr Russell Bayliss, about that issue, that it was
never going to happen?

A. I don't know.

25 Q. Well, that was sent to you. What did you
interpret it to mean?

A. The primary reason for sending the email was
because I was after the radio transcripts and
trying to get a priority set on delivering them.
30 I needed the 8th - because I couldn't have access
to all of them at the time that I was preparing
the first report, I had settled for the 17th and
18th and the 9th and 10th. As far as discussing
times, which is what I was after, I felt it most
35 appropriate, because I had done my analysis on the
fire spread off the linescan data, I considered
that should be independent. It was my
interpretation of the linescan data. And my
primary interest has been to see whether there
40 were any logged radio calls that would help me
identify parts of the fire.

MR WHYBROW: Thank you, Mr Cheney. I tender that
document, your Worship.

45

THE CORONER: This email?

47

MR WHYBROW: Yes. There has been some suggestion
by Mr Lasry a few moments ago to some process by
which Mr Lucas-Smith and Mr McRae may or may not
give statements. Here is an email directly
5 referring to it.

THE CORONER: They haven't given any statements as
at this date.

10 MR WHYBROW: No.

THE CORONER: You weren't in the proceedings when
they started. They hadn't given statements.
These two people hadn't provided statements when
15 the inquest started. That was a difficulty in
these proceedings to starting these proceedings.
As Mr Lasry said, that was in the control of the
ACT Government Solicitor at the time.

20 MR WHYBROW: I tender the document.

MR LASRY: I object to the tender, your Worship.
On what issue? On what possible basis can this
document have any relevance? Mr Cheney has
25 explained what he was after at the time, the
process he was going through. Mr Whybrow did
attempt to ask him to interpret something said by
Ms Drew, but beyond that how on earth is this
relevant to an issue?

30 THE CORONER: How is it relevant, Mr Whybrow?

MR WHYBROW: If your Worship is not proposing to
admit it, could I ask that that document and the
35 last one be marked for identification so they may
in the future be identified, if necessary?

MR LASRY: Your Worship posed the question to my
learned friend: "How is it relevant?" Instead of
40 answering it, he says, "Could it be marked for
identification?" My friend should say how it is
relevant.

MR WHYBROW: In my submission, the relevance is
45 that it indicates a preparedness by at least
Mr Lucas-Smith and Mr McRae to sit down with this
expert witness and discuss matters pertinent to

his report.

THE CORONER: That's not what this indicates.
That is not at all what this indicates. Maybe
5 that is your interpretation of what that indicates
but it is not what this document indicates.

MR WHYBROW: That is what matters of this are all
about, is people make interpretations and make
10 submissions. It sounds like your Worship would
not be proposing to accept any submission based on
that.

THE CORONER: I am not going to accept evidence
15 from you at the Bar table on your interpretation
of a document that was prepared by somebody who is
not giving evidence and attempted to be
interpreted by somebody else. That is what you
are asking me to do. How is that relevant?

20
MR WHYBROW: No I am not, your Worship. I am
asking that it be tendered so that it is on the
record as an indication as of August 2003 of a
preparedness of Mr Lucas-Smith to sit down with
25 this witness and discuss the linescan data. That
is relevant in terms of the task that this witness
undertook in giving his evidence, which has
already been examined by me today.

30 THE CORONER: You have asked the question. The
document is not relevant, Mr Whybrow. I don't
accept either of them as a tender.

MR WHYBROW: As your Worship pleases.
35

MR LASRY: There is already evidence, which I
think was given if not this morning then
yesterday, that Mr Cheney and Mr Woodward and I
and possibly others, I forget now, attended at ESB
40 so that a presentation, as I recall it, on this
very topic could be made by Mr McRae, for some
considerable time.

In fact, what happened was Mr McRae - I am not
45 sure if Mr Lucas-Smith was there or not --

MR WHYBROW: Is my friend giving evidence,

your Worship?

MR LASRY: I am referring to the evidence that has
already been given. Mr Cheney was asked yesterday
5 about whether he had a one-on-one meeting with
Mr McRae on these issues. As I recall his
evidence, it was that he didn't have a one-on-one
meeting but he attended a meeting at which
Mr McRae made a presentation. If the purpose of
10 this document is to suggest that this information
was being made available to Mr Cheney and the
offer of that information was rejected and that
Mr Cheney didn't attend and didn't hear any of
it - on the evidence as it stands, that is simply
15 not correct.

I just asked Ms Drew to establish that date. As I
understand it, that presentation occurred
subsequently to this email. The very thing that
20 was being suggested was, in fact, what happened.
If that is so, what is the point of going through
these documents?

THE CORONER: Just continue, Mr Whybrow.
25

MR WHYBROW: Q. Mr Cheney, taking you to the 20th
of August and the field trip, you prepared notes
of that field trip and areas that were visited?
A. Yes, I prepared an itinerary before we went
30 and some notes of where we were to go. I prepared
a report, brief report of what we actually did.

Q. I think it is [DPP.DPP.0010.0271]. Hopefully
that will come up on the screen and you can
35 identify that, if that is the case. Does that at
least on the screen appear to be page 1 of the
notes that you prepared following this trip?
A. Yes.

Q. In bold are the various places visited and
then some comments about issues at that point?
A. Yes.

Q. If we go to page 2, for example, we have:
45 "Stop 1. Baldy Range fire trail". Your notes
start:
47

"Location of spot fire that originated when McIntyre fire burnt up the western slopes of the range above the Brindabella Valley in the afternoon of 8 January."

5

And then goes on to indicate the inspection that was conducted by Mr Hutchins, your son, Mr Gould, and Mr Ellis at around 9.30 that night?

A. That's correct.

10

Q. And the discussion of various techniques that could have been used to suppress parts of that fire?

A. Yes.

15

Q. Similarly with each other of the stops you have recorded particular comments about fire suppression or terrain, things of that nature, that you considered pertinent to bring to her Worship's attention?

20

A. Yes.

Q. You prepared those notes, was it on the 20th or some time shortly afterwards?

25

A. Some time shortly afterwards.

Q. Yesterday I referred you to a memorandum of Mr Cheney's; do you recall that?

A. I'm sorry?

30

Q. Of Mr Lasry, I am sorry. I referred you to a memorandum of Mr Lasry's?

A. Yes.

35

Q. I think the part I referred you to was a possible conference between yourself and some people at ESB; do you recall me asking you those questions yesterday?

A. Yes.

40

Q. Can I suggest that at paragraph 5 of that memorandum the following was conveyed to you when you received this document:

45

"On Wednesday, 20 August 2003, Dr Cheney conducted a field trip. The trip took the entire day, as much of it was over roads that

were accessible to only 4-wheel drive vehicles. The purpose of the trip, to enable the coroner to see at first hand the areas where the fires which mainly affected
5 Canberra commenced and developed. That meant that the areas that were being looked at were the ignition points and development areas for the McIntyre's Hut and Bendora fires.

10 It would be useful to have some record of that trip, given that it is part of the coroner's information gathering. Ideally Phil Cheney could prepare a summary of where we went and what we saw so that if the matter
15 is raised or the coroner wishes to refer to it in her report, as she almost certainly will, there will be a record of it."

Then it indicates "action PC". The notes on the
20 screen, I take it, are the notes that you prepared in response to that memo from Mr Lasry?

A. That's correct.

Q. Could document [DPP.DPP.0006.0819] be brought
25 up, please? Mr Cheney, you may have been court - I suggest in late April there was a request made that notes relevant to her Worship's field trip be provided so that the parties would know where she had gone to and that this document that is now on
30 the screen was subsequently provided. Are you aware of that?

A. Yes.

Q. Does the document on the screen appear to be -
35 it is 2-pages long, so can we scroll to the second page? I have hard copies of both. It might be easier if I provide them in that form to Mr Cheney. The first document with the red highlighting, I suggest, is the notes that you
40 prepared of that visit on 20 August, or a copy of those?

A. Can I have the previous one again?

Q. There are two documents there.

45 A. Sorry.

Q. That one in your hand with the red

highlighting, does that appear to be the full set of notes that you prepared?

A. Yes.

5 Q. Does the second document, the shorter document, appear to be an edited version of that longer document?

A. Yes. I guess so.

10 Q. It is in the same format?

A. Mmm.

Q. You see there is red highlighting on the longer document?

15 A. Yes.

Q. If you would like to satisfy yourself, I suggest to that you the red highlighting represents the words that appear in the shorter document?

20 A. Yes.

Q. Were you involved in the preparation of the shorter document?

25 A. I don't believe so.

Q. Do you know who was?

A. No, I don't.

30 MR WHYBROW: Might they be returned?

Q. Finally, you will be pleased to hear, Mr Cheney, you would agree that between about 1 o'clock and 3 o'clock on 18 January the McIntyre's Hut fire behaviour escalated dramatically?

35 A. Yes.

Q. Escalated in a fashion beyond even what Project Vesta would predict?

40 A. I haven't made that comparison at this stage of the analysis of an extrapolation of the Project Vesta data, so I don't know.

45 Q. Certainly, as we established yesterday, the fire went at least three times faster through the grasslands than the MacArthur meter would predict?

A. CSIRO meter.

Q. CSIRO grass meter, sorry?

5 A. Yes, for the predicted wind speed, on the assumption that the wind speed at Tidbinbilla was similar to across that area as we discussed, the comparison was pretty close. But that is on that assumption.

10 Q. Can I suggest that between 1 o'clock and 3 o'clock that fire turned into something completely beyond anybody's experience and expectation who was there on that day? You have sat through most of the evidence.

15 A. It may have been beyond the experience of many people who were fighting that fire, but in terms of fire spread and sort of reviewing the historical literature, it was about par of the course. It certainly didn't spread within the
20 pines as fast as the fires in 1983 in South Australia did, nor did it spread as fast in the grasslands as those fires in 1983 or 1977 in Victoria.

25 Q. Do you know what a plume-driven fire is, Mr Cheney?

A. I have heard the expression.

30 Q. What does that expression refer to, as you understand it?

A. Generally it is an American term which relates to fires burning under relatively stable conditions in very steep topography.

35 Q. Do you know a gentleman by the name of Neil Cooper?

A. Yes.

40 Q. I think he has been described in these proceedings as one of the most experienced firefighters in the ACT?

A. Yes.

45 Q. Would you accept that or do you agree with that?

A. Along with Mr Bartlett. I think they are two very experienced people, yes.

Q. I would just like to remind you of some of Mr Cooper's evidence at 4784; do you recall that he was in the grasslands at about 2.15 on 18 January?

5 A. Yes.

Q. He described a retreat into a grazed out paddock.

A. Yes.

10

Q. In his vehicle along with another unit. At 4784 he says:

15 "In desperation I tried to burn a patch of ground to give us an area of safety but there was not enough fuel to light a new fire and the winds were too strong, actually picking up rocks with enough force to break car windows. The on-coming flames driven by heat and wind were up to 2 metres high. I remember they were as high as the aerial on my vehicle. The flames had a depth of greater than 100 metres, which is a lot deeper than normal grass fires. I could not believe the height and depth of the approaching flame front, given that it was burning across heavily grazed and bare ground?"

30 Mr Lasry asked the question:

"I take it you had never seen anything like that before, Mr Cooper?"

"A. No, I had not."

35

Then in cross-examination Mr Cooper was asked about that section of his evidence, which came from paragraph 67 of his statement:

40 "After that experience is when you limped back to the depot in the car that had been burnt over?"

"A. Yes.

45 "Q. Notwithstanding that event and your experience, you indicate in paragraph 70 that you still did not even think that the depot

was about to burn down, is that correct?
"A. That is correct."

5 Stopping there, you recall Mr Bartlett's evidence
that he also had no expectation or belief that his
forestry depot was in danger that afternoon?

A. Yes.

10 Q. Further on in Mr Cooper's evidence -
page 4816, line 25 - I asked Mr Cooper:

15 "In any event, you set out there your
thoughts - this is in his statement - and
actions at the time. Given all of the things
that you experienced on that day and taking
into account your experience and your
knowledge of what the weather was like that
day, would it be fair to say that what you
experienced was many factors beyond any worst
20 case scenario you could have imagined
occurring that day?

"A. Yeah, I think that is a fair comment."

25 Is it fair to say your position is it wasn't
beyond your worst case scenario even though it was
beyond his?

A. That's correct.

30 Q. Apart from Mr Bartlett, who didn't have any
inkling that this might happen on that afternoon,
you would rate Mr Bartlett and Mr Cooper amongst
the two most experienced firefighters in the
Territory?

A. Yes.

35

Q. Finally, sir, Ms Julie Crawford was asked some
questions about the fire movement from 1 o'clock
onwards at page 4514. The question, Mr Cheney,
was:

40

"This may be very difficult, but, in the
absence of hindsight, if you were aware that
that was the position of the fire at 1pm on
18 January --

45

Perhaps to put it in context, referring to your
report, Mr Cheney, if it can be brought up, it is

the slide of McIntyre's Hut at 1pm. It is slide
66. Ms Crawford had that slide before her. Now I
understand in your evidence-in-chief second time
around, Mr Cheney, the amendments that you made to
5 that slide involved a small break-out at the
"DIGB" of Goodradigbee.

A. Yes that's correct.

Q. And a line around one of the roads beneath
10 Doctor's Flat Road or it might even be Doctor's
Flat Road?

A. Yes, it was the actual constructed boundary
between - that they contain - tried to contain the
fire to prior to the 18th.

15

Q. They were the only amendments you made to that
slide?

A. There were some --

20 THE CORONER: I think this is the amended one. I
will just show Mr Cheney. Do you have a copy of
that amended one, Mr Whybrow?

25 MR WHYBROW: I don't, but I have marked on this
one, hopefully accurately, Mr Cheney's evidence.

THE WITNESS: There were a number of changes in
the pattern of the fire on the northern part of
the break-away which I was able to do using
30 Mr Hoare's photographic evidence, which I hadn't
seen prior to that.

MR WHYBROW: Q. In relation to the southern edge,
you didn't make any amendments to your previous
35 slide from when you gave evidence in October last
year?

A. No, the southern edge is pretty much the same,
I would say.

40 Q. I would suggest to you that that slide was
referred to to Ms Crawford. I asked her:

"This may be difficult, but, in the absence
of hindsight, if you were aware that that was
45 the position of the fire at 1pm on
18 January, do you have a view as to whether
or not that would be a time that reasonably

persons within ESB could have given any advice, or evacuation advice to the residents of suburban Canberra."

5 In an answer that goes over a couple of pages - I will try to break it up - she firstly of all says:

10 "It is a difficult question to do in hindsight because there has been so much about the fires and everyone has an opinion. In hindsight it is very difficult. If I try to cast my mind back to the morning of the 18th when this was happening, that's where the fire was at 1 o'clock. People doing the 15 planning in ESB would have been doing their rate of spread under their worst case scenario to work out when it would hit the suburbs. You would try to time in to that."

20 You would agree with that comment?

A. Yes.

Q. She continues:

25 "They would also have had the fact that the ACT has had an excellent reputation of holding fires on the urban edge of Canberra. They have really good setbacks."

30 She refers to a fire in the night at O'Connor. Do you agree with those comments that Canberra had very good setbacks and an excellent reputation of holding fires on the urban edge?

35 A. I would agree with the first one. I am not so sure about the second one because I would venture that they have little experience of trying to hold grass fires under extreme conditions. So the reputation of holding fires actually depends on the weather conditions that they are fighting in.

40

Q. In the 17 years that Mr Lucas-Smith was the Chief Fire Control Officer, are you aware of any suburban house that was destroyed by an encroaching bushfire before 18 January 2003?

45 A. No, I'm not.

Q. The next paragraph:

5 "I think the ACT worked out that it wasn't going to hit until 6 o'clock that night. But if you just look at it, there is the Murrumbidgee River to cross, there is a huge amount of rural paddocks which were in the middle of drought. There were no fuels in them. A lot of them were just dust bowls."

10 Do you agree with those descriptions of at least the area around the paddocks?

A. No, I don't.

Q. You disagree with those?

15 A. I do.

Q. The next paragraph indicates:

20 "The night of the 17th, Dr Cheney was out there on the fire ground of the area. He spoke with my divisional commander. My divisional commander said, "What do we do? It is in the timber." The advice I got back through my divisional commander was there is nothing you can do once it is in the timber. 25 Once it gets out in the cleared country that's when you hit it. That's what you would expect. When it came out into the cleared country is when you would attack the fire and when you would be able to get to it. 30 At least the rate of spread would drop."

Did you give that advice to that divisional commander that night?

35 A. Yes, I did. And I was talking about that night. The only opportunity they had while the fire danger was moderate to high was to hold it in the eaten-out pastures.

40 Q. Ms Crawford went on to say:

45 "What happened when it came out into the cleared country, from discussions I had with people who were there at the time, they couldn't believe it hit the cleared country and just took off. It was a wall of flame across paddocks that had nothing in them. The rate of spread was far more excessive

than what people expected."

Putting yourself aside, do you accept that all of
the evidence you have seen that the rate of spread
5 when it came out into the paddocks was beyond what
anybody other than yourself could have predicted?

A. The words were "expected". And if you haven't
experienced a fire spreading under those
conditions, yes, of course it will be - it is
10 always a surprise and it spreads faster than you
expect.

Q. It continues:

15 "You were also then having where fires were
combining and things, so you get this much
more erratic fire behaviour. You would have
to work out, well, it has hit there. What
20 are you going to tell the people of Canberra
that it is coming and, yes, you will get it
in the cleared paddock, which is what
everyone was hoping would happen."

Then she goes on to say:

25 "When it crossed the border we stayed with
it. We were doing property protection. Once
the fire front would go over, it didn't go
over in one wall, it came across in fingers,
30 so they would then stay and protect the
property from the embers that were left after
the fire front. Some other crews followed it
down. There was nothing they could do with
it. It just moved so quickly."

35 In terms of the firefighting effort, do you agree
from about 1 o'clock onwards when this fire came
out from where it was at 1 o'clock, it moved
quickly in a way that the authorities were not
40 able to cope with?

A. Certainly. They couldn't suppress a fire
under extreme conditions. That's been observed
before and reported before.

45 MR WHYBROW: Your Worship, the documents that were
provided this morning, in my assessment of them,
may contain some matters of relevance that I might

need to put to Mr Cheney. I don't think they do, but rather than do that in this situation, given that they haven't been copied or anything like that, I would rather take the opportunity to have
5 a proper consideration of them. I would expect that I don't need Mr Cheney if there is to be an issue arising out of them. To the extent that it is necessary, I haven't properly considered them yet and I don't want to delay Mr Cheney. I have
10 finished now, subject to anything that may arise and subject to - I indicated yesterday - I would get copies of Mr Cheney's notebook for tender. That has now been done. I have no further questions, your Worship.

15 MR LASRY: I just wonder why my learned friend didn't finish the answer that Ms Crawford was giving. It is a matter for him. He didn't read to the end of the answer or the following answers
20 dealing with the issue of warnings.

MR WHYBROW: Because I understand Mr Cheney is not put forward as some sort of expert on community warnings, that is why. In fact, I am quite
25 content to put that question and answer if my friend doesn't want to do it in re-examination.

MR LASRY: For completeness it should be.

30 THE CORONER: That is right, for the sake of completeness and fairness, I think it should.

MR WHYBROW: Q. This is from Ms Crawford, the next question and answer:

35 "This may be covered in your last answer. Again, without an expectation or knowledge as to what it did after it came out of the forests I suggest would be the type of
40 warning, could you suggest the type of warning you would or could give at that time to the residents of Canberra."

45 She then referred to that slide and said:

"At this time here, yes - the answer was - which would be that the fire has now -

McIntyre's fire has now entered into the ACT. We now have X amount of fires at the same time. Fires are also moving out into New South Wales from the ACT. What we will keep you up to date with what has happened."

That was the next question and answer that my friend wanted to put. I have no further questions, your Worship.

THE CORONER: Mr Cheney's notebook dealing from about 13 January, I will describe it as notes made by Mr Cheney will be exhibit 0095.

EXHIBIT #0095 - NOTEBOOK DEALING FROM 13 JANUARY NOTES MADE BY MR CHENEY

THE CORONER: We will adjourn until 5 past 2.

LUNCHEON ADJOURNMENT [1.05pm]

THE CORONER: Mr Whybrow, have you finished?

MR WHYBROW: I have finished, your Worship.

<CROSS-EXAMINATION BY MR PIKE

MR PIKE: Q. Dr Cheney, during the break I took the opportunity to give you a couple of pages of copies of emails which appear in the three bundles of material which have now been produced as being documents that you have had reliance on. Have you had the opportunity to peruse those?

A. Yes.

Q. I want your assistance with the sequence of events that have given rise to it. I should indicate for the record that this is a series of three emails appearing on three pages - I am not sure if this is meaningful to anyone apart from your or not - behind the orange tab in the first of the three folders. The first of the emails is dated 8 June 2004. It will become clearer in a few moments.

Mr Cheney, is the background to these three emails which have been produced on these pages this: in about early June you were in the course of

preparing the final version of your report; is that right?

A. Yes. I think by this time I had sent a report to Mr Woodward to review and I had a --

5

Q. Let me take you to the questions I want to ask you. It may be a bit faster. It is just a confusion on my part.

10 THE CORONER: Mr Pike, just before you continue, I would like to retrieve from Mr Cheney, before it gets lost out of my set, that map. I will make it available if it is needed by you, Mr Pike. Sorry to interrupt you.

15

MR PIKE: Not at all, your Worship.

Q. The context was at that point in time you were in the process of finalising the final version of your report?

20

A. Yes.

Q. One of the issues that you had raised in your earlier version was the one of Mr Rick Hayes and what resources he had available to him on the 9th of January?

25

A. Yes.

Q. You became aware through the course of sitting in court that further evidence was given in relation to that aspect?

30

A. Yes.

Q. You wanted to address that aspect in the final version of your report?

35

A. Yes.

Q. What we see is the first of these emails is in fact from Ted Woodward to yourself. Am I right in inferring it would have been in response to some query made by yourself, whether in person or on the telephone or in some other way as to that evidence of Mr Hayes?

40

A. Yes. I had made a note in my notebook and I had asked Mr Woodward to check through the transcript that he had readily available to confirm --

45

Q. The note that you had made?

A. Yes.

Q. What he set out in the first of the emails is:

5

"Here is our extract from our transcript summary."

Then your email in response on the following day saying:

10

"This is pretty much as I had in my count. Do you have the transcript where it says he received additional men?"

15

Et cetera. Then there is his response to that on the same day saying:

"Yes, here is the information that you wanted."

20

The final email in the exchange is one from yourself saying, "Thanks Ted".

A. Yes.

25

Q. In the context of that you were trying to finalise the material that would be in your report as to that issue, and in that context you were obtaining some assistance from Mr Woodward in that regard?

30

A. Yes.

Q. That is the only question I have for you in that respect. We are leap-frogging to another and final issue. You may recall last week Mr Watts spoke to you at some length about fire intensity?

35

A. Yes.

Q. He asked you on Thursday a series of questions in relation to the fire intensity when it hit Duffy. Because you hadn't done the calculations at that time, he said to you on page 7023:

40

"Could I perhaps ask you when you have a moment to do some kind of calculation of what intensity you feel the fire was as it reached Duffy."

45

Do you recall being asked that?

A. Yes.

Q. Have you had opportunity to do that?

5 A. I have had the opportunity but I'm afraid I haven't done it. If you want to run some figures, I do have a calculator and we could do it pretty quickly.

10 Q. No, I am not going to have you take the advantage over me in that respect. I am just the messenger here, Mr Cheney. In any event, you haven't conducted that calculation, as you say?

A. That's right.

15

MR PIKE: Those are the only questions I had. Just for the transcript, to make sense of my earlier questions, perhaps those three pages of emails might be tendered. I have given Mr Cheney 20 three unmarked pages of them, which I am grateful to my friend Mr McCarthy for having given me. If it is convenient, I would seek that would be the one that is tendered. I can make my own arrangements with Mr McCarthy as to replacing his.

25

THE CORONER: I will just have a look at them, if I may, Mr Pike.

MR PIKE: Yes, of course. It is just difficult to 30 make proper sense of them.

THE CORONER: They are emails between Mr Woodward and Mr Cheney?

35 MR PIKE: Yes.

THE CORONER: Which include an extract of a summary of the evidence of Mr Hayes. Those emails between Mr Cheney and Mr Woodward dated 40 8 June 2004 will become exhibit 0096.

EXHIBIT #0096 - EMAILS BETWEEN MR CHENEY AND MR WOODWARD DATED 8/06/2004 TENDERED, ADMITTED WITHOUT OBJECTION

45

MR PIKE: Prior to my friend re-examining the witness, as this is an appropriate time to mention

it, I did speak to Mr Lasry about the practical difficulty I have and probably others have in taking instructions in relation to the documents which have now been provided to us on the
5 understanding that they not be taken from the Court room. My suggestion to Mr Lasry, which I think he is in agreement with, is given the practical difficulties of taking those
10 instructions might the situation be handled in this way: that those practitioners who are prepared to give an undertaking that the documents not be copied or otherwise re-circulated apart from for the purpose of taking instructions give such an undertaking. If that were a suitable way
15 to address the issue, it would certainly make life a lot easier in terms of taking meaningful instructions about them.

20 THE CORONER: What does that mean? Does that mean uplifting them from where they are located?

MR PIKE: I am talking about the copies of the meetings which have had sections whited out from them.

25 THE CORONER: I beg your pardon. I thought you were talking about the four volumes.

MR PIKE: No, no. Just the ones that we have now
30 been shown, the unexpurgated versions, if I can describe them that way. I, for my own part, would be more than happy to give an undertaking along the lines I have indicated, if that would assist in the process.

35 THE CORONER: I think that sounds like a reasonable suggestion.

MR LASRY: Yes, that is satisfactory. I have both
40 copies, I think. I have the 4th of June and the 28th of July. The 28th of July is marked as MFI 93. I am not sure what the status of the unexpurgated 4th June one is.

45 THE CORONER: That concludes your questions, Mr Pike?

47

MR PIKE: It does, your Worship.

THE CORONER: Any re-examination, Mr Lasry?

5 MR LASRY: Yes, your Worship.

<RE-EXAMINATION BY MR LASRY

MR LASRY: Q. Mr Cheney, on 14 September of this
year, Alan Thompson, the chief executive of the
10 Urban Services department of the ACT government
wrote a letter to me in relation to what were
described as "further land management issues".
Attached to that document were two appendices. I
should identify the document [DUS.DPP.0001.0079].
15 Have you had the opportunity of reading that?
A. Yes, I have.

Q. I don't want to take you through it in detail.
Do you have any either particular or general
20 comment to make on what is contained in that
material?

A. Yes, I had been through it. I made some
notes, highlights to myself of different parts. I
think it is an account of setting out in theory
25 perhaps of a whole lot of things that may be done.
The main focus of the report is that they, the
Department of Urban Services, have decided to take
a strategic approach to fuel reduction without
really defining what that strategic approach is.
30 In some cases it is difficult to see how they are
going to do it.

An indication on page 8 of the document in the
first paragraph --
35

Q. "Park planning in 1986"? Did you say the
first paragraph?

A. Yes the first paragraph, "Park planning in
1986". In the last part of it, they refer to the
40 fuel management map for 2002-2004, where
substantial strategic burning corridors within
Namadgi National Park, see example from that
report. Those corridors have been placed on the
map, but in terms of carrying out fuel reduction
45 within those corridors, because they are not
referenced to a road network, it would be very
difficult to carry out a fuel reduction program in

those areas. Elsewhere there is reference to using creek lines as control lines.

5 My comment on that would be: to do that, that
would take considerably more training in the
operation of prescribed burning than really is
currently available anywhere in Australia. By
definition, if you were going to confine an area
10 to within the corridor, then you are really going
to need a control line in a very similar way you
need a control line to control wildfire.

Q. And not a creek?

15 A. Creeks are possible, but you really have to be
right on top of the ball in terms of your forecast
weather, expecting rain almost imminently, because
even under control burning conditions in the areas
where some of those corridors would burn, you
can't rely on the creek holding it.

20

Q. Anything else apart from that?

25 A. The other comment is really that it is in
general negative against control burning. It has
a negative tone towards it. There are lists of
things of how control burning and access trials
are a negative impact on the environment, but
there is no mention of the positive benefits in
terms of managing biodiversity, which is an
important thing for national parks, and even
30 positive benefits in terms of bringing fires under
control more rapidly and avoiding or trying to
avoid the situation that we faced in the recent
fires.

35 Q. Is that about all you wanted to say about that
report, Mr Cheney?

40 A. I think pretty much that's the tone of it. I
mean, my own report indicated that carrying out or
setting out a specific plan really requires
valuation of the fuels, the fuel accumulations and
the hazards as the majority of the timbered areas
recover from the Canberra fires. Someone
undertaking control burning will have to weigh up
the benefits against damages to particularly
45 regenerating vegetation and some areas will have
to be withheld from any burning, if possible, for
maybe a period of 25 years.

Q. In order to facilitate proper regeneration?

A. Yes, of certain species. Where ash forests have been killed and are regenerating, any fire within 25 years from now is likely to severely damage and even wipe out the species on that site because the ash won't have seed on them for some time.

So all of those aspects have to be taken into consideration. It seems to me that the Department of Urban Services have set up a group within the Department of Environment to supervise activities by the ACT Conservation Service who actually do the management. In a way, this is placing another layer of bureaucracy within the land management system which is not directly responsible for the operation of prescribed burning and its relationship to their firefighting resources and their responsibility to control fires in the area, which I have raised in my fuel management report.

Q. Just a couple of things about some of the questions you were asked more recently. On the 15th of September you were being asked questions by my learned friend Mr Erskine and particularly at pages 6947-6948 you were referred to the observations made by Mr Gould, I think, on the night of the 8th of January?

A. Yes.

Q. In the course of giving that evidence, you were being referred to his statement at page 6948 in the middle of the page. Then you were asked this question:

"Now, I've drawn your attention to those. Is it clear that Mr Gould was not in fact looking at the flank fire of McIntyre's in those videos but he was in fact looking at a spot fire?"

"A. He was looking at a spot fire, yes."

That's right, isn't it?

A. That's correct, yes.

Q. At the time that that video was taken and Mr Gould was making his observations, can you draw

any legitimate inference or extrapolate the behaviour of the spot fire to the main fire, even although you are not actually observing the main fire? Does the observation of the spot fire tell you anything about the likely behaviour of the main fire?

5
10
15
A. In terms of reference to the distance that the fire had come up and had crested the ridge, at Webbs Ridge, and his report that the weather conditions at the time were a light southerly wind when they were there, then on the other side of the ridge I would expect that the flank fire, even though it was on the western slope, would be of low flame height, very similar to the fire that Mr Gould was observing. This was borne out by an examination of aerial photographs where the degree of scorching on the main fire was similar to those areas where Mr Gould was operating.

20
25
Q. Now, in the course of being questioned by Mr Walker, he spent some time with you going through your experience. In the vicinity, if I read it correctly, of transcript page 7089, the chronology which he was asking you to go through seemed to come to an end in the summer of 1982/83. Is your recollection that's about the point at which his questioning of you about your experience finished?

30
A. Yes.

Q. I just want to ask you to briefly summarise your experience in fire suppression, including with experimental fires and other experience that you had after 1983?

35
40
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A. In 1982/3 we were carrying out some preliminary experiments for Project Aquarius. Part of that project was to measure the cost-effectiveness of air tankers and to compare that with - that's large air tankers - conventional suppression techniques. And we were also carrying out a physiological study of firefighters because we were also measuring the maximum fire intensity that firefighters with hand tools could contain. As part of that overall program we were lighting fires, and some of them were suppressed by hand tools, some by bulldozers and some by large air tankers.

The major program was scheduled for 1984/5 and unfortunately that summer was very wet, but we managed to carry out half a dozen drops with air tankers on fires and measured the performance of those drops as the air tanker came - experimental fires burnt up to them.

We also looked at probably, I think, three fires with bulldozers but unfortunately the logistics for doing that measurement on experimental fires was inadequate and we really only got very limited amount of data on that. But we did do a very complete study in both 1983, 1984 and 1985 of firefighters working with hand tools.

I was directing the whole experiment and to do that we set up a structure because we were managing somewhere between 70 or 80 people in the field dealing with different types of suppression. So we had what effectively was an operations manager and logistics person, so the basis of the ICS system was put in place for those experiments. Plus on-ground supervision of the firefighters while they were actually working.

Subsequent to that, in 1986 we carried out a large series of experiments in grasslands in the Northern Territory and again this time we had a rather smaller crew so we had fires that were burning up to 6 kilometres per hour through tropical grasslands and at the end of each fire we had to suppress them primarily so we didn't burn out our whole experimental area.

Then the latest series of trials with Project Vesta, where we are burning four fires - four or five fires simultaneously in different fuel types. Again we had set up a fairly - a system under the ICS system. That suppression was run by fire officers with CALM but I had overall responsibility, as would an incident controller, for the experimental work and the suppression work that was carried out.

Q. We are up to now the early 1990s for that work?

A. No, that is coming through probably 1996

through to 2001 - 1997 through to 2001.

Q. Just in relation to Project Vesta, can I just ask you this general question: we have seen the warning pamphlet that was distributed to which I think Mr McRae made a response and you have given evidence about that. But to what extent were the concerns that you developed during the course of Project Vesta made known within the fire suppression industry, if I can call it that; to what extent were people made aware of Project Vesta and, at least on a preliminary basis, the conclusions that you were coming to?

A. Well, in addition to the brochure that we had printed and sent out to all authorities in batch numbers, which I don't recall, but I do know that some of the authorities, certainly the Rural Fire Service and probably the CFA, did a reprint of their own of that and did a wider circulation to, I understood, most of the people within their brigade system.

In addition to that we had a video --

Q. Can I just interrupt that? I want to ask you a question about those two services or any others that come to mind because they are probably the two biggest, are they, New South Wales Rural Fire Service and the Victorian CFA?

A. Country Fire Authority, yes.

Q. To your knowledge, are there people within those organisations whose job it would be to evaluate the sort of warnings that you were transmitting through Project Vesta to see whether in fact the preliminary conclusions at least were valid or to do their own work on such analysis as you have done?

A. Not really within those organisations. The validation is seen as a research task which will be --

Q. I understood that. I didn't have in mind the kind of peer review that Mr Craddock was asking you about. But simply, whether within an organisation like the Rural Fire Service or the CFA there would be specialists who would have this

information brought to their attention and be asked to do their own work on the sorts of issues raised in the pamphlets distributed so you might get some feedback or some broader research from
5 people interested in the same issues. Is there any process by which any of that happened?

A. Not formally. We did make up a video because I was concerned about two things that we set out in that program. One was the under-estimation of
10 rate of spread, particularly early in fire's development. The second one was when there was a change in wind direction the fire immediately spreads at its potential rate of spread.

15 If I may just explain that: a fire which is narrow confines itself through its convection and will spread at a constant rate and appear to be spreading at a constant rate which one might expect would remain constant for those conditions.
20 But that rate can be well below the potential rate of spread. This has been one of the problems and why we say that the MacArthur fire meter, and the table at the back of it in particular, was designed for small fires as they were developing.
25 In the original literature, MacArthur only rated that system for the first hour of fire spread, although that has been sort of lost in time, but that was his intention.

30 So Vesta fires confirmed other experiments that we carried out in 1983 which confirmed that indeed the fires were spreading when they were wide, and spreading at their potential rate at a much higher rate than predicted on the meter.

35 So a video was circulated highlighting the dangers. This is where the dead man zone came from. Particularly when there was a wind change, a fire would suddenly start spreading to its
40 potential rate of spread and it would spread at three times the rate predicted by the MacArthur meter. That was set out within the video and in the paper that we published in Australian Forestry in 2000-2001.

45 There was also a video of the Vesta experiments themselves which was more or less saying what we

did.

Q. Did they go to all fire suppression agencies in Australia?

5 A. Yes. Distributed both on VHS tape and video disk, and feedback from volunteer fire services in pretty well all states is that it has been well-received.

10 Q. And well-received because, at least anecdotally, their experience appears to support what you are warning might occur?

15 A. Yes. It is one of these things that people often say, "Oh Christ" - sorry - "I would have always known that. It is good to see this is what actually happens and this is what the explanation is".

20 Q. Mr Cheney, when you were being questioned by Mr Whybrow at around page 7157, you were being asked questions about conversations with, among other people, your son who was stationed, as you said, at Mt Stromlo. Particularly towards the bottom of that page Mr Whybrow put to you this
25 proposition at line 36:

30 "What I am suggesting is, you didn't even tell your staff. You placed your son on Mt Stromlo. You didn't tell him that this was going to burn over Mt Stromlo into Canberra, did you?

"A. There was a potential there, yes. He knew that and Peter knew that.

35 "Q. There is a difference between potential and complete expectation. Your evidence so far has been that you knew this was going to happen?

"A. I expected it to happen.

40

"Q. And you never even told your son?

45 "A. I told my son for quite some time that I expected the fire to come into Canberra many days before the 18th. He was aware of it and so was Mr Hutchins who was with him and so was Mr Gould."

47

In a bit more detail, just tell us about the conversations that you had with each of those three people in the days leading up to the 18th, to the extent that you can recall them?

5 A. I guess it started when I was aware that there were four lightning strikes on the 8th of January and the team went out independently of me as a response to try and pick up some data on McIntyre's fire, as I have described.

10

In a morning meeting with them the next day --

Q. The 9th of January?

15 A. On the 9th of January I said, "We are going to be in strife here because these spot fires are going to be very difficult to bring under control in time". I then, on subsequent days, because I am no longer running the group, Mr Gould is, persuaded them to take the opportunity, as I did, 20 to observe the fire behaviour under these conditions and go and inspect the fires. We made a couple of trips to do that.

25 Mr Ellis and Mr Sullivan, who is another staff member, also did a flight over areas in southern New South Wales to pick up an appreciation of the extent of the fires. I think all along in saying, you know, "If we get extreme conditions, these fires will burn into Canberra".

30

Q. As at the 18th when your son's crew or team or that part of the team that he was apart from were at Mt Stromlo, what can you recall about what you said to him on that day about the expectation that 35 the fires would burn over Mt Stromlo and affect Canberra?

40 A. I asked them to go to Mt Stromlo. We were in mobile telephone contact in that time. I asked them to set up a video and take wind recording measurements and report back changes to me as to whether they should continue observations or whether they should leave.

45 That was basically Mr Hutchins who was in control of that group. He has been with me since about 1969, I think. I had a great deal of confidence in Mr Hutchins' experience in observing wildfires

and making sound decisions because he had been with me on most of the fire experiments since 1969.

5 At 2.30 they said, "It's getting a bit close. I think we should retire back to Canberra". They just said they made that decision and they came back to the urban edge and they then set up their cameras to video from the edge of Hindmarsh Drive
10 where that was the final series of videos that we viewed. They were looking at both the McIntyre's fire coming over the Stromlo plus also the Bendora fire coming over the Bullen range.

15 They were confident they left themselves an out. They didn't isolate themselves. They weren't in any particular firefighting vehicle, they were just in a 4-wheel drive. They retired back into their own homes when the fires hit Canberra.

20

Q. A bit further on in Mr Whybrow's questioning of you at 7161, you had been asked about effectively your attendance at a planning meeting which, I think, by a process of deduction you
25 might have been prepared to accept was on the 17th because of the fact, as was put to you, Mr Lucas-Smith was apparently there and on the 16th he had been briefing cabinet at the time that the planning meeting had occurred on that day. So
30 it was possibly Friday the 17th. In the middle of the page, after you had been asked a number of questions about that planning meeting and whether or not you should have participated in it you were asked the question:

35

"Did you not think to say to anybody there:
"Excuse me, Canberra is going to burn down tomorrow because of this fire up north?
"A. I thought that was obvious."

40

Why did you believe it was obvious?

A. Because we had a forecast of extreme weather with north-westerly winds.

45 Q. You had a conversation, I think you have previously given evidence at page 434 of the transcript, with Mr Lucas-Smith on

14 January 2003; is that right?

A. That's correct.

5 Q. The prospects of the fires burning to or
burning into Canberra was a topic for discussion
in that conversation?

A. I raised that with Mr Lucas-Smith because I
wanted to advise him I had been approached by the
media to give an interview and I wanted to advise
10 him that this was my opinion. His response was,
"That's fine, Phil. That's our opinion too".
That was an opinion then - that was a belief that
I carried with me that they were fully aware of
that potential.

15

Q. That leads me to the next stage of the process
which is at page 7169. Again you were being asked
more questions about that briefing on the 17th of
January. Near the top of the page at line 3 you
20 were asked a question:

"Did you have any speaking role or did you
take any speaking role on that day?

"A. No.

25

"Q. You seem to be indicating in that answer
that ESB were well aware of this imminent
risk to Canberra but just hadn't issued
warnings at this stage?

30 "A. That was my feeling, yes."

That was your answer?

A. Yes.

35 Q. Was that, what you have just described, the
basis for the impression that you had or the
feeling that you had?

A. That was the belief that I had. They have
their operational system in place and I was not
40 asked specifically for my opinion. I was there to
observe what was happening and see then where I
should go to make observations for documentation
of the fire.

45 Q. Indeed, later in that question you said, in
answer to Mr Whybrow who asked you the question:

47

"Did you not in those circumstances think that you could or should have brought that circumstance to their attention?

5 "A. Perhaps I should, but my feeling was they knew about it and they were choosing their time to release the warning to Canberra."

That was your feeling at the time, was it?

10 A. Yes. They were the appropriate authority to issue the warnings.

Q. At the time that you were made aware of comments made by the Chief Minister in Parliament about you, which I think produced an email, had you ever met Mr Stanhope?

15 A. I had met him once before at schizophrenia fellowship meeting that I was attending and he was speaking at.

20 Q. That had nothing to do with any fire issue?

A. Nothing to do with fires at all.

Q. At the time that you became aware of the comments that he made in Parliament, were you aware of the fact that I think at that stage he was potentially a witness in this inquest?

25 A. Yes.

Q. And finally, you were being asked just before lunch, I think, some questions about Vivien Raffaele. You were asked to explain one part of your answer but, as I recall it, not the other. The part that I don't think you were asked to explain was your assertion that she had misinterpreted what you described as the "deadman zone" in the evidence that she had given. Could you just tell us why you came to the conclusion that she had misinterpreted the dead man zone?

30 A. The dead man zone is simply to highlight to people that you must not only identify what the potential change in fire behaviour is but that must be related to your potential escape route which, purely for illustrative purposes, we said you should at least, whatever you were doing, allow 5 minutes to pack up and get out. The 5 minutes is not rigid. It might be 30 seconds. But you identify your potential escape route and

you assess your position in relation to where the fire is burning and where you will go if there is a change in fire behaviour.

5 Because it was a flanking fire which was moving northward - it had burnt up to Moonlight Hollow Road and the fire was moving northwards - and it was a relatively narrow flame zone, the potential escape route was always to go back towards the
10 burnt area and onto the road and if necessary back into the burnt area, although on the road by the burnt area was a pretty safe location to go back to in terms of responding quickly.

15 So my feeling is, really, that was an afterthought to talk about the dead man zone. There just wasn't the standard practice of having someone located in the forest above the road to look for short distance spotting which was coming off those
20 large trees. And as soon as the wind, even a light wind, started to blow from the east there would be spotting over the road up the hill.

Fuels up there were heavy. The best chance you
25 have of putting them out quickly is to get them as soon as they start, which, if you are close by, you can often get there in time to give them a squirt, a single squirt with a knapsack or a rake with a rake hoe and that is the end of that
30 problem.

MR LASRY: Thank you, Mr Cheney. Thank you, your Worship. I have no further questions.

35 THE CORONER: Mr Cheney, if I could refer you to your report on fuel management, the page I have is page 19. It is under the heading "Future fuel management". The second paragraph under that heading, your opinion, you say:

40

"Fuel management should be carried out by persons or organisations who own the fuel."

45 Now, what do you see in the situation where, say, the manager of the fuel is less than conscientious, should we say, in managing the fuel? What sanction or what compulsion do you see

to a fuel manager to undertake what would be regarded as appropriate fuel management?

5 A. Basically it is the chief executive of that organisation who should be given the responsibility to manage the fuel and be responsible in part for the consequences of not managing it, which is a failed firefighting operation. Because unless they are fully aware of the difficulties that keeping a high fuel load
10 involves, then they are then in the best position both to seek out the appropriate equipment and the appropriate training for firefighters to undertake suppression based on their decision for fuel management.

15 There are many decisions which are basically either ecological decisions or business decisions where an organisation will say, "I will carry the risk of a high fuel load in this particular area
20 because that is part of my business". That is quite legitimate in my book. But the counterpart of that decision is that you are capable of undertaking suppression in that area effectively and efficiently.

25 Q. Who monitors that?

A. Well, basically I see the Emergency Services as a co-ordinating body for emergencies. I don't see the suppression of the average fire that we
30 get as always being an emergency. It is part of their management that they have to take. And so it is the head of that organisation who should be monitoring his branch that he ascertains being responsible for it.

35 I don't think any monitoring by a third party is going to be particularly effective.

40 THE CORONER: Thank you.

THE WITNESS: I hope that helps you, your Worship.

THE CORONER: You are excused, Mr Cheney.

45 THE WITNESS: Thank you.

MR LASRY: I was going to ask if Mr Cheney could

be finally excused. As far as we are concerned,
this represents the end of his evidence.

5 THE CORONER: Yes I agree with that. You are
excused, Mr Cheney.

<THE WITNESS WITHDREW

10 THE CORONER: What is the status of Mr Roche's
folder of documents?

MR LASRY: As far as I am aware, the folder of
documents has already been provided. Mr Craddock
didn't lie to your Worship. He did go straight
from here to the room at the DPP and has looked at
15 those parts of the transcript, Mr Roche's
transcript, that interest him. He has completed
that exercise.

As I said earlier, those documents will remain
20 here for the rest of the week. How we will
accommodate the issue that was raised by
Mr Whybrow I am not quite sure. We will deal with
that as we go. Mr Roche will need the material
for the better part of next week in order to
25 prepare for his evidence. As far as I am
concerned, everything that needed to be handed
over has been.

So far as the issue raised by Mr Pike is
30 concerned, I have in fact checked with Mr Woodward
over lunchtime. Any notes, if there are any notes
of discussions with Mr Roche, which I must say I
am not aware of, if there are any they are in the
folders. If they are not in the folders, they do
35 not exist. There are no other notes, as I am
informed. So if they are not there they don't
exist at all, as far as I am instructed.

MR PIKE: I take it that includes any notes from
40 Ms Drew which we have seen?

MR LASRY: Yes.

MR PIKE: I am grateful to my friend.
45

MR LASRY: That is my belief. I will certainly
specifically check that later in the afternoon.

That's as I understand the position now. So, your Worship, as far as I am aware, we will be ready to start with Mr Roche's evidence on Tuesday, 5 October.

5

THE CORONER: Were there any other matters? Yes, Mr Pike?

MR PIKE: Your Worship, there just remains those documents we discussed in relation to having copies but only available for counsel taking instructions. Can that be done shortly so we can take copies with us? The ones you have in front of you now. You may recall I mentioned this after my cross-examination of Mr Cheney. It was in the context, as discussed with Mr Lasry, if those who wanted copies would be in a position to give an undertaking.

THE CORONER: I am not sure which documents. I thought you meant Mr Roche's --

MR LASRY: May I assist? The documents which originally had parts removed which your Worship has made available, 28 July document and 4 June document. What is being sought is that those members of counsel who want to take copies be permitted to do so on the basis they give an undertaking to you that they won't disseminate the documents and will only use them for the purpose of obtaining instructions. For my part, I am content with that.

THE CORONER: That is the document that was MFI 93?

MR PIKE: And the other document as well, which I don't believe has actually been marked but relates to 4 June 2003. There are two sets of documents stapled together. For my part, I am certainly prepared to give such an undertaking as discussed with Mr Lasry and indicated just then. I hereby do so now.

THE CORONER: Mr Lasry knows what you are talking about and you do, Mr Pike. I will pass these down and you can certainly do as agreed with those

documents. They are the documents that I see as MFI 93.

5 MR LASRY: I wonder if we could formalise this so far as MFI 93, for present purposes, represents the unexpurgated notes of 4 June 2003 and 28 July 2003. so they can become one exhibit.

10 MR McCARTHY: Your Worship, I actually stood to seek that clarification. Nevertheless, I also give the undertaking that Mr Pike has given. I will take copies of the two documents in question, now MFI 93, on the basis that I use that copy to seek instructions from my client.

15

THE CORONER: Yes, you have that permission.

MR WHYBROW: Can I also indicate that I am prepared to, on receive of a copy of those 20 documents, only disseminate them for the purpose of taking instructions and getting legal advice. I can't give that undertaking obviously for Mr Walker. Can I indicate this, that unless he gives it to me I won't give him a copy of the 25 document. Thank you.

THE CORONER: Thank you, Mr Whybrow.

MR ARCHER: I don't rise to give an undertaking. 30 Mr Nicholson has been mentioned as a person who has been approached to provide some assistance to various parties in this inquest. On the last occasion, that is prior to the previous adjournment, there was some discussion about what 35 the process might be if it was the case that there was an intent to call Mr Nicholson as a witness.

I am not quite sure if the various re-arrangements of the timetable that have been had over the last 40 couple of months have affected the position. I think you gave some directions in relation to the service of notice of an intent to call Mr Nicholson if indeed that was the intent of any particular party.

45

THE CORONER: And to serve a report as well, if there was a report to be prepared by Mr Nicholson.

MR ARCHER: I don't have to hand, I apologise, the directions that you gave. I am wondering whether those who are present at the Bar table who may have formed an intent in relation to Mr Nicholson
5 can clarify what is going to happen in relation to him.

MR WHYBROW: I can indicate that my client and Mr Walker's client have been working closely with
10 Mr Nicholson, obviously to bring him up to speed. One of the limiting factors on the preparation of any report has been the availability of Mr Roche's documents. That bottleneck is now being overcome. He has had many other commitments. He has
15 indicated to me since being involved in this - words he quoted to me - he can't put it down. He is the only one at the moment, I am sure.

Your Worship indicated that there should be a filing
20 of any report by 1 October. Mr Nicholson is anxious about that date but he is working feverishly to have anything that we would like to put before us, who in turn then to put it before counsel assisting to comply with that date, which
25 I think is Friday week. That is certainly what he is working to. He can't give any guarantees at the moment because he hadn't seen a lot of the documents. We will certainly keep the parties appraised and we are aware of Mr Lasry's concerns
30 that any alternative evidence from Mr Roche be available to other parties, including your Worship and Mr Lasry, before Mr Roche gives evidence. We are working towards that. I can't say any more at this stage.

35 There is a hope that he may be somebody that we wish to call. I understand Mr Lasry has reserved the right to call all the witnesses, but that is our position. Speaking on behalf of myself and
40 Mr Walker, I can't provide my learned friend any more guidance than that, that we are trying to comply with the timetable that was already set.

THE CORONER: As soon as you know, Mr Whybrow, you
45 will let all the parties know, including myself?

MR WHYBROW: Absolutely.

MR LASRY: I just repeat, your Worship's attitude throughout this inquest has been that Mr Woodward and I would call all of the witnesses, so we obviously have to be given time to evaluate the material to decide whether we would call him, and obviously to have some time to prepare to take evidence from him. I don't suggest it is being put that we would not agree or we would object to any course whereby it was suggested, for example, that he be called and led through his evidence by Mr Whybrow and Mr Walker.

The present arrangements ought to apply. We ought to be given enough notice to make an evaluation of his evidence.

THE CORONER: I think you understand that, Mr Whybrow.

MR WHYBROW: I do, your Worship.

THE CORONER: Thank you. Unless there is anything further, we will adjourn now until 10 o'clock on Tuesday, 5 October.

**MATTER ADJOURNED AT 3.08PM UNTIL 10AM TUESDAY,
5 OCTOBER 2004**