

1 MS MORTIMER: If Your Honour pleases, I call David Scotts.
2 HIS HONOUR: Yes.
3 <DAVID JOSEPH SCOTTS, affirmed and examined:
4 MS MORTIMER: Take a seat, Mr Scotts. See if you can turn
5 around a bit, thank you. Your full name is David
6 Joseph Scotts, is that right?---Yes.
7 And your address is 14 Oceanview Crescent, Emerald Beach, in
8 the state of New South Wales?---40 Oceanview.
9 40?---Yes.
10 And you are an ecologist and a zoologist, is that
11 right?---Yes.
12 Now, if Your Honour pleases, there's been a slight mix-up
13 with the exhibits, so that because this is an important
14 issue, the identification, I am going to take Mr Scotts
15 through the identification orally, and I have discussed
16 that with my learned friends.
17 HIS HONOUR: Yes.
18 MS MORTIMER: Mr Scotts, do you have a copy of your affidavit
19 there?---Yes, I do.
20 Can I ask you to go to paragraph 3, please. And can I ask
21 you to look at this - just turn around and look at this
22 footage that you are going to see on the screen. Is
23 that the footage- would you like to see that
24 again?---No, that's fine.
25 Is that the footage that you are referring to in paragraph
26 3?---Yes, it is.
27 What is the animal that you see in that footage?---It's a
28 long footed potoroo.
29 And how confident are you that it is a long footed
30 potoroo?---100 per cent.
31 And what is it that makes you confident?---Well, it's the

1 general - having worked on the animal very closely for
2 a couple of years, it's the general appearance of the
3 animal. The location of the animal and knowing where
4 the animal came from in East Gippsland in the forest,
5 the hinterland forests. It's an animal that
6 potentially could be confused with a couple of species,
7 namely bandicoots and long nosed potoroos. It's
8 obviously to me not a bandicoot, just by the general
9 appearance, the body shape, the structure of the tail
10 in particular; whereas bandicoots have a very rat-like
11 tail, potoroos, the family of potoroos have a much more
12 solid and meaty tail, so that precludes the possibility
13 of it being a bandicoot. The other possibility was
14 the other species of potoroo, which is the long nosed
15 potoroo. But this species, the long footed potoroo,
16 and having worked on both species over a number of
17 years, I am very familiar with them and the way they
18 move through the forest. I might just make the point
19 that during my time in working on the animal over a
20 number of years I observe them in the wild frequently,
21 which I think is an important thing to do just to be
22 able to observe the animal in its natural habitat, to
23 become familiar with its general gait and appearance,
24 as opposed to just observing the animal in a trap, for
25 example. So the long footed potoroo has a very
26 distinctive body shape, an extremely long tail in
27 proportion to the body, as opposed to the long nosed
28 potoroo, the other species, and it's a much meatier and
29 solid tail. In fact they use the tail to carry
30 nesting material, so it's a very muscular tail, and so
31 I have no doubt based on those characters that that

1 particular individual was a long footed potoroo.
2 I am going to show you - and, Your Honour, that was Exhibit
3 SM2.
4 HIS HONOUR: Yes.
5 MS MORTIMER: I am going to show you another two still
6 images, Mr Scotts. Is that one of the still images to
7 which you refer in paragraph 3?---Yes, it is.
8 What is that animal?---That's also a long footed potoroo.
9 And I will show you the next still image. Now, are you able
10 to identify the animal from that still image?---Well,
11 that's a much - if I'd seen this photo in isolation I
12 would have had more difficulty in identifying it as a
13 long footed potoroo, but this photo was supplied to me
14 with the other ones, and I would be less sure that that
15 is a long footed potoroo. But I would be confident
16 that it is a potoroo; and I wouldn't be hundred per
17 cent sure that that's a long footed potoroo.
18 Is that because of the - - -?---Well, just the fact that the
19 animal is a fair way away, you can't really see the
20 structure of the tail particularly well. So it's
21 obviously not a bandicoot again, and I would say it's
22 100 per cent a potoroo. And given it's location at
23 Brown Mountain it would have to be a long footed
24 potoroo. But just based on morphological
25 characteristics, it would be difficult to be 100 per
26 cent sure it was a long footed potoroo.
27 Thank you. Now, Mr Scotts, I want you to look at paragraph
28 5 of your affidavit and I am going to show you another
29 piece of five second footage. Have you seen that
30 footage before?---Yes, I have.
31 Is that the footage you are referring to in paragraph

1 5?---Yes, it is.

2 What is the animal in that footage?---It's a long footed
3 potoroo.

4 And the reasons that you have explained to His Honour in
5 relation to the other identification, do they apply to
6 that one?---Yes, particularly this - that's just a
7 classic image of a long footed potoroo, that would be
8 100 per cent plus.

9 HIS HONOUR: Is that because it's beside you and it shows
10 the tail so clearly?---Particularly the tail and the
11 side. The general - it's got a much more solid
12 hindquarters, hunched posture compared to a long nosed
13 potoroo, but particularly the tail.

14 Yes.

15 MS MORTIMER: Your Honour, that was Exhibit ASL2. And one
16 still image, Mr Scotts. Have you seen that still
17 image before?---Yes, I have.

18 Is that the still image you refer to in paragraph 5?---Yes,
19 it is.

20 And what is that animal?---It's a long footed potoroo.

21 If Your Honour pleases, no further - now, with those matters,
22 Mr Scotts, is your affidavit true and correct?---Yes,
23 it is.

24 I will just get you to identify Exhibit DJS1. That's a full
25 copy of your curriculum vitae, is it?---Yes, it is.

26 I tender that, if Your Honour pleases.

27 HIS HONOUR: Yes.

28

29 #EXHIBIT 35 - Affidavit of David Joseph Scotts.

30

31 MS MORTIMER: If Your Honour pleases, I apologise, I had one

1 more question. Your Honour, there are two more
2 matters.

3 Mr Scotts, can you please look at the board of
4 photographs over there, and there is a photograph with
5 the heading "Long footed potoroo". Are you able to
6 tell His Honour whether that is a photograph of a long
7 footed potoroo?---Yes, I can. It is.

8 Now, the other question I need to ask you is this, Mr Scotts:
9 in late December - in 2009 were you approached by my
10 instructor, Ms Bleyer, about the possibility of you
11 providing an expert report on the long footed potoroo
12 for this matter?---Yes, I was.

13 Could you tell us what your response was to Ms Bleyer,
14 please?---Well, I was interested to be involved, but I
15 work as a sole trader environmental consultant, and the
16 time lines that were required in order to write a
17 comprehensive report I just couldn't meet at the time.

18 If Your Honour pleases.

19 HIS HONOUR: Yes. Mr Waller.

20 <CROSS-EXAMINED BY MR WALLER:

21 Mr Scotts, when did you say you were first asked to provide a
22 report on the long footed potoroo?---It would have been
23 mid-October, I think.

24 I see?---2009.

25 And when did you inform Ms Bleyer that you would be unable to
26 do that?---At the time of the request.

27 Now, you have exhibited, I take it, to your affidavit all of
28 the emails, the relevant emails between yourself and
29 Ms Bleyer where she asked you to make the
30 identification referred to in your affidavit?---That's
31 right.

1 Yes. And you would agree that nowhere in those emails is it
2 stated where the particular footage or images was taken
3 from in terms of location?---I was told initially, upon
4 request for my input, that it was from Mount Brown in
5 East Gippsland.

6 Right. Who told you that?---Vanessa Bleyer.

7 Right. You didn't actually make any independent
8 investigation to confirm that statement, did you?---No,
9 I didn't.

10 No. No further questions, Your Honour.

11 HIS HONOUR: Yes. Thank you, you are excused Mr Scotts.

12 <(THE WITNESS WITHDREW)

13 (Witness excused.)

14 MS MORTIMER: Mr Niall will take the next witness, if Your
15 Honour pleases.

16 HIS HONOUR: Yes.

17 MR NIALL: Your Honour, I am just seeking to recall
18 Dr Gillespie who Your Honour will recall has some
19 outstanding cross-examination.

20 HIS HONOUR: Yes.

21 MR NIALL: I call Dr Gillespie.

22 <GRAEME RICHARD GILLESPIE, recalled:

23 HIS HONOUR: Thank you, Dr Gillespie, just sit down again.

24 MR NIALL: I have no further questions, Your Honour.

25 HIS HONOUR: Yes. Mr Redd?

26 <CROSS-EXAMINED BY MR REDD:

27 Dr Gillespie, you recall when I asked you about the large
28 brown tree frog report, and in particular your
29 conclusion in that report that the proposed harvesting
30 would be in breach of the precautionary principle, you
31 said that your consideration of that issue was based

1 entirely on the issues concerning the frog species. I
2 take it the same is true of that conclusion in your
3 giant burrowing frog report?---Correct.

4 I also took you to the definition of the precautionary
5 principle and the code of practice for timber
6 production 2007, and you confirmed that that was not
7 the definition that you had directed yourself to for
8 the purpose of reaching your conclusion on that issue.
9 And I take it is that also true of your conclusion in
10 the giant burrowing frog report?---Correct.

11 I also asked you whether for the purpose of your large brown
12 tree frog report you took into account the new parks
13 and reserves that had been added to the Brown Mountain
14 area, and you said that you hadn't. I take it the
15 same is true of your conclusions in the giant burrowing
16 frog report?---Correct.

17 When you were re-examined when you were last here,
18 Dr Gillespie, you said that the available evidence
19 suggests that the giant burrowing frog breeds in
20 streams, and indeed I think on page 3 of your report
21 you also state that the giant burrowing frog breeds
22 mostly in small low order streams. That's correct,
23 isn't it?---Correct.

24 Yes. You would agree, therefore, that the 100 metre stream
25 side buffer that's proposed would provide adequate
26 protection to the giant burrowing frog for its breeding
27 purposes, would you agree with that?---No, I wouldn't.

28 You state, or you said actually in evidence, and I will just
29 get the reference, you said in your re-examination,
30 when you were being re-examined by Mr Niall, that
31 there's also studies from overseas that suggest that

1 300 metres is probably the minimum required to protect
2 the ecological requirements of stream breeding
3 amphibian communities. Do you remember that,
4 Dr Gillespie?---Yes.

5 The reference for that, Your Honour, is at transcript 324.

6 HIS HONOUR: Yes. But in this report he specifically
7 refers to a local study rather than overseas as the
8 basis for that.

9 MR REDD: Yes. Well, what I was going to suggest to
10 Dr Gillespie is that the studies - the overseas studies
11 that you mentioned in re-examination, and the local
12 study that you refer to I think on page 8 of your
13 report, it might be - - -

14 HIS HONOUR: He refers to both at page 8. I should
15 perhaps not have interjected, it's just that as I read
16 the written report, the reliance is both on the study
17 of O'Shannesy & Associates in '95 and Dr Gillespie
18 himself in 2000, and then the overseas multi species
19 studies that follow.

20 MR REDD: Yes.

21 HIS HONOUR: And that seems to me a more elaborate
22 statement than the transcript statement.

23 MR REDD: Yes, I accept that, Your Honour.

24 HIS HONOUR: Yes. So it's important, I think, that if you
25 are going to - if you take issue with this statement
26 that there's no biological or scientific significance
27 that he is aware of for the 100 metre buffer, then I
28 think you have got to confront the detail of the
29 statement.

30 MR REDD: Yes, Your Honour. All I was going to put, and
31 perhaps if I can put this to Dr Gillespie - - -

1 HIS HONOUR: Yes.

2 MR REDD: You rely on the studies that you have described on
3 what I have numbered page 8 of the report, and they all
4 refer to, those studies, don't they, amphibian
5 communities, is that correct?---The studies from
6 Australia are the work of myself, and the O'Shannesy &
7 Associates refers to one particular species. The work
8 of Penman et al in Southern New South Wales, was work
9 done specifically on the giant burrowing frog - - -
10 I'm sorry, just if I could clarify, the Penman et al work you
11 refer to, is that a paper that was in the Australian
12 Journal of Zoology?---Just bear with me for a sec, I
13 will check my reference. I believe it was in Wildlife
14 Research, the journal Wildlife Research.

15 Okay. Is it the case - - -

16 HIS HONOUR: Well, if I look at the bibliography, there are
17 two papers from Wildlife Research. I take it it's not
18 the meteorological effects paper, it's the second one,
19 is it, spatial ecology of the giant burrowing frog,
20 implications for conservation prescriptions, Wildlife
21 Research 56, is that the one?---I beg your pardon, Your
22 Honour?

23 See there are three papers, four papers instanced from
24 Penman, maybe more than that.

25 MR REDD: Indeed five, I think, Your Honour.

26 HIS HONOUR: Six. It's the third paper, is that right, or
27 not?---It's the 2008 B applied conservation management
28 of a threatened forest dependent frog species.

29 I see. So it's number 4?---That paper was somewhat of a
30 synthesis of work, and it also draws on the findings of
31 the previous paper, 2008 A, which is the spatial

1 ecology of the giant burrowing frog.

2 Well, the spatial ecology one is the one from Wildlife
3 Research, and the next one is from endangered species
4 research?---That's correct.

5 And you say that the second one took up the work referred to
6 in the first one, is that right?---That's correct.

7 All right. Yes, Mr Redd.

8 MR REDD: Yes, Dr Gillespie, do any of those studies directly
9 refer to that requirement in regards to the giant
10 burrowing frog per se?---The work of Penman
11 specifically addresses the 100 metre buffer as a
12 prescription, and specifically states that he does not
13 believe based on the ecology of that species that a 100
14 metre buffer would be adequate to conserve the
15 ecological requirements of that species. And the
16 evidence for that is that radio tracking studies that
17 he undertook in Southern New South Wales demonstrated
18 quite clearly that animals utilised habitat up to 250
19 metres away from the streams in which they breed.

20 Yes. Do you also agree that insofar as male giant burrowing
21 frogs are concerned, they disperse on average 99 metres
22 from their breeding sites, would you agree with that
23 proposition?---They disperse on average some 99 metres,
24 which means if you understand the statistics that if
25 you assume a normal distribution, that half of the -
26 or up to half of the records of those - that's based
27 on, would be over 100 metres from the stream side. So
28 one really needs to be looking at the maximum, not the
29 average.

30 I will just see if I have got copies of something before me,
31 just a moment, Dr Gillespie. I will just have handed

1 to you, Dr Gillespie, a paper, and we will hand up a
2 copy for Your Honour. Now, this paper bears the same
3 title as one of the papers you have referred to in your
4 bibliography, and Your Honour will note it's a Penman
5 paper, amongst others.

6 HIS HONOUR: Yes.

7 MR REDD: It's actually one of the papers that Your Honour
8 suggested that Dr Gillespie might have been referring
9 to. Well, it bears the same title, I should say.
10 But I notice it appears in a different journal. I am
11 wondering, Dr Gillespie, if you could assist as to
12 whether that is actually the same paper that you have
13 referred to in your bibliography of the same
14 title?---You are correct, that's a mistake on my part
15 in the bibliography.

16 I mean, I don't know, doctor, but it might well be that's
17 published in more than one place?---No, that won't be
18 the case.

19 Right?---That's a mistake on my part in compiling the
20 bibliography - - -

21 HIS HONOUR: Because the volume and the page numbers are
22 the same as you have attributed to Wildlife Research,
23 it must be the wrong - - - ?---I have put the wrong
24 journal title in the bibliography, that's my error.
25 Yes.

26 MR REDD: Yes, all right. I might for convenience now
27 tender that report.

28 HIS HONOUR: Yes.

29 MR NIALL: I object, Your Honour. Tendered to prove what
30 and it's for what purpose? In my submission the
31 witness has indicated that it's a reference in his

1 report, that this is a document, but in my submission
2 my learned friend should identify the purpose for which
3 he seeks to tender it.

4 HIS HONOUR: Yes. Well, Mr Redd - - -

5 MR REDD: Well, I am happy to draw Dr Gillespie's attention
6 to certain parts of it, and then we will see where we
7 end up, and I can tender it after that process, if Your
8 Honour pleases. I am going to put certain
9 propositions, two propositions from this report - - -

10 HIS HONOUR: Yes.

11 MR REDD: To Dr Gillespie.

12 HIS HONOUR: Yes. Well, at the moment Dr Gillespie has
13 agreed that this is one of the references to which he
14 has referred in his evidence, and more particularly, as
15 I understand it, it's the predecessor to the 2008 B
16 report which he says summarised the conclusions about
17 conservation management of the giant burrowing frog.
18 So it seems to me that you are entitled to - you are
19 entirely within your rights to pursue the report. I
20 think under the Evidence Act, if he were to entirely
21 adopt the report, then it just goes in. But if he
22 doesn't, there may be a question as to whether it goes
23 in for all purposes as the Evidence Act prima facie now
24 provides, or whether it goes in for some purposes only.

25 MR REDD: Yes, I appreciate that, Your Honour.

26 HIS HONOUR: I think all those matters have to be sorted
27 through. But for the moment just pursue the substance
28 of the dispute as you see fit.

29 MR REDD: Yes, yes, I will do that, Your Honour.

30 Now, Dr Gillespie, you accept, do you, that
31 there's no known breeding sites of this frog in Brown

1 Mountain Creek?---Yes.

2 Now, if I could take you to page 184 of this paper that's
3 being handed up to you. You will see on the
4 right-hand column, about halfway down, it's the third
5 paragraph down, there the authors indeed express some
6 limitations about the use of buffer zones that we have
7 been talking about, do you see that paragraph?---Yes.

8 And the paragraph beneath that, the authors state: "A more
9 suitable approach to managing this species where timber
10 production is also required is the specific reservation
11 of several known populations rather than attempts to
12 buffer key habitat features within these areas."

13 Pausing there, do you agree with that statement?---It
14 would depend.

15 Well, if you would like to clarify?---Okay. It would depend
16 on what you knew about what "known populations"
17 actually means.

18 Yes?---And I talk about in my report what information is
19 required to determine the significance of "known
20 populations". If you were to take that approach, if
21 we had enough information about the demography of this
22 species, its distribution and its habitat requirements,
23 then I think that approach would have some merit.

24 Yes?---In the absence of that knowledge it makes a lot of
25 presumptions.

26 Yes, all right. The next sentence in that paragraph reads:
27 "Specific reservation zones should be based on
28 biologically meaningful areas that encompass several
29 known breeding sites as well as the associated non
30 breeding habitat areas and not just an exclusion zone
31 of a predetermined area. Therefore the size of the

1 zone needed to be protected will vary between areas."
2 Do you agree with that statement?---In general, yes.
3 The next sentence reads: "For most populations needing
4 reservation, this would mean that additional surveys
5 are required to adequately design the protection zones
6 as this information is not currently available." Do
7 you agree with that statement?---Yes.
8 Then the authors state: "The remaining populations would be
9 protected with standard prescriptions designed to
10 protect water quality and stream side habitat but
11 recognising that most individuals will be subject to
12 disturbances." Do you agree with that statement?---I
13 don't agree with that statement because it doesn't
14 logically flow from the rest of his argument. I can
15 accept the meaning - the interpretation of that, that
16 it might be deemed in his opinion to be acceptable to
17 apply that prescription, but I don't accept that it
18 would constitute protection. If protection means the
19 viability of the populations, based on what we know and
20 indeed the work that Penman has done suggests that that
21 actually won't offer that protection. So I can't
22 agree with that statement.
23 Yes, all right. And I will take you to the final statement
24 - the final sentence there which really refers to the
25 one we have just been discussing, and it reads: "The
26 use of such an approach weighs up the desire of society
27 to have a timber resource whilst trying to maintain the
28 long-term conservation of these populations." Would
29 you accept that? Do you agree with that?---No, because
30 that's his and his co-author's opinion. I might add,
31 one of whom works for the forestry department in New

1 South Wales. And this paper presumably would have had
2 to go through an internal review process, I am not
3 quite sure what that would have been. So that's an
4 opinion, and it's not - it may very well achieve that,
5 but it doesn't necessarily achieve the conservation -
6 satisfy the conservation needs of the species.

7 Yes, all right. And the other aspect of this report that I
8 just wanted to clarify with you is on page 182.

9 HIS HONOUR: Just before we go to that, Dr Gillespie, are
10 there any specific reservation zones in East Gippsland
11 based on biologically meaningful areas encompassing
12 known breeding sites for this frog?---I would need -
13 the problem is, Your Honour, we don't know what a
14 biologically meaningful area is at this stage.

15 I see?---If we assume that a biologically meaningful area is
16 an area that's large enough to protect the needs of a
17 local population.

18 Yes?---And if we assume that that's a large area around a
19 known record.

20 Yes?---I would need to check, there may be some records in
21 national parks that might meet those criteria, but I
22 stress that it's still based on a number of assumptions
23 about the biological needs of the species for which we
24 don't necessarily have adequate information.

25 Well perhaps there's an even simpler question: are there any
26 specific reserves for this frog that you are aware
27 of?---I would have to check the forest management plan
28 to see if there are any SPZs that were established
29 specifically based on the species, I can't recall.

30 Yes. All right, thank you. Yes?

31 MR REDD: Thank you, Your Honour. Dr Gillespie, I mentioned

1 before I actually had this paper handed up to you that
2 male giant burrowing frogs disperse an average of 99
3 metres from their breeding sites, and I appreciate you
4 have given an answer to that and clarified it in your
5 view. But if I could just take you to page 182 of
6 this paper, and you will see there figure 4, having the
7 female and male activity areas from known breeding
8 sites, do you accept that that figure shows what I put
9 to you earlier, that male giant burrowing frogs
10 disperse an average of 99 metres from their breeding
11 sites?---Yes.

12 Your Honour, they are the parts - the parts that I have taken
13 Dr Gillespie to of this paper and sought his comment on
14 are the parts that I rely on, but I also notice Your
15 Honour said that Dr Gillespie has referred to the paper
16 for his own purposes, but I seek to tender it if
17 nothing else for a complete record, I suppose, of the
18 exchange both Dr Gillespie and I have just had, and
19 also it being a paper he has referred to in his own
20 report.

21 HIS HONOUR: Yes. What do you say, Mr Niall?

22 MR NIALL: In my submission it can be tendered to identify
23 the opinions adopted by the witness, for that purpose.
24 And also identify the opinions that he did not adopt
25 for the purposes of understanding the
26 cross-examination.

27 HIS HONOUR: Well - - -

28 MR NIALL: For that limited purpose.

29 HIS HONOUR: Dr Gillespie, as I understand it you have had
30 regard to the substance of the investigation, that is
31 what's under the headings "Materials" and "Methods" and

1 "Results", is that right?---I'm sorry, Your Honour, I
2 didn't quite understand the question.

3 In reaching your conclusions, have you had regard to what's
4 set out in the substance of the report, that is what's
5 under the headings "Materials" and "Methods", starting
6 on page 1, followed by "Results" starting at page 3 of
7 the copy, that is page 181 of the journal; is that
8 right?---That's correct, Your Honour.

9 Yes. And what about the discussion, is that something that
10 you had regard to or not?---That's correct, Your
11 Honour.

12 Yes. Yes, I am prepared to receive it absolutely.

13 MR REDD: If Your Honour pleases.

14

15 #EXHIBIT G - Paper of Penman.

16

17 HIS HONOUR: Dr Gillespie, do you say that the subsequent
18 paper is a necessary adjunct to me understanding what
19 Penman says? You know you have told me that there's a
20 follow-up paper that summarises the work, as it were.
21 Should I have both of them if I have one of them, or
22 not?---I believe so, Your Honour.

23 Yes. Yes, Mr Redd.

24 MR REDD: I can't say I can hand up to Your Honour a copy of
25 the other one.

26 HIS HONOUR: Well, it may not be able to be produced
27 immediately, but I think - he's really said that
28 Penman's work in 2008 is embraced by what he has
29 labelled as report A and report B, and it seems to me
30 that if you put in report A as a whole, and he has
31 relied on A and B, then logically B goes in for better

1 or worse as well.

2 MR REDD: I appreciate that.

3 HIS HONOUR: Unless - - -

4 MR REDD: We will locate a copy of it - - -

5 HIS HONOUR: If both sides agree that I shouldn't look at
6 B, or one side wants to argue about it, well then of
7 course we will look at it. But at the moment I am
8 inclined to think that they should both go in.

9 MR REDD: Yes, I appreciate that, Your Honour. It's just
10 that I can't hand you that right now, but we will
11 locate that article at a later time.

12 HIS HONOUR: Well, in the electronic world that may not be
13 too hard.

14 MR REDD: These things can happen, that's right, Your Honour.

15 Dr Gillespie, if you could turn to - I have
16 numbered it page 5 of your report, and just so that we
17 can see we are all reading on the same page, the top
18 dot point on that page reads "A national recovery plan
19 should be prepared". The part on this page I would
20 like to take you to is the second bottom dot point,
21 where you state that "Most of the known localities of
22 the giant burrowing frog in Victoria are outside of
23 protected areas such as national parks." Would you
24 agree that one reason why that may be so is that more
25 surveying is done outside of national parks than within
26 them?---Not necessarily. We had - we touched on this
27 in the last - the last time - - -

28 Yes, you are right?---Where I explained that those surveys,
29 whether they be pre logging surveys or the land
30 conservation council surveys, when they were conducted
31 were conducted independent of national park boundaries.

1 Yes, all right. If you could turn, please, Dr Gillespie, to
2 page 3 of your report, and again I will just identify
3 that. The top line of that page reads "The giant
4 burrowing frog breeds mostly in small low order
5 streams." The part that I would like to take you to
6 is under the subheading "Distribution", and the
7 second-last sentence there reads: "Because of the
8 paucity of records of the species from Victoria, it is
9 not clear whether or not the species shows any
10 preference for particular forest types or ecological
11 communities over others, but there are no records from
12 cleared land or regenerating clear felled habitats."
13 Now, if the witness could be shown volume 2 of the
14 agreed book. Dr Gillespie, if you could turn to page
15 600 of that volume, which should be the Flora and Fauna
16 Guarantee Action Statement for the giant burrowing
17 frog?---Yes.

18 Do you recognise that document, Dr Gillespie?---Yes.

19 If you could turn to the following page, 601, you will see in
20 the left-hand column there's a subheading "Reasons for
21 conservation status", and about halfway down, or I
22 suppose it looks like the third paragraph down, it
23 begins: "Gillespie (1990) considered the giant
24 burrowing frog may be adversely affected by current
25 silviculture practices and fuel reduction burning.
26 These activities may damage potential breeding sites,
27 diminish water quality and remove the litter and
28 groundcover layers which harbour the specie's food
29 items." And it's this next sentence that I draw your
30 attention to: "However, several individuals have
31 recently been recorded near Nowa Nowa in a forest area

1 with a history of disturbance from harvesting and fuel
2 reduction burning." Do you agree with that statement,
3 are you aware of that detection?---Yes.

4 And in your view is that not a detection from a cleared land
5 or regenerating clear felled habitat?---The area in
6 question is an area of forest which has a long history
7 of selective, one might call them selective logging
8 practices for timber harvesting and for firewood
9 collection. It's not an area that's been subject to
10 clear fell logging or modern forest management
11 practices per se.

12 Yes?---I made those records personally.

13 Yes?---I can't recall the specific wording I used in that
14 paper 20 years ago, and I am not quite sure whether
15 that's been paraphrased or not. But I know the area
16 in question, and it hasn't been clear felled as such.

17 Okay, thank you. If the witness could be shown Exhibit D.
18 So, Dr Gillespie, you should have before you a document
19 titled "Management of eucalypt regrowth in East
20 Gippsland, technical report number 8, pre thinning
21 vertebrate fauna survey", is that what you have before
22 you?---Yes.

23 That you have been handed? Do you recognise this document at
24 all?---No.

25 If I could just take you to - it's page numbered 1 up the
26 top. There's some sort of introductory pages at the
27 beginning, but then the first page that's numbered 1,
28 it sets out on that page the study sites of this
29 particular study, and you will see there's one called
30 Dyers Creek, being a 32 hectare site covered with 24
31 year old post clear felling regrowth, do you see

1 that?---Yes.

2 And on page number 2 there's Stare Track, and that site's
3 described as 19 year old post clear felling regrowth,
4 do you see that?---Yes.

5 Then if I could ask you to turn to page numbered 17 of that
6 report, you will see halfway down there's a reference
7 to giant burrowing frog. Do you have that before you,
8 Dr Gillespie, that page?---Yes.

9 And you will see there that it says "Recorded while
10 spotlighting along Stare Track in the thinning
11 plot"?---Yes.

12 And if you now turn to page number 21, the third paragraph
13 there reads - and you will have to forgive my
14 pronunciation of the Latin term, but "the record of *H*
15 *australiacus* is important because it represents the
16 15th only for the State, the first for regrowth forest,
17 and the most coastal (G Gillespie pers comm)." Do you
18 see that?---Yes.

19 Now, I think we are all of the understanding that *H*
20 *australiacus* is the giant burrowing frog,
21 correct?---That's right.

22 Now, isn't that an example of a giant burrowing frog being
23 detected in a regenerating clear felled habitat?---It
24 would appear so, yes.

25 So having now been taken to that, do you accept that it's not
26 accurate to state that there are no records from
27 cleared land or regenerating clear felled
28 habitats?---If we accept this report for what it is,
29 then I guess you could draw that conclusion.

30 Well, I appreciate this report is some years ago, in fact I
31 think the study time was 1988; the report itself is

1 dated July 1990. But the authors appear to suggest
2 that detection came from a personal communication from
3 you, though I take it you don't have any recollection
4 of that?---I don't have any precise recollection of
5 this report. I get consulted by various people to
6 identify photographs and records of amphibians and
7 reptiles at various times, and I am certainly aware of
8 the authors on this list, and they may very well have
9 approached me at the time.

10 Yes?---I would suggest that this record probably appeared
11 after the publication that I am quoted in that action
12 statement, which was published in 1990.

13 Yes, I understand. And - - -

14 HIS HONOUR: Well - - -

15 MR REDD: I'm sorry, Your Honour.

16 HIS HONOUR: Does that mean - what do you believe that
17 statement's based on? Something else that you
18 published or on something that you said personally, or
19 - - -?---The statement in the action statement is based
20 on a paper that I wrote and published in 1990.

21 Yes?---This technical report appears to have been produced in
22 July 1990.

23 Yes?---And I am suggesting that the record of the giant
24 burrowing frog reported in this report probably was
25 recorded after that paper that I had written was
26 finished.

27 Yes, I see.

28 MR REDD: I am going to hand up to you a paper, one of your
29 papers, Dr Gillespie.

30 HIS HONOUR: I wonder if I can see that last exhibit? I
31 don't have a working copy other than the exhibit that

1 was tendered, Mr Redd, unless you have a spare copy
2 that I could - - -

3 MR REDD: I will hand up a copy, Your Honour, that can be a
4 working copy.

5 HIS HONOUR: Yes. Thanks very much.

6 MR REDD: Now, Dr Gillespie, do you recognise the document
7 that's just been handed up to you?---Yes.
8 And that's a report from you published in 1990, is that
9 right?---That's correct.

10 Now, do you think that is the report of yours that's referred
11 to in the action statement?---I believe so, yes.
12 Okay. If you could turn to page 147 of that report, you
13 will see in the right-hand column a paragraph numbered
14 9?---Yes.

15 It says: "East Gippsland 5 kilometres south of Mount
16 Puggaree, one individual released was observed crossing
17 an old logging track along a ridge at night.
18 Vegetation at this site was approximately 20 year old
19 regrowth forest"?---Yes, I know where you are going -
20 this will be the same record. I stand - - -

21 Yes, I was going to clarify that?---I stand corrected.

22 It is the same record, okay?---My apologies, it's 20 years -
23 - -

24 No, I appreciate that, but I just wanted to chase that down
25 the burrow, as it were. So you have explained that -
26 yes, that this report is one of yours, it is in your
27 view the report referred to in the action statement,
28 and I will tender this report.

29

30 #EXHIBIT H - 00/00/1990 research report of Dr Gillespie
31 relating to the giant burrowing frog.

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MR REDD: Dr Gillespie, I am just going to put to you some propositions. Do you accept that taking into account the surrounding reserves around Brown Mountain, and the proposed stream side buffer, and the fact that there have been no detections of the giant burrowing frogs in any of these coupes, bearing all that in mind, would you agree that the proposed harvesting in these coupes does not present a serious or irreversible threat to this particular species?---Bearing in mind my argument that the lack of detection of the species is virtually meaningless in the context of what we know about this species in the survey work that's been done for it, and bearing in mind that we know what we - the little we know about its biological requirements and therefore the efficacy of the current reserve system to provide adequate protection for the species, then I would not want to make that assumption that the - I forget your exact wording, but that the logging as proposed would not be in conflict with that species.

Do you not accept that bearing those matters in mind, and I will just repeat them for you again, bearing in mind the surrounding reserves, the stream side buffer, and the fact there have been no detections of the giant burrowing frog in any of these coupes, that the proposed harvesting is a proportionate response to the potential threat to the giant burrowing frog, would you agree with that?

HIS HONOUR: That is the proposed harvesting with 100 metre buffer on each side of the stream in particular?

MR REDD: Yes, that's so, Your Honour. Would you agree that

1 that's a proportionate response to the threat that the
2 harvesting could pose to the giant burrowing frogs,
3 would you accept that?---Sorry, could you clarify what
4 you mean by a proportionate response?

5 Well, do you accept at all that in talking about the
6 precautionary principle and its application, that it
7 involves a balancing of various factors, do you accept
8 that?---Yes.

9 And do you accept that it's relevant in applying the
10 precautionary principle that measures should be adopted
11 that are proportionate to the potential threats, do you
12 agree with that?---Yes, I agree with that statement in
13 principle.

14 Yes.

15 HIS HONOUR: And in assessing the threat and that notion of
16 proportionality, on one view you have regard to the
17 gravity of the harm and the likelihood of the harm; in
18 other words, if you have a threat of very serious harm
19 it's likelihood may not have to be as high as if you
20 have a high likelihood of a lesser harm; do you
21 understand what I am saying?---Yes.

22 So that rolled up in that notion of threat there are at least
23 those two components, the notion of the gravity of the
24 harm that's possible, and the likelihood of the harm.
25 Does that make sense?---Yes.

26 And then what you have been asked by counsel is accepting
27 that you can take those matters into account in looking
28 at the threat, what you would expect is a proportionate
29 response?---To agree with that statement one would have
30 to be in a position to evaluate the magnitude of the
31 threat.

1 Yes?---And the effectiveness of the measures being put in
2 place to ameliorate that threat.

3 Yes?---And neither of those pieces of information are
4 currently available for this species.

5 I see. So in principle you agree that that's what you would
6 do, but you say the current extent of scientific
7 knowledge about this species doesn't enable that to be
8 done in a meaningful way?---I go further than that in
9 saying that the weight of scientific knowledge on this
10 particular species suggests that in the case of the
11 specific measures being proposed for the coupes, ie,
12 the 100 metre buffer, are not adequate.

13 I see.

14 MR REDD: And I am putting to you that the 100 metre buffer
15 is a proportionate response in light of the threat
16 posed by the harvesting to the giant burrowing frog, do
17 you agree with that?---Based on the scientific
18 evidence, I can't see any relationship between the 100
19 metre buffer and the biological requirements of the
20 species.

21 Do you accept that the 100 metre buffer provides a degree of
22 protection for the giant burrowing frog?---Yes.

23 I have no further questions for this witness.

24 HIS HONOUR: Yes, thank you, Mr Redd.

25 <RE-EXAMINED BY MR NIALL>

26 Dr Gillespie, you were asked some questions about the
27 technical report and the sighting of the giant
28 burrowing frog to which it refers at page 21. Do you
29 have a copy of page 21 there?---Yes.

30 And it says that the record of the species is important
31 "because it represents the 15th only for the State, the

1 first for regrowth forest, and the most coastal."
2 What significance, if any, is there for the statement
3 that it's "the first for regrowth forest"?---Well, to
4 the best of my knowledge it's the only record from
5 regrowth forest in the specie's known range, to the
6 best of my knowledge.

7 And from that amount of information which you have just
8 referred to, namely that it's the first and only
9 example in regrowth forest, what conclusions are you
10 able to draw from that fact, if any, in relation to
11 this species and its habitat?---I think that the weight
12 of evidence available, not just based on the records
13 from Victoria but the research that's been done by
14 Penman in New South Wales, suggests that the species is
15 a forest-dependent species, that there are a range of
16 attributes of the forest environment that it's
17 dependent on. One record found crossing an old
18 logging road doesn't imply that the species is able to
19 thrive or is indeed in any way dependent on regrowth
20 forest. We know nothing about the local population of
21 that area. There may indeed be remanent populations
22 in that area that were utilising non regenerating
23 forest, we just don't know. If one finds a koala
24 crossing a highway in an urban environment it doesn't
25 mean that that constitutes important habitat for that
26 species. In my other statements around the habitat
27 requirements of this species I have been cautious to go
28 too far in saying what its specific forest habitat
29 requirements are, because it is actually found in a
30 range of different forest habitats. But I think in
31 saying that it is a forest-dependent species is fairly

1 well supported.

2 Now, you were asked some questions about balancing gravity of
3 consequences and likelihood of consequences occurring,
4 and in answer to a question I think from His Honour you
5 indicated or made some observations about the current
6 state of scientific knowledge on those two matters.
7 What's the level of research on the - what's the level
8 of funding research on the presence of the giant
9 burrowing frog in the Gippsland area?---Do you mean
10 currently or in total?

11 Well, currently?---Currently zero.

12 And over the last decade?---Zero.

13 Now, you were asked some questions about the report of Penman
14 and others the "Spatial ecology" report, do you have a
15 copy of that?---Yes.

16 And you were asked some questions about page 184, on the
17 second column, and you were asked some questions -
18 again a question from His Honour, I think, about the
19 existence of specific reservations of several known
20 populations, and you indicated that, or made some
21 reference to the management plan. Could Dr Gillespie
22 be shown volume 1 at page 412, please, of the agreed
23 bundle. Volume 1, page 412. Perhaps if you just go
24 firstly to - if you hold that page open and just go to
25 369, I will just show the start of this document.
26 That's a document entitled "Forest management plan for
27 East Gippsland". Are you familiar with that document,
28 Dr Gillespie?---Yes.

29 And could you go to 412, and there's a reference in the box
30 to the conservation guideline, reptiles and
31 amphibians?---Yes.

1 And three paragraphs down there's a reference to the giant
2 burrowing frog. Could you just read that paragraph
3 down, and the next paragraph, to yourself,
4 please?---Right.

5 Firstly, there's a reference on line 3 to a first order
6 stream. Are you able to - are you familiar with that
7 phrase "First order stream"?---Yes.

8 And is Brown Mountain Creek a first order stream?---Brown
9 Mountain Creek is at least a second order stream, in my
10 opinion.

11 And how does that fit within the structure of first order and
12 second order stream?---A first order stream would be an
13 upstream tributary of a second order stream.

14 And are you able to tell His Honour how many sites, looking
15 at that guideline, have generated a special protection
16 zone of 50 hectares?---I am not sure exactly how many
17 sites in East Gippsland have generated that zone that
18 are in forest management areas, that may be captured
19 elsewhere in this document.

20 Do you have any knowledge of the order of magnitude of what
21 they might be?---Of the?

22 Number of special protection zones created in accordance with
23 that prescription?---Well, given that there are
24 somewhere between 20 and 30 records of giant burrowing
25 frogs in Victoria, some of which will be in national
26 parks, it's going to be somewhere in the order of less
27 than 20, I would imagine. I would need to check those
28 specific records. So there's only 21 separate
29 geographic localities in this state that have been
30 confirmed for the giant burrowing frog, and I am aware
31 that some of those records are in national parks. So

1 we are talking no more than about 15 records that would
2 have been in state forest.

3 Yes?---Now, some of those records will have probably ended up
4 within - by default - in other special protection zones
5 for other values, so discriminating which ones are
6 specifically set aside for giant burrowing frogs would
7 take some work.

8 All right. They are the only questions I have in
9 re-examination. Is the number of special protection
10 zones created for the giant burrowing frog under this
11 prescription publicly available?---There should be a
12 record of appendices or information for the forest
13 management plan that underpins the values of each
14 special protection zone that's been created.

15 And outside of that, are they recorded in any publicly
16 accessible place?---The special protection zone values?
17 Yes?---Not that I am aware of.

18 They are the only questions I have, if Your Honour pleases.

19 HIS HONOUR: Dr Gillespie, when Mr Redd asked you about
20 what should be regarded as a proportionate response,
21 and in particular whether the 100 metre buffer should
22 be regarded as a proportionate response, do I take it
23 that your answers proceed in part on the basis of the
24 opinion you express that it's more likely than not that
25 the giant burrowing frog is present in these coupes; is
26 that right or not?---It's based on the opinion that the
27 species is more likely than not present in this area.

28 Yes, in your view it's not merely a possibility, you say that
29 although they haven't been detected, as I understand
30 it, in your report, what you say is that there's
31 reference to 60 per cent, is that right?---That's

1 correct.

2 All right. Now, the other thing I just wanted to clarify
3 with you is that one of the matters that was put to you
4 specifically in relation to proportionate response was
5 surrounding reserves, and I wonder if you could look at
6 map 12, if we can find a copy of the maps?---Yes, Your
7 Honour.

8 Do you see that Brown Mountain Creek runs down the bottom of
9 a valley basically from south to north. There's a
10 ridge on the eastern side of that valley running
11 towards the nor-nor-west, and there's a ridge on the
12 western side of that valley running almost north-south
13 in terms of the centrally located coupes, and the
14 centrally located coupes if you like sit across the
15 watershed of the valley, do you see that?---Yes, Your
16 Honour.

17 Yes. Well, if you look at the topography, what do you say
18 about the significance of the surrounding reserves in
19 terms of proportionate response to frog habitat within
20 the coupes?---If we assume that the probability of the
21 frog occurring in the adjacent forest areas is similar
22 to it occurring in the coupes, then the proportionality
23 is quite high.

24 I see. So that means that it's quite likely that there are
25 frogs to the west, is that right, in the reserves to
26 the west, is that what you are saying?---Yes.

27 Yes. Yes, thank you. Is there anything arising out of
28 that?

29 MR REDD: No, Your Honour.

30 HIS HONOUR: Thank you, Dr Gillespie, you are excused.

31 Thank you for coming back.

1 <(THE WITNESS WITHDREW)
2 (Witness excused.)
3 MS MORTIMER: Your Honour, would it be convenient to have a
4 short break before we start the next witness?
5 HIS HONOUR: Yes.
6 (Short adjournment)
7 HIS HONOUR: Yes, Ms Mortimer?
8 MS MORTIMER: If Your Honour pleases, my learned friend
9 Ms Knowles will take the next witness.
10 HIS HONOUR: Yes.
11 MS KNOWLES: If Your Honour pleases, I call Mr Robert
12 McCormack.
13 <ROBERT BROWNING McCORMACK, sworn and examined:
14 HIS HONOUR: Yes, Ms Knowles.
15 MS KNOWLES: Your name is Robert McCormack?---Correct.
16 And your address is 5 Cook Drive in Swan Bay in
17 Queensland?---New South Wales.
18 New South Wales?---Yes.
19 If I can provide you with a copy of a document.
20 Mr McCormack, have you seen this before?---Yes, I have.
21 And what is it?---This was the original instructions I was
22 given.
23 And who were you given them by?---By Bleyer Lawyers.
24 Yes. And is the date of the document 26 October
25 2009?---That's right, yes.
26 Your Honour, I tender that document.
27 HIS HONOUR: Yes.
28
29 #EXHIBIT 36 - Instructions to Mr McCormack.
30
31 MS KNOWLES: And, Mr McCormack, if I could provide you with a

1 copy of another document. Is this your report,
2 Mr McCormack?---It is, yes.
3 And it's dated 7 December 2009?---That's correct.
4 And was it prepared in response to your letter of
5 instructions?---It was, yes.
6 To the extent that your report contains matters of fact, in
7 your opinion are those matters of fact
8 true?---Certainly, yes.
9 And to the extent to which the report contains opinions, are
10 they your opinions?---They are, yes.
11 And are they honestly held?---They are, yes.
12 Your Honour, I tender that report.
13
14 #EXHIBIT 37 - Report of Mr McCormack dated 07/12/2009.
15
16 MS KNOWLES: Mr McCormack, also in this proceeding, did you
17 recently prepare a document - I provide you with
18 another document?---Yes, I did prepare this document.
19 And did you prepare this to describe the morphological
20 differences between three species?---Yes, I did, it was
21 just a quicky document, and if I had more time I would
22 have done it better, and I certainly would have put
23 page numbers and things on it. But yes, it's just a
24 document to help distinguish between the three species
25 that we may be talking about.
26 And what are those three species?---Well, we have Euastacus
27 diversus, Euastacus bidawalus, and a new species of
28 crayfish which is just a new species, Bonang taxon,
29 whatever you like to call it.
30 And Euastacus diversus, what is the common name for
31 that?---The Orbest spiny crayfish.

1 And, Mr McCormack, the document is undated, when did you
2 create this document?---Last week.

3 Last week. Your Honour, I tender that document.

4

5 #EXHIBIT 38 - Morphological comparison between different
6 crayfish species.

7 MS KNOWLES: And, Mr McCormack, if I can ask you to direct
8 your attention to this board. In the bottom right you
9 will see two photos of two species. Can you see those
10 photos?---I can, yes.

11 And can you identify the photo in the very bottom right?---In
12 the bottom right, that's the new taxon, so that's the
13 new one we found in the Bonang catchment of Brown
14 Mountain Creek or - - -

15 Yes. And the one above that to the left?---That's the
16 Orbost spiny crayfish, the Euastacus diversus.

17 Thank you.

18 <CROSS-EXAMINED BY MR WALLER:

19 Mr McCormack, your instructions asked you to make enquiries
20 about the Orbost spiny crayfish, didn't they?---They
21 did.

22 And you were not able to find any evidence of the Orbost
23 spiny crayfish in Brown Mountain Creek, were
24 you?---That's correct.

25 But you were able to find, you say, evidence of another
26 crayfish as yet unclassified, is that the
27 position?---Yes, it doesn't formally have a name, but
28 it was a different species to the Orbost spiny
29 crayfish, yes.

30 And this new form of crayfish or taxon, you have identified
31 it as a stream crayfish, is that the position?---Yes.

1 It does not construct intricate burrows throughout the
2 surrounding land, does it?---No.

3 Yes. In preparing your report and considering the position
4 vis-a-vis the Orbost spiny crayfish, did you have
5 regard to the DSE action statement issued in relation
6 to the Orbost spiny crayfish?---I have read the DSE
7 action statement, yes.

8 Could I ask you to be shown a copy of it. It's in volume 2
9 of the agreed book of documents. Yes, it's on page
10 566 of that volume?---Yes, got it.

11 *Euastacus diversus*. Were you involved in any way in the
12 preparation of this action statement?---No, I wasn't.

13 Have you published anything in relation to the Orbost spiny
14 crayfish?---No, I don't think so.

15 All right. And your training is - your formal training is
16 as an engineer, isn't it?---That's correct, yes.

17 But you have developed over the last years or so an interest
18 in crayfish?---Yes.

19 And it's that interest that caused you - I withdraw that.

20 If I could draw your attention to page 3 of the action
21 statement, and in particular it's on page 568 of the
22 agreed book, and if I could draw your attention to the
23 heading "Wider conservation issues"; do you see
24 that?---Yes, I do.

25 There's a statement there which says "The protection of
26 streams inhabited by Orbost spiny crayfish will also
27 benefit other resident species of aquatic flora and
28 fauna." You have got no reason to doubt that
29 statement, have you?---Not offhand, no.

30 And it goes on to talk about various fish species which
31 inhabit catchments in which the Orbost spiny crayfish

1 occurs. And then in the next paragraph it states that
2 "Protection of the riparian strip along streams
3 inhabited by the Orbost spiny crayfish will also
4 provide habitat for a number of rare or threatened
5 birds and mammals, including the spot-tailed quoll, the
6 long footed potoroo, the powerful owl and the sooty
7 owl." Again, you take no issue with that statement,
8 do you?---Not at all, no.

9 But in relation to the Orbost spiny crayfish, if it were
10 present you agree that a 100 metre stream side buffer
11 would afford a protection to that creature?---It may
12 do, yes.

13 And you understood in reading this action statement that the
14 action statement in fact provided - and this is dealt
15 with under the heading "Previous management action",
16 subheading "Habitat protection", talks about a number
17 of measures to provide protection for these waterways.
18 And I want to draw your attention to the second of
19 them: "Secondly, many of the waterways in the
20 suspected range of the crayfish support areas of rain
21 forest, which, with the addition of a buffer of
22 eucalypt forest, is protected from timber harvesting by
23 prescription." And then further comment is made about
24 other waterways which flow through national parks and
25 reserves, and then the next paragraph is the paragraph
26 I want to draw your attention to: "In state forest
27 sites of Orbost spiny crayfish and forest extending
28 approximately 100 metres from each bank of the
29 watercourse, for 1 kilometre upstream and 1 kilometre
30 downstream of those sites are included in the special
31 protection zone." You understood that this action

1 statement, at least in terms of the previous management
2 action, was focused on the creation of 100 metre buffer
3 for one kilometre upstream and downstream of the sites
4 of where an Orbost spiny crayfish had been
5 detected?---Sorry, what was the question?
6 You understood that the previous management action detailed
7 in the statement essentially - - -?---Okay, yes.
8 Focused on the creation of 100 metre buffer zone?---Yes.
9 Yes. And in terms of the intended management action,
10 there's systematic survey that's referred to, and then
11 over the page: "Habitat protection", again it refers
12 to: "Linear reserves consisting of an undisturbed
13 buffer of approximately 100 metres on each bank of the
14 stream for one kilometre upstream and downstream of the
15 detection site will be established at all sites on
16 public land where the Orbost spiny crayfish are
17 recorded." That proposed action under the statement
18 mirrors, as it were, the action that we have just
19 looked at previously?---Yes.
20 Now, when you conducted your analysis, I take it you were
21 focused primarily on finding the Orbost spiny
22 crayfish?---Correct, yes.
23 You didn't go out there looking for a new taxon?---No.
24 No. And when you went out there, where were you asked to go
25 in particular?---There was two coupes were the main
26 ones we were requested to look at, and that's I think
27 the creek, the Brown Mountain Creek actually ran
28 between these two coupes, so that was the main area we
29 were looking at. But I think there were actually four
30 coupes mentioned.
31 Yes?---In the original document.

1 And I take it you are familiar with the area we are talking
2 about?---Yes, yes. Not very familiar, but I certainly
3 know the area, yes.

4 Was this your first on-site visit to that area?---To that
5 area where that creek was, yes. I had surveyed the
6 creek further down towards Bonang, but up there in this
7 coupe area, that's the first time I'd ever been up into
8 that, those higher headwaters.

9 When had you conducted the previous survey you just
10 mentioned?---We'd been conducting surveys in the region
11 since 2006.

12 And those surveys I take it didn't reveal the existence of
13 the new taxon?---Not in that area, no.

14 No. In fact not in any area, is that the position?---No, we
15 actually found in Result Creek, we found species which
16 we thought could have been a new taxon, but we didn't
17 have enough specimens to make a good comparison. To
18 actually describe the species and know if it's
19 different, you naturally need to get a number of these
20 animals to look at. You just can't get one or two and
21 make a decision on those.

22 What year was it that you found those examples?---I don't
23 know for sure, but possibly 2007.

24 And when you found those examples, did you alert the DSE to
25 your find?---No.

26 HIS HONOUR: Where is Result Creek?---On the Gap Road. I
27 think it is actually shown on one of those maps.
28 Yes.

29 MR WALLER: Could I ask you to look at the book of maps, and
30 in particular could I ask you to look at map number
31 12?---Is that page 12?

1 Yes, page 12, sorry?---Yes, okay.

2 That's a map that details roads, contours and

3 hydrology?---Sure. Well, I can actually point out on

4 this one where Result Creek is.

5 Yes, it's actually mentioned, isn't it? It's in blue "Result

6 Creek"?---Yes.

7 And that was the area, was it, where you'd previously found

8 - - - ?---We'd previously found the new taxon, yes.

9 Right. Now, is it the position that your site survey and

10 investigations that you conducted for the purposes of

11 this proceeding focused exclusively on the stream that

12 runs down the middle of coupe 26 and between coupes 15

13 and 19?---That's correct, yes.

14 And how did you describe that creek? By name?---Well, it's

15 an unnamed water course, but you can call it the Brown

16 Mountain Creek or tributary of the Bonang River.

17 Right. But when we see references in your report, or if we

18 are to use the expression "Brown Mountain Creek", you

19 would understand that to refer simply to that creek - -

20 -?---Certainly.

21 That runs through those coupes?---Yes.

22 And do you see after it passes through - or while it's

23 passing between coupes 15 and 19, the stream divides

24 into two tributaries?---Yes.

25 Are they both - are they still part of Brown Mountain

26 Creek?---Yes.

27 But a separate tributary to the one - - -?---Yes, I mean, you

28 could call it, you know, east arm or west arm or

29 something like that, but - - -

30 Yes. And you understood that the east arm of Brown Mountain

31 Creek at that point formed the boundary of another

1 logging coupe known as coupe 20?---Possibly, but coupe
2 20 is not shown on this one.

3 Yes. Were you asked to make any findings or do anything in
4 respect of coupe 20?---Possibly.

5 Possibly asked or you possibly did?---Well, we were asked to
6 look at the area. Unfortunately the maps I was given
7 to look at didn't have any GPS locations, or there was
8 no actual definition of this area. So where you are
9 saying coupe 19 is, or coupe 20 is, we had no physical
10 means of actually determining where those coupes are.

11 I see. So when you located a particular taxon or crayfish,
12 you were not able to say whether it was in fact
13 adjacent to a particular coupe?---No. But we took a
14 GPS location of the site, so we know exactly where it
15 came from.

16 Right. You know exactly where it came from, you just don't
17 know that position relative to the coupes?---No, I
18 can't tell you that with accuracy unless we have a GPS
19 location on the coupes. We say that it's, you know,
20 20 metres in this way or 20 metres outside sort of
21 thing.

22 Now, your report contains as its back cover a full page
23 colour photo of a burnt out coupe?---Certainly, yes.

24 Who provided you with that photo?---That's my photo, I took
25 it.

26 Yes. And do you know where that photo was taken from
27 relative to the map we are looking at?---No, but I can
28 show you on my map.

29 Right. Well, by your map you are now talking about the maps
30 that are at the end of your report?---Sure, yes.

31 Which page did you have in mind?---Well, if we go to page 45,

1 and also point of interest POI 368. So that's roughly
2 where that photo was taken.

3 Yes. So between those two water bodies?---Yes.

4 Is that the position? And then - - -?---Yes.

5 And that coupe, that coupe that you - or that area where you
6 took that photograph that appears on the back cover,
7 that's an area that's also close to the Brown Mountain
8 stream, isn't it, or the Brown Mountain Creek?---Well,
9 that's up above it, that's looking down to the creek.
10 So the creek is down the base of that.

11 So your photograph is directed towards the creek?---Yes.

12 Yes. And did you walk through that coupe, the burnt out
13 coupe, to reach the creek?---We did, yes.

14 Yes. And was any buffer retained at the edge of the timber
15 harvesting on the side of the creek?---There was, yes.

16 And were you able to measure how large that buffer was?---No,
17 I didn't.

18 Yes. Did you search for crayfish in the creek adjacent to
19 the burnt out coupe?---That's a good question. I
20 would say, yes, we did.

21 And what do you say "yes" based on?---Well, it's a bit hard,
22 because we did two surveys, one where we came in
23 through the burnt out side, which are the most northern
24 part of the creek we looked at and survey, but then
25 when we did the most southern survey we actually came
26 in on the other side, on Legges Road, so we actually
27 can't see where the burnt out section was from there.
28 But roughly by looking at it, yes, it looks roughly
29 opposite that burnt out section.

30 I just want to ask you about that. Looking at map number 12
31 that I gave you to look at?---Yes.

1 You will see that coupe 26 is the northern most coupe?---Yes.
2 And coupe 20, or the burnt out coupe, is south of coupe 19,
3 isn't it?---Seems to be, yes, but it's not marked on
4 this map.

5 No, it's not. But if you assume that coupe 20 - - -
6 HIS HONOUR: Is it south of coupe 19 but contained within
7 the watercourses that are marked there, so it's in a
8 triangular area south of coupe 19, if I can put it that
9 way?---Yes.

10 MR WALLER: You can assume that it's bounded by the two
11 watercourses and Errinundra Road to the east?---Okay.
12 Well then probably the survey - we didn't, looking at
13 that, we probably surveyed between coupe 19 and coupe
14 15.

15 Right.

16 HIS HONOUR: Can you see that the main stream along the
17 bottom of the valley runs parallel with the eastern
18 boundary of coupe 15, but if you - I have got a plan -
19 - -?---Yes, so looking at it here, I haven't surveyed
20 opposite the burnt out section. We walked up - we
21 walked further north of that burnt out section.

22 Right?---And surveyed in there.

23 Right. Well go back to map 11, page 11, can you see the
24 dark blue triangular coupe south of 19?---M'mm.
25 That's coupe 20, and from your previous evidence I take that
26 to be what you photographed?---Yes. So that's where
27 we parked the car there, and walked down through the
28 base of 19 to the creek section between 19 and 15.
29 And that's where we surveyed in there.

30 All right.

31 MR WALLER: Right?---So we actually crossed the creek which

1 is the southern boundary of 19 with the little creek
2 shown there, but that was a dry watercourse.

3 Right.

4 HIS HONOUR: Yes.

5 MR WALLER: But the creek - yes. So is it the case that
6 all of your surveying efforts which are the subject of
7 the work you did for this proceeding, were located
8 between 15 and 19 only?---No, and then another section
9 further - - -

10 Yes?---Up, which we talking north now.

11 Yes?---Which would be probably getting towards 26.

12 Yes. Now, I want to ask you about that. Are you able to
13 say whether that survey activity occurred in coupe 26
14 or south of coupe 26?---I could tell you exactly if you
15 had GPS coordinates for 26 to tell us what the
16 boundaries are, but here all I can do is sort of
17 estimate from the two maps we have got, and roughly it
18 looks like we are on just inside and outside the most
19 southern boundary of 26 where it crosses the creek.
20 So we are on that boundary sort of just inside and just
21 outside.

22 Right.

23 HIS HONOUR: If we look at your report, where are those GPS
24 coordinates, Mr McCormack?---If we go to page 44 of my
25 report.

26 Yes?---The most northern one. So point of interest 006, for
27 example.

28 Yes, and where do I - - -

29 MR WALLER: And then the GPS coordinates are all listed, are
30 they, starting at page 39?

31 HIS HONOUR: Yes, I follow.

1 WITNESS: A whole bunch of - - -

2 HIS HONOUR: Yes, thank you, Mr Waller.

3 MR WALLER: But you are not able to tell us, sitting there

4 today, precisely whether your survey effort was within

5 or without coupe 26?---Only by looking at the maps, and

6 I'd say it's both within and without.

7 Right. Now could I ask you to look at map 11, please. Do

8 you see the base of coupe 26?---Yes.

9 And you see that there's some blue tucked into that

10 triangular indentation?---Yes.

11 And moving down southward as well, indicating that the area

12 had been logged between 1990 and 1999?---Yes, I can see

13 that.

14 Now, you found evidence of the new taxon at that northern

15 site, didn't you?---We did, yes.

16 Yes. You found at least one, possibly two or

17 three?---Certainly, yes.

18 How many did you find there?---On the most northern one,

19 maybe two by the looks of it.

20 Yes. And the fact that you found them there, and the fact

21 that that area had been directly or very closely the

22 subject of - or very close nearby the subject of

23 logging, harvesting in 1990 to 1999, suggests that the

24 species is able to co-exist with timber harvesting, do

25 you agree?---I agree that I found crayfish there, and

26 the crayfish I found were happy and healthy. I can

27 tell you that much.

28 Thank you. Just so that I understand, this new taxon, and

29 forgive my ignorance, but is it a creature that's been

30 around for thousands of years at least?---Yes.

31 It's not a recent mutation of some other crayfish?---No, no.

1 So it would be something that's left over, you know,
2 hundreds of thousands of years.
3 Hundreds of thousands of years?---Yes.
4 Yes. And looking, if you would, at your map page 46 of 47
5 of your report, that indicates, does it, the areas that
6 you surveyed between October and December last year, as
7 well as areas that you had surveyed in previous
8 years?---It does, it's got different points on there,
9 yes.
10 Yes. So the points that we have been looking at at the
11 west, as it were, or towards the middle of the page,
12 where we see for instance - and because there are
13 numerous records over-laid it's not exactly clear, but
14 there is a reference, at least one reference to the
15 Bonang, which is the new taxon - - -?---Certainly, yes.
16 Almost in the very middle of the page?---Yes.
17 And next to it it says "POI 035"?---That's right, yes.
18 Now, that's the area which you have said is partly inside and
19 partly outside coupe 26?---Certainly.
20 Yes. And then moving lower where we see further references,
21 you found at least one example of the Bonang taxon, the
22 new taxon in that area too?---Correct.
23 Are you able to say how many you found there?---Not offhand,
24 no.
25 Right. But certainly more than one?---Certainly, yes.
26 And that's the area which is between coupes 15 and
27 19?---That's correct.
28 And then to the east, the northeast, there are some further
29 references, I think it's Bonang 7 and Bonang 8?---Yes.
30 That's the surveys you conducted in Result Creek in
31 2007?---Correct.

1 And then to the southeast there's another reference to Bonang
2 in a creek that I think is part of the Bonang River
3 south branch, is that right?---Yes.
4 And when did you conduct those surveys?---That survey was on
5 the following day after I did this Brown Mountain
6 Creek.
7 And you were not instructed to do that survey, were
8 you?---No, I wasn't.
9 You did that for your own interest?---Certainly.
10 Yes. And you indeed located another example of the new
11 taxon in that area as well?---We did, yes.
12 So the distribution, as it were, of this new taxon was
13 substantially expanded by your survey in and around
14 Bonang River south branch?---Certainly.
15 Have you done any surveys further afield to see how wide or
16 broad the distribution of the new taxon is?---Yes, we
17 have.
18 Where have they occurred?---All these areas here. I mean,
19 the only spots where we caught them are actually shown
20 here?
21 Yes?---We have done a lot of surveying south towards Bonang,
22 on the Bonang River, but we haven't located any
23 crayfish there.
24 So if I could ask you to - - - ?---But, I'm sorry, that would
25 be north towards Bonang, we haven't found any crayfish.
26 So - - - ?---What we - - -
27 The orientation of these maps we are looking at in the map
28 book, they are north?---Yes, north.
29 So if you go to page 47 of your report, does that indicate
30 the range of surveying you have done?---Yes, that gives
31 a better idea of some of the spots where we have

1 actually caught something. So we might have sampled a
2 lot of sites and not actually found anything, and that
3 won't be recorded. It's only really where we have
4 recorded or vouchered a specimen that it's actually
5 shown up on this map.

6 Right. When you located examples of this new taxon within
7 the areas between or inside the coupes in question, so
8 between coupes 15 and 19, and either inside or slightly
9 outside coupe 26?---Yes.

10 Did you remove every example of the taxon that you
11 found?---We did, yes.

12 Do you need permission to do that?---We do, yes.

13 And you obtained that permission?---I did, yes.

14 Yes. And you yourself were present on site at each of these
15 surveys?---Yes, I was.

16 Yes. And were you by yourself or in the company of
17 associates?---Sometimes by myself, sometimes in the
18 company of associates.

19 Yes. And when you removed the new taxon, did you consider
20 it to be a rare species?---The ones we got from the
21 Brown Mountain Creek we didn't know whether they were
22 rare or not when we got them. You know, a new species
23 could be common, could be uncommon, but you know one
24 would think it would be reasonably uncommon otherwise
25 we would have found it more widespread.

26 Were you not concerned that if you removed them you might
27 cause the species to be further endangered?---It's
28 always a concern, but the bottom line is we are only
29 looking at a very small section of the creek, so we
30 just took the crayfish from this section and went way
31 up there and took another set of crayfish from that

1 section. So whether that's going to have a
2 significant impact on the overall population of the
3 creek, it is always a possibility, yes.

4 Was that decision that you took really the exercise of the
5 precautionary approach?---No, the exercise is to get
6 enough specimens to find out what species it is. You
7 just can't get one specimen and decide what species it
8 is. I mean, these are crustaceans, they actually grow
9 back their arms and legs. So, for example, when it
10 loses an arm and grows back another one, the template
11 changes. It might be something different to what the
12 original was. So you need to get enough that you can
13 get the overall as to what the most common features are
14 and what is the norm.

15 I see. As I understand it, when you removed the crayfish,
16 the new taxon, you subjected it to a series of actions
17 which I think you set out on page 12 of your report,
18 where you say "Specimens of crayfish captured from the
19 survey site were retained for identification. They
20 were returned to the office at Port Stephens where they
21 were photographed, photographed alive, they were
22 DNA-sampled, euthanised by freezing for 24 hours and
23 then vouchered." And then later you say they were
24 morphologically examined?---Correct.

25 Are those the steps that you undertook in relation to each
26 sample you took from these creek areas?---Certainly.

27 Yes. And are you able to say how many samples, or how many
28 examples of the new taxon you removed in this
29 way?---Well, from Brown Mountain Creek I think it was
30 either six or seven, and from the what I call the
31 Bonang picnic area, which is the one on that southern

1 side, we got four specimens. And the Result Creek
2 specimens, there's four or five of them, but that was
3 from the previous survey.

4 Right. Now, in your report at page 13 you state that
5 samples of genetic material collected from the
6 specimens are in storage and available. So is it the
7 position that those samples that you collected in the
8 last few months remain in storage?---No longer. They
9 have been sent to America.

10 But have they been sent to Professor Fetzner of the Carnegie
11 Museum of Natural History?---That's correct, yes.

12 In the United States?---Yes.

13 In your report you say: "Findings are expected in January,
14 and they may be of further interest to stakeholders in
15 the Brown Mountain area." Have those findings been
16 provided?---No, they haven't.

17 So we are none the wiser about this particular taxon?---Only
18 on the genetics side, yes.

19 In other words, we are still waiting for genetic
20 information?---We are, yes.

21 And that genetic information, that would be necessary, would
22 it, in order for this taxon to be properly
23 identified?---Not necessarily. I mean, the majority
24 of species that have been described have been described
25 without genetic information on the species. But this
26 is just a new tool, I mean genetics is now available so
27 it's something that we can add in to the scientific
28 description of the species. So it's just handy to
29 have, and if we can get it it will show a relationship
30 between the species. So it might say "Well, this new
31 Bonang taxon is related to diversus and related to

1 bidawalus and related to something completely
2 different. So it's just another tool that we would
3 like to use if we can, and we have the ability to get
4 that genetic information, so we will include it.
5 Now, these seven samples that you took from Brown Mountain
6 Creek that we have been talking about, were they at any
7 time provided to the DSE?---No, they weren't.
8 Was information regarding the find provided to the DSE by
9 you?---No.
10 So you simply provided - - -?---Well, sorry, let me correct
11 that. I have talked to the DSE, I haven't done
12 anything officially but I have spoken to the DSE senior
13 scientist and let them know that we have actually found
14 a new species in East Gippsland.
15 Yes. When did you do that?---I don't know, a month or more
16 ago.
17 But there's been no written communication?---No written
18 communication, no. I might qualify that, that
19 actually could have been in an email, we might actually
20 have written confirmation.
21 From the DSE, you think?---To the DSE, yes.
22 To the DSE. Did you receive anything in writing from the
23 DSE?---No, no. So it's not an official - it's just
24 anecdotal, we were just chatting between ourselves.
25 You accept that the process by which a new taxon becomes
26 recognised is not straightforward?---No, it's very
27 complicated.
28 Yes, and it can take some time for that to be properly
29 undertaken?---Yes. It's a very long, drawn-out
30 process.
31 Do you have any idea how long it could take? Is it a

1 question of a couple of years or could it be a
2 decade?---No, it will be this year.
3 Yes?---I mean, we have done the manuscript, it's a scientific
4 manuscript that describes all the morphological
5 differences or outstanding features and characteristics
6 of the new species, that's done. So all we are really
7 waiting for now is just the DNA results which will be a
8 separate section which will be added in. Then it will
9 actually have to go out to a scientific journal for
10 publication, so the journal will then send that
11 manuscript out for peer review, so a couple of
12 scientists will have to look at it and make comment on
13 it. Then it will go back to the publisher, the
14 publisher may ask for alterations, you know, might need
15 to make it shorter or depending on what sort of space
16 they have got available, and then it will go to
17 publication. And that might be in the next issue or
18 the following issue or the following issue. And it
19 depends on the journal too as to what sort of room they
20 have got. I mean, if we want to do it with something
21 like the Australian Museum, there might be a two year
22 wait before there's space available in their memoirs of
23 the Australian Museum, but we would probably go to
24 another journal and do it through them.
25 And in terms of the steps required to have the species
26 classified under the Flora and Fauna Guarantee Act, are
27 you familiar with those steps?---I've never done one
28 under the Victorian Flora and Fauna Guarantee Act, no.
29 I believe it would just be a matter of making that
30 nomination to their scientific committee for inclusion.
31 And that nomination would occur after the steps you have

1 described - - - ?---Certainly. You can't do anything
2 until the species has a name. Until such time it's
3 got an official published name there's not a lot we can
4 do.

5 Yes. So in summary no formal taxonomic description has been
6 published yet in respect of the new taxon?---No.

7 No. And in summary, in relation to what's occurred in
8 America, no genetic analysis has yet been completed to
9 elucidate its genetic form - sorry, to elucidate its
10 genetic distinctiveness from other related taxa?---No,
11 no results as yet, yes.

12 Now, in your report you were asked to give consideration to
13 the precautionary principle, do you recall that?---Yes,
14 I do.

15 And you provided an answer to the question "What is your
16 understanding of the precautionary principle?", at page
17 33 of your report. Where did you obtain the
18 definition that you have set out at page 33?---I don't
19 know, just going through various pieces of information
20 on the precautionary principle.

21 Can you recall what those pieces of information were?---Not
22 offhand, no.

23 No. You did in your report pay attention to the code of
24 practice for timber production 2007, didn't you?---Yes,
25 I think I was issued with a copy of that.

26 And you have reproduced a coloured photograph of the cover of
27 the code on the next page of your report?---Sure, yes.

28 Yes. Are you aware that the code itself contains a
29 definition of the precautionary principle?---Yes,
30 probably. Probably one of the ones I looked at, yes.

31 Could I ask you to look at, or to be shown, and it may be

1 that you can relieve yourself of volume 2, but be shown
2 volume 1 of the agreed book. And in particular if I
3 could ask you to look at page 185. And that page is
4 part of the glossary which is to be found towards the
5 end of the code of practice, and the code of practice
6 for your information begins at page 106?---M'mm.

7 But looking at that definition, is that then one of the
8 definitions you had regard to in coming to your own
9 answer to question 17?---It probably would have been,
10 yes.

11 Yes. I want you to read, if you would, just to yourself, the
12 definition as set out in the code, just familiarise
13 yourself with it for the moment?---Okay.

14 Now, you will see that the code definition includes the
15 expression "and to properly assess the risk-weighted
16 consequences of various options"; do you see
17 that?---Yes.

18 Now, that's not a phrase that you included in your
19 definition, is it?---No.

20 Was there any reason why you chose to exclude that
21 phrase?---No reason.

22 Do you accept, though, that the precautionary principle as
23 defined in the code is an accurate description?---Sure.

24 And what do you understand by that expression, "to properly
25 assess the risk-weighted consequences of various
26 options"?---Well, you would have to have options
27 available to assess, and you would have to work out
28 which is the best option for the least problems.

29 Yes. Did you undertake that sort of exercise in answering
30 the next question? You haven't set out the next
31 question, but I think - have you got a copy of the

1 instructions that you received from Bleyer lawyers
2 handy? It's exhibit - I think it's 36, I might be
3 wrong. Yes. And you will see that on the last page
4 of those instructions you were asked question 17:
5 "What is your understanding of the precautionary
6 principle"?---Yes.
7 And that's the question you have set out in fact in the form
8 you have answered it in your report?---M'mm.
9 And then you go on in a conclusion or a section headed
10 "Conclusion", to deal with other aspects of the
11 precautionary principle, don't you?---Possibly, yes.
12 I will ask you, you see that you were asked, for instance:
13 "Having regard to the East Gippsland Forest Management
14 Plan and the action statement for the Orbost spiny
15 crayfish", and various other matters, you were then
16 asked "Would the proposed logging be consistent with
17 the application of the precautionary principle in
18 respect of the Orbost spiny crayfish?" Now, because you
19 were not able to identify the presence of the Orbost
20 spiny crayfish, that question became academic, didn't
21 it?---Certainly.
22 Yes. And you didn't need to address it. So you turned
23 your mind, I am suggesting, to how the precautionary
24 principle might interact in relation to the new taxon
25 that you found?---Correct.
26 Yes. And you dealt with that under the heading
27 "Conclusion". What you have said there, and I want to
28 direct your attention in particular to the paragraph
29 beginning with the word "Australia" on page 34. You
30 have said: "Australia has adopted ecologically
31 sustainable development (ESD) as a guiding principle of

1 environmental management. In relation to these coupes
2 a threatened crayfish species (*Euastacus diversus*) was
3 known to be present in the general area." Just so
4 that we are clear, that is the Orbost spiny
5 crayfish?---Yes.

6 Yes. "DSE in their action statement number 128 admits they
7 know little about this specie's distribution, biology
8 or ecology. When there is insufficient scientific
9 certainty about the impact of logging projects on these
10 species, a precautionary approach should be taken when
11 approval is given, mandatory 100 metre plus buffer
12 zones along all creeks should be a standard requirement
13 for any logging approval in this East Gippsland
14 region." So is it the case that that statement that
15 you have made about mandatory 100 metre plus buffers
16 would be the sort of precautionary approach that should
17 be adopted having regard to the existence of the new
18 taxon?---Yes.

19 Now, in terms of risk-weighted consequences, you only
20 considered, I take it, environmental consequences when
21 you had regard to the precautionary principle, didn't
22 you?---Well, yes.

23 For instance, you didn't consider in weighing up
24 precautionary measures that ought be taken - for
25 instance, the value of logging to the State of
26 Victoria, or the employment possibilities offered by
27 logging?---No.

28 You didn't factor those into your calculations?---I was only
29 interested in the crayfish.

30 Yes. Your Honour, I have no further questions.

31 HIS HONOUR: Yes. Ms Knowles?

1 <RE-EXAMINED BY MS KNOWLES:

2 Mr McCormack, can I take you to page 36 of your report -
3 sorry, I beg your pardon, page 3?---Yes.

4 Can you see in the middle of the page the publication you
5 mentioned "The freshwater crayfish of Victoria,
6 Australia"?---Yes.

7 What's the status of that publication?---Due for completion
8 probably early next year.

9 And with respect to the other publications on crayfish in
10 Australia, what is the status of those
11 publications?---Queensland will be finished about the
12 same time, sort of Christmas, January next. And the
13 New South Wales is completed.

14 And who publishes those?---I publish those.

15 With respect to the new species and the samples that you
16 identified, why did you decide that it was a new
17 species?---Because of - well, I mean basically we have
18 got maybe five reasons why it would be a new species.

19 And what are those reasons?---Well, we have distribution for
20 a start. Now, this species is in an isolated
21 distribution, so we looked at it and it's got bidawalus
22 over here, we have claytoni, Euastacus claytoni here,
23 and diversus here, and then the Bonang species here.
24 So we said "Well, it can't be bidawalus because it's
25 separated by two different species in between." So
26 common sense would tell us that all the crayfish
27 species or the Euastacus crayfish species in Australia,
28 have a connection between their distribution. So
29 there's a direct link. So this one is isolated, so
30 therefore it shouldn't be either claytoni, diversus or
31 bidawalus, because it's separated. So that's just a

1 common sense one.

2 When you say "distribution", can you clarify what you mean by
3 distribution?---Well, distribution is where it's known
4 to occur. So it might be a river valley and all the
5 tributaries of that river will have this species in it.
6 And then when you go to a separate river system, which
7 might be divided by mountains or something like that,
8 you would find another species with its own
9 distribution. So distribution of the species is a
10 significant factor.

11 And how many different varieties of the species are
12 there?---Well, for Euastacus crayfish, you know, 43 or
13 - no, it would be now 50 species of those, in
14 Australia generally.

15 And with respect to the new species that you identified in
16 the three areas, was there anything specific or
17 particular about those areas in terms of
18 distribution?---Yes, they were all high altitude sites.
19 So they were sites between sort of a 700 metre and 900
20 metre mark and they were all very restrictive. When
21 we went up a bit higher and the creek became ephemeral,
22 it wasn't flowing fully, we didn't get any crayfish.
23 And when we went down lower from where we did catch the
24 crayfish and the creek became faster flowing and
25 deeper, we didn't get crayfish. So they were
26 restricted, and there's just this sort of section of
27 creek before it was too deep on one end and not flowing
28 enough at the other. So they were highly restricted
29 species.

30 HIS HONOUR: The distributions that you have been talking
31 about are mapped at page 37 of your book, is that

1 right?---Yes.

2 And that shows - - -?---That shows roughly where the
3 different species occurred, or are known to occur at
4 this stage.

5 And you say that they don't intermix, as it were, that this
6 is in a system which doesn't contain these other
7 species that you have mapped?---Yes.

8 Yes, I understand.

9 MS KNOWLES: And in respect of the map on page 47, are all
10 numbered point of interest references - what are they
11 references to?---On page 47?

12 Yes?---They are just references to points in the area. They
13 are just spots that we have actually looked at or got a
14 sample from. And they might be diversus or Euastacus
15 diversus, they might be Euastacus claytoni, the Bonang
16 taxon, bidawalus, kershawi, all sorts of species we
17 have captured.

18 And when you say "we have captured", who are you referring
19 to?---Well, myself for one, and whoever else has gone
20 out on the surveys with me. So that might be Dr Jason
21 Cogan, it might be people from the Goongerah area, it
22 could be people from Sydney, it could be people from
23 Melbourne - - -

24 I'm sorry, if I could clarify, with respect to this survey
25 and going to the Brown Mountain Creek - - -?---Okay,
26 four of us went down there on the first day.

27 Yes. And who are they?---I think they are listed in here.

28 MR WALLER: Your Honour, I object to the question. It
29 doesn't arise out of cross-examination, and it's
30 irrelevant.

31 HIS HONOUR: Well, I think you did question in a general

1 way about the process of the taking of the samples, so
2 I am prepared to allow it, Mr Waller.

3 MR WALLER: If Your Honour pleases.

4 MS KNOWLES: With respect to the taking of the samples and
5 providing them to the university, to Professor Fetzner
6 in Pennsylvania, when you use the term "we" who are you
7 referring to?---Okay. So when we collected the
8 specimens in the Brown Mountain Creek, I was with Joe
9 Edwards, Joseph Henderson and David Caldwell. There
10 were four of us went down the first day, and three of
11 us on the second.

12 And you mentioned that you have been in conversation with the
13 DSE. Who have you been in conversation with?---Tarmo
14 Raadik, their senior scientist.

15 With respect to the significance of the naming process, and
16 the significance of the - I beg your pardon. You have
17 described the process of providing a manuscript and the
18 process of naming. What is the significance of that
19 process?---Well, the significance is once you find a
20 new species, it has to be scientifically described and
21 a manuscript written which actually details the
22 morphological characteristics of the animal. And it
23 will get given a scientific name, and this is something
24 that will last for all eternity, so there's a certain
25 due diligence, you have got to do it correctly first,
26 because once it is named this lasts forever, and all
27 reference to that animal will go back to this original
28 description that we are doing now.

29 And prior to that being completed, what is your opinion on
30 the status of the species that you found in Brown
31 Mountain Creek?---In whether I think it's a new species

1 or not? Yes, I am 100 per cent sure it's a new
2 species, there's no question that it's not a new
3 species.

4 Thank you. No further questions.

5 HIS HONOUR: Mr McCormack, the Flora and Fauna Guarantee
6 Act defines a taxon as meaning a taxonomic group of any
7 rank into which organisms are categorised. I take it
8 that the taxon, the relevant taxon on a group is that
9 of a species, is that right?---Yes, well, this is a
10 your Euastacus species, so - - -

11 A Euastacus species?---Yes. So I mean all these species we
12 are talking about in this Brown Mountain, East
13 Gippsland area, they are mostly Euastacus species, so
14 they are a spiny crayfish, they have got lots of little
15 spikes and spines on them compared to, say, a Cherax,
16 like a normal yabby you would have, they are Cherax,
17 they are smooth.

18 Yes?---So these are all Euastacus. So we are just looking
19 at putting a species name on it, like diversus or
20 bidawalus or claytoni, et cetera.

21 Do you have your map at page 37 there?---I do.

22 And can you open page 12 of the map book, which is the other
23 document you have got there. In terms of what you
24 have mapped as the estimated distribution of this new
25 crayfish, it includes part of the Result Creek
26 catchment, is that right?---It does.

27 And that area is reserved as shown on page 12, is that right?

28 It's in the pink?---New parks and reserves, yes.

29 Well, as shown on page 12, it's entirely in a reserve until
30 one gets upstream on the edge of the map, is that
31 right?---Yes, it is.

1 And did you detect this in the reserved area, or can't you
2 say?---Yes, I can say we detected it basically from
3 where that creek crosses the road up about 150 metres.
4 I see, yes. So it's in the vicinity of the word "creek"
5 where Result Creek is named?---Yes, Result Creek - - -
6 Yes, I see. And if you look at the Bonang River south
7 branch?---Yes.
8 You can see that's rising towards the southeast, and you find
9 your point of detection further to the
10 southeast?---Yes.
11 Is that right?---It would probably be off this map, it would
12 probably be somewhere here where we found it, one of
13 these little branches.
14 Yes. And again at that time are you in a pink reserve? As
15 I understand it you are?---Yes, it was what they call
16 the Bonang picnic area, if anybody knows it.
17 Yes?---It was a little picnic site there.
18 Yes, thank you. Is there anything arising out of that?
19 MR WALLER: No, Your Honour.
20 HIS HONOUR: Thank you, you are excused.
21 <(THE WITNESS WITHDREW)
22 (Witness excused.)
23 HIS HONOUR: Is it a convenient point?
24 MS MORTIMER: If Your Honour pleases, it is.
25 HIS HONOUR: And who do we have this afternoon,
26 Ms Mortimer?
27 MS MORTIMER: Dr Belcher.
28 HIS HONOUR: Yes. Can I say to you that I may have been a
29 bit expansive in my timetabling remarks yesterday.
30 The County Court is due to sit here in the middle of
31 the week after next, and that may be a moving target,

1 in other words, it may be we can sit a bit longer, but
2 partly for that reason and partly because of court
3 commitments in Melbourne, having regard to the fact
4 that the case was originally estimated at 7 to 10 days
5 when we fixed it in Sale, I would want - I would
6 certainly not want it to go into the week before
7 Easter, that's the first thing. And so the next two
8 weeks have got to be it, and in a sense the shorter the
9 better within that framework. But I would have to
10 impose limits on final addresses and things of that
11 nature if it were necessary to do that within the next
12 two weeks. In other words, we are going to have to
13 wind up in that time. We will effectively have had
14 close to twice the estimate, by the time we finish that
15 four week period.

16 MS MORTIMER: We understand that, Your Honour.

17 MR WALLER: Just to be clear, Your Honour expects the matter
18 to be finished, the last date would be 26 March, is
19 that right?

20 HIS HONOUR: That's right.

21 MR WALLER: For our part our estimate, even with a convenient
22 break between evidence and submissions, would have us
23 finishing on 25 March.

24 HIS HONOUR: Yes.

25 MS MORTIMER: And we at the moment agree with that, Your
26 Honour.

27 HIS HONOUR: Yes. Well, that's within the outer limit
28 that I was just seeking to divine. If we can finish
29 faster so much the better, but if we can't then you
30 have obviously got to be given the opportunity to
31 present your cases fairly. So I am not going to

1 suddenly change the pace, as it were, halfway through
2 the hearing, but I am saying to you that we will
3 increasingly come under some pressure, and it's about
4 the middle of the week after next that that pressure is
5 going to come from a number of directions. Perhaps
6 I'd better leave it at that for the moment.

7 MS MORTIMER: If Your Honour pleases.

8 HIS HONOUR: We will adjourn until 2.20.

9 LUNCHEON ADJOURNMENT

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1 UPON RESUMING AT 2.25 PM:
2 HIS HONOUR: Yes?
3 MS MORTIMER: If Your Honour pleases, Mr Niall will take the
4 next witness.
5 HIS HONOUR: Yes, Mr Niall.
6 MR NIALL: If Your Honour pleases, I call Dr Chris Belcher.
7 <CHRISTOPHER ALAN BELCHER, affirmed and examined:
8 MR NIALL: Dr Belcher, can you tell His Honour your full
9 name, please?---Christopher Alan Belcher.
10 And your address?---397 Brumbys Road, Peterborough.
11 And your occupation?---I am a biologist.
12 And in October last year, in October 2009, were you asked by
13 the lawyers for the plaintiff to provide an expert
14 report in this proceeding?---I was.
15 Would you have a look at this document, please. Can you
16 identify that document, Dr Belcher?---Yes, I can.
17 And what is it?---That's asking me to be an expert witness.
18 And it's a letter of instruction dated 26 October 2009 from
19 Bleyer Lawyers seeking an expert opinion from
20 you?---Yes.
21 I tender that, if Your Honour pleases.
22
23 #EXHIBIT 39 - Instructions to Dr Belcher.
24
25 MR NIALL: And in answer to that request, did you in December
26 2009 provide a written opinion?---Yes, I did.
27 Would you have a look at this document, please. Is that a
28 copy of your expert witness report for the spotted
29 tailed quoll in answer to the request?---Yes, it is.
30 And if you go to page 5, there's a signature and a date. Is
31 that your signature?---Yes.

1 And the report is dated 18 December 2009?---Yes.

2 Now, to the extent that the report contains matters of fact,
3 do you believe those facts to be true?---Yes, I do.

4 And to the extent that the report contains statements of
5 opinion, are they your opinions?---Yes, they are.

6 And do you honestly hold those opinions?---I do.

7 I tender that, if Your Honour pleases.

8

9 #EXHIBIT 40 - Report of Dr Belcher.

10

11 MR NIALL: Just a couple of additional questions, doctor. In
12 your report you refer on a couple of occasions to a
13 publication called Long and Nelson 2007. Are you
14 familiar with that publication?---Yes, I am.

15 Can you tell His Honour what type of document that is?---It's
16 a draft national recovery plan.

17 And do you know whether that's made under any statute?---I
18 believe it's under the Environment Protection and
19 Biodiversity Conservation Act.

20 And that's a Commonwealth Act?--- Commonwealth, yes.

21 Now, you refer in your report to Long and Nelson 2007, and
22 you have identified it as the recovery plan. What is
23 a recovery plan, Dr Belcher?---Under the Act the
24 Commonwealth is obliged to prepare a plan for
25 threatened species currently once they get to the
26 endangered classification, and the purpose of the plan
27 is to identify the causal threats for the species'
28 endangered status, and to attempt to address those
29 factors in order that the species may recover, and
30 ultimately be delisted.

31 Now, you refer in your report to Long and Nelson being a 2007

1 publication. Can you tell His Honour what the current
2 status of the document is?---It's finally been approved
3 by all the states that it covers, and it's been revised
4 into a new format, and is either out for public comment
5 or about to be released for public comment.

6 Would you have a look at this document, please. Can you
7 identify that document for His Honour?---Yes, that's
8 the draft national recovery plan.

9 And is it dated?---Yes, it's - - -
10 Or at least by the month?---It's a draft public comment,
11 February 2010.

12 Now, I can hand up a spare copy to Your Honour. Now,
13 Dr Belcher, are you familiar with the version of the
14 document that I have just provided to you?---Yes, I am.
15 And to the extent that there are opinions expressed in that
16 report, is there anything that you disagree with?---No.
17 Right. Just a couple of questions, if I may. If you go to
18 page 6 of the - no, perhaps if you go to page 3 of the
19 report, do you see the heading "Summary"?---Yes.

20 And in the middle of that paragraph the sentence beginning
21 "Major threats to the spotted tailed quoll are"?---Yes.
22 Can you just read that to yourself to the conclusion of that
23 paragraph?---Yes.

24 And in broad terms does that summarise the threats that are
25 described in the report?---Yes, it does.

26 And do you agree that they are the major threats to the
27 spotted tailed quoll?---Yes.

28 Can you go to page 6 of the document, please. And there you
29 will see a table under the heading "Important
30 populations", and a number of states are identified.
31 Can I direct your attention to Victoria, and there are

1 three areas identified, Great Otway National Park,
2 Mt Eccles National Park, and East Gippsland?---Yes.
3 Firstly in relation to the Great Otway National Park, are you
4 familiar with that population of quoll?---Yes, I am.
5 And what's its current status, in your opinion?---I would say
6 that they are critically endangered and most likely
7 functionally extinct.
8 Now, the phrase "functionally extinct" that you have just
9 used, could you explain to His Honour what you mean by
10 that phrase?---Within the eco-system their population
11 levels are so low that they no longer play the role
12 that they would normally play within that eco-system.
13 And in relation to the Mt Eccles National Park population
14 that are identified in that table, are you familiar
15 with that population of quoll?---Yes, I am.
16 And what in your opinion is its current status?---The same as
17 the Great Otway National Park, they are critically
18 endangered, and again functionally extent.
19 Now, given your opinion in relation to those two sets of
20 population in Victoria, does that have any significance
21 for the population in East Gippsland?---It does. East
22 Gippsland has become the stronghold for the species in
23 Victoria.
24 And what does it mean to be a stronghold, Dr Belcher?---It's
25 basically the only area in the state where quolls are
26 persisting at anything like normal population levels.
27 Now, if you go to page 8 of the report, you will see
28 immediately above the words "habitat loss and
29 modification" are the word "the major threatening
30 processes are discussed further below", and below that
31 under various headings, are they the major threatening

1 processes identified by the author, starting with
2 habitat loss through fragmentation, timber harvesting,
3 poison baiting, et cetera?---Yes.

4 If you go to page 9 under "Poison baiting", and then over the
5 bottom of page 10, you will see the last sentence on
6 that page it says: "While the loss of a small number
7 of individuals resulting from 1080 poisoning may have
8 no population level impact in areas where quoll
9 populations are relatively large, in small fragmented
10 or declining populations, even small elevated mortality
11 rates may markedly affect population viability." Do
12 you see that, doctor?---Yes.

13 Now, firstly that sentence relates to loss of individuals
14 resulting from 1080 poisoning. What's 1080
15 poisoning?---1080 is a widely used poison for a range
16 of pest species, including carnivorous mammals, but
17 also herbivores and omnivores.

18 Now, the observation in relation to that deaths may markedly
19 affect population viability in relation to that
20 particular threatening process, does that have any
21 relevance to any other threatening process?---Yes, it's
22 in the same - the population viability analysis has
23 found that even small increases in mortality rates
24 greatly increases the probability of extinction for
25 small populations.

26 And does that observation in your opinion have any relevance
27 to the population of quolls identified at page 6 as the
28 East Gippsland population?---Yes, it does.

29 And what's the relevance to that?---Because most of the
30 populations surviving in Victoria are small and
31 fragmented, they are all at risk of extinction with any

1 increased mortality rate.

2 Right. Now, can you go to page 20 of that report, the Long
3 and Nelson recovery plan. And you will see a heading
4 "Management practices", do you see that,
5 Dr Belcher?---Yes.

6 And I won't ask you to read it all, but over on the next
7 page, the first full paragraph there, the paragraph
8 beginning "There are no mitigating measures"?---Yes.

9 Can you read that paragraph to yourself, please?---Yes.

10 And do you agree with that paragraph?---I do.

11 I tender that report, if Your Honour pleases.

12

13 #EXHIBIT 41 - Long and Nelson report.

14

15 MR NIALL: The last questions I have relate to your report.

16 Could I take you to page 11 of the court, paragraph 12
17 - perhaps paragraph 11 on the bottom of page 10. In
18 the first sentence of paragraph 11 you say: "The area
19 should be surveyed during the species' breeding season
20 May to August using hair tubes of a particular density
21 or remote cameras"?---Yes.

22 "And active" - going on a few lines or a few words - "active
23 searches for latrines should also be conducted during
24 this period." Now, in paragraph 12 you say that "the
25 survey undertaken from 10 November to 5 December using
26 four remote cameras did not detect spotted tailed
27 quolls in the four coupes of Brown Mountain. It must
28 be noted that the survey period was at the least
29 appropriate time." Now, firstly, if the survey that
30 you had undertaken had been undertaken using the same
31 methodology but in the months of between May and

1 August, are you able to tell His Honour whether that
2 would have had any significance for the ability to
3 detect a quoll present in the coupes?---Yes. During
4 the period that the survey took place, females are
5 restricted by having young in a den, so their activity
6 and the area they are able to move in is greatly
7 restricted. Similarly for males, because it's outside
8 of the breeding season, their activity is at a minimum,
9 so therefore the likelihood of detecting quolls during
10 that period is very low. If, however, the survey was
11 undertaken during the species' breeding season, May
12 through to the end of August, activity peaks during the
13 breeding season, so the probability of detecting quolls
14 during that period is much higher if they are present.
15 But even during that period, using the techniques
16 described in the report, the probability of detection
17 is still only between 70 and 80 per cent.

18 Now, finally, you refer at the top of page 11 to searches for
19 latrines should also be conducted?---Yes.

20 How easy is it to find latrines used by quolls?---Depending
21 on the habitat, if there's rock outcrops it can be
22 considerably easier, but latrines in forest similar to
23 the forest in the coupes on Brown Mountain will
24 commonly have latrines on logs, and it's quite possible
25 to find them - certainly not easy, but it's quite
26 possible to find them. I have found them in a similar
27 forest in New South Wales, co-workers have found them,
28 so it's possible.

29 And is the ease of detection influenced by the time of the
30 year in which the search is conducted?---Absolutely.

31 Peak latrine use occurs during the breeding season, so

1 during the breeding season you got an accumulation of
2 scats on latrines, and they may well be washed off.
3 But because they are continually using those latrines,
4 the probability of finding active latrines is much
5 higher.

6 And what about the probability of finding latrines during the
7 period of November, December?---Again that's fairly low
8 because of the restricted movements and much lower
9 activity of both male and females.

10 Yes. They are the only questions I have, if Your Honour
11 pleases.

12 HIS HONOUR: Yes. Yes, Mr Redd.

13 <CROSS-EXAMINED BY MR REDD:>

14 Dr Belcher, you were taken in Exhibit 41, which is the Long
15 and Nelson report?---Yes.

16 To a table on page 6 of that report. Now, Mt Eccles
17 National Park, that's not an area that's been subject
18 to timber harvesting before, is it?---No. Land
19 clearing, but in the surrounding country.

20 Yes. Now, if I could just clarify some - just a couple of
21 references in your report, being Exhibit 40. You have
22 got a copy of that before you, do you? There are some
23 references throughout, and I will just take you to one,
24 if you could turn to page 9 of that report, paragraph
25 8, the second bottom paragraph, there's a sentence
26 there that reads: "There is currently no evidence that
27 even aged regrowth forest provides a suitable habitat
28 for quolls in Victoria (Loyn et al. 1980)" - sorry, I
29 should rephrase that, that's at the beginning of the
30 next sentence. "Loyn et al. 1980 found that quolls no
31 longer persisted in the Boola Boola State Forest after

1 harvesting." Do you see that sentence?---Yes.
2 Now, I might be mistaken, but I couldn't find the reference
3 to that in your list of references that you have set
4 out in your report at the end?---You are right, I
5 haven't included that in my reference list.
6 Are you able to tell us now the particulars of what that is,
7 as in the title and publication, can you recall?---It's
8 a Forestry Commission publication. There are at least
9 three probably more authors. It's a survey of the
10 Boola Boola State Forest.
11 Yes, okay. And - - -
12 HIS HONOUR: Where's that?---In central to East Gippsland.
13 Yes?---In foothill forest.
14 MR REDD: Now, similarly, Dr Belcher, on that same page you
15 will see there's a few references to Belcher
16 2008?---Yes.
17 Do you see that?---Yes.
18 That was another one I couldn't spot?---Yes.
19 But can you just check whether that's present?---It's at the
20 front of the report, under "Relevant publications", and
21 I failed to transfer that to the references at the
22 back. On page 4.
23 Page 4, yes?---The bottom - of the relevant publications.
24 That's the bottom 2008 publication, is it?---Yes.
25 Yes, I see. So the reference to Belcher 2008 is a reference
26 to that document, is that right?---Yes.
27 Yes. Now, Dr Belcher, you are aware that there are reserves
28 immediately adjacent to coupe 15, are you not?---Yes.
29 If the witness could be handed the agreed maps,
30 please?---Thank you.
31 So, Dr Belcher, do you see the maps have numbers in the

1 bottom right-hand corner?---Yes.

2 If you could turn to map number 7. And you see that towards
3 the top of the map there's the four coupes
4 marked?---Yes.

5 Do you see that?---Yes.

6 That is a map that shows the forest management zones prior to
7 November 2009. Now, you are familiar with the terms
8 "special protection zones", "special management zone"
9 and "general management zone", Dr Belcher?---Yes.

10 Yes. So you are aware that there's no harvesting allowed in
11 special protection zones?---Yes.

12 And also no harvesting allowed in conservation parks and
13 reserves?---Yes.

14 And if you turn to the next page to map number 8, you will
15 see there that there are new parks and reserves that
16 have been added following November 2009, do you see
17 that?---M'mm.

18 And that is the middle hue of pink, if I can put it that way,
19 being that there are three pink colours on that page
20 from lightest to darkest, but the middle one is "New
21 parks and reserves 2009"?---Yes.

22 Now, I will show you one more map. If you could turn to map
23 number 11, you will see there, Dr Belcher, that in
24 addition to showing us the management zones, we have in
25 blue "Logging history" of the surrounding area?---Yes.

26 And we have also obviously changed the scale on this map, so
27 we are in a closer scale. So you would agree,
28 wouldn't you, that large parts of the new reserve
29 immediately west of coupe 15 has no recorded logging
30 history?---From the map, yes.

31 Yes. So would you agree that you could describe those areas

1 as unlogged mature forest?---Not without looking at
2 them, no.

3 You don't accept that?---Not without looking at them.

4 Okay. You are not familiar with that area?---Not enough to
5 stand up in court and say that they are unlogged mature
6 forest.

7 You are aware, though, that - or are you, I should say - are
8 you aware that that reserve was announced by the
9 government as part of what it calls "New icon and old
10 growth reserve", are you aware of that
11 announcement?---No, I was not.

12 Okay. If the witness could just be shown volume 3 of the
13 agreed book, please. Dr Belcher, if you could just
14 turn to page 1043 of that volume, you will see there,
15 and apologies for the size of the font, you will see
16 there a document headed "Media release", and in the top
17 paragraph it states: "The Brumby Labor government will
18 protect a further 400 hectare of the Brown Mountain
19 area, including the mountain summit, as part of the
20 establishment of old growth and icon reserves in East
21 Gippsland, Environment Minister Gavin Jennings said
22 today. Mr Jennings said that the inclusion of the
23 large area around Brown Mountain would form part of a
24 significant unbroken link between the Errinundra and
25 Snowy River National Parks." Having now had that
26 brought to your attention, does it at all refresh your
27 memory about that announcement?---Vaguely, but not in
28 detail.

29 All right. Well, am I to take it from that that for the
30 purpose of your report you have not factored in as an
31 assumed fact that there is unlogged mature forest

1 immediately adjacent to coupe 15?---From the road there
2 is, but given the size of that area, I couldn't get up
3 here and say that it's all unlogged mature forest.

4 Yes. My question is, though, for the purpose of your report
5 and the opinions that you have expressed in it, you
6 have not assumed that there is unlogged mature forest
7 to the west of coupe 15, is that right?---I haven't
8 stated that there is unlogged mature forest to the
9 west. I haven't stated that it would form a corridor
10 between the parks to the west and the parks to the
11 east.

12 So is it the case that you are not aware of what that forest
13 is like to the west of coupe 15?---Not all of the area
14 that has become park, no.

15 Do you agree that the presence of unlogged mature forest may
16 be a significant factor in enabling quolls to use
17 nearby areas once groundcover and understorey have
18 reestablished?---It may be, depending on the prey that
19 they are dependent on.

20 And for the purpose of this question assume that the area in
21 pink to the west of coupe 15 as described on map 11,
22 assume that that area is unlogged mature forest, having
23 made that assumption would you agree that the presence
24 of that unlogged mature forest may be a significant
25 factor in establishing quolls to use coupe 15 once the
26 groundcover and understorey have reestablished?---Well,
27 it would depend on their prey base. If like in other
28 moist forests that I have worked in or am aware of
29 other people's work in, arboreal mammals comprise a
30 significant proportion of their diet.

31 Yes?---After harvesting the number of trees with hollows will

1 be minimal, so therefore the habitat for their prey
2 will be minimal. So unless there's abundant suitable
3 terrestrial prey, it may well not enable them to
4 utilise coupe 15 after logging.

5 But assuming that that area in pink is mature unlogged forest
6 and will remain so because it's in a reserve, you would
7 agree, wouldn't you, that that of itself would provide
8 a protected habitat for arboreal mammals?---Depending
9 on the tree species.

10 Yes. You would agree, wouldn't you, that hollow-bearing
11 trees are predominant amongst old growth
12 forests?---Again depending on the tree species.

13 Yes. Now, you have been informed in your letter of
14 instruction, which is Exhibit 39, and I think it's in
15 paragraph 16 of that letter, you have been asked to
16 assume there that VicForests will create a 100 metre
17 stream side buffer and also what I might call modified
18 habitat tree prescriptions. Now, you would agree,
19 wouldn't you, that the 100 metre stream side buffer
20 would provide a degree of protection for spot tailed
21 quoll?---I guess the fundamental problem I have with
22 that is the large area requirements for spotted-tail
23 quolls, protecting a proportion of their habitat may
24 result in that habitat not having sufficient prey to
25 enable females to breed, ie, the prey resource isn't
26 great enough to enable them to breed successfully. So
27 it may add some measure of protection, but whether it
28 is adequate to enable female quolls to be resident and
29 to be able to successfully breed is another matter.

30 Yes. Now, do you have volume 2 of the agreed book before
31 you? I am not sure if you do. I might get that just

1 before you. You can do away with volume 3 if you'd
2 like, we don't need that one again, I don't
3 think?---Thank you.

4 If you could turn to a document that begins at page 0566.
5 That should be a document headed "Action statement
6 Orbost spiny cray"?---Yes.

7 Are you familiar with that document, Dr Belcher?---No.
8 Have you seen it before, do you think?---Yes, I would have
9 read it at some stage in the past.

10 At some point. If you could turn to page 3 of that
11 document, which is page 0568. In the left-hand
12 column, the second bottom paragraph reads: "Protection
13 of the riparian strip along streams inhabited by the
14 Orbost spiny crayfish will also provide habitat for a
15 number of rare or threatened birds and mammals,
16 including the spot tailed quoll." Pausing there,
17 would you agree with that statement?---It will provide
18 some habitat. Whether it's sufficient habitat is
19 unknown. It really depends on the specific area and
20 the amount of habitat that is protected.

21 Yes. And you would agree that the modified habitat tree
22 prescriptions, which are the ones set out in 16B of
23 your letter of instruction, you would agree that those
24 prescriptions provide a level of protection for
25 arboreal mammals upon which the quolls might
26 prey?---Again, they'd provide some habitat for arboreal
27 mammals, but whether that's going to provide sufficient
28 prey is unlikely.

29 Yes. Now, if you could turn to - this is still in volume 2
30 of the agreed book - turn to page 0562. I shall take
31 you to the front page first. So the document begins

1 on page 0555, that should be a document headed "Action
2 statement, spot tailed quoll"?---Yes.

3 Now, that's a document with which you are familiar, are
4 you?---Yes.

5 Yes. If you could turn to page 0562 of that document, you
6 will see in the right hand column there's a subheading
7 "Habitat protection", and the second-last sentence in
8 that column reads the following: "In East Gippsland
9 (the area covered by the Forest Management Plan), there
10 will be a target of 75 quoll sites in protected
11 habitat, that is, parks, reserves and state forest,
12 SPZ/SMZ. Currently there are 71 sites of quoll
13 records protected in East Gippsland, including 21 in
14 state forest (note that this prescription exceeds the
15 target of 50 protected records specified in the East
16 Gippsland FMP)." Now, would you agree that the target
17 of 75 quoll sites has now been met in East
18 Gippsland?---Yes.

19 If I could take you now, Dr Belcher, to page 13 of your
20 report, and you will need to have volume 1 of the
21 agreed book before you as well. At the top of page
22 13, in response to a question asked of you, you say
23 that "The precautionary principle is that lack of full
24 scientific certainty should not be used as a reason for
25 postponing a measure to prevent degradation of the
26 environment where there are threats of serious or
27 irreversible environmental damage"?---Yes.

28 Yes. And you have given a reference there from an Act. Is
29 that the Act from which you have drawn that
30 definition?---Yes.

31 Yes. I would like you now in the agreed book of documents

1 to turn to page 0106. Now, have you got page 106
2 there, Dr Belcher? That should be a document titled
3 "Code of practice for timber production 2007"?---Yes.
4 Is that a document you are familiar with?---I have read it.
5 I wouldn't say it would be word perfect, but - - -
6 Yes. When was the last time you read that?---I would have
7 read it when I received the brief from Bleyer Lawyers.
8 Yes. All right, if you could turn now to page 0185, which
9 is a glossary, or part of the glossary to that
10 document. You will see at the top of that page
11 there's a definition of "precautionary
12 principle"?---Yes.
13 If you could just read that to yourself for the
14 moment?---Yes.
15 You have read that?---Yes.
16 Now, you would agree, wouldn't you, that the definition in
17 the code is different to the definition you have used
18 for the purpose of your report?---There's a risk
19 analysis in the code, but there's not in the definition
20 that I have provided.
21 Yes. And in fact when you have answered your question about
22 the precautionary principle, you haven't undertaken an
23 assessment of the risk-weighted consequences, have
24 you?---I probably have as far as the species has gone
25 in that with regard to protecting 75 sites for the
26 forest management area, that is unlikely, highly
27 unlikely to be a viable - to constitute a viable
28 population.
29 Yes, but to the extent, Dr Belcher, that you have assessed
30 risk-weighted consequences of various options, you
31 haven't assessed at all the consequence, for instance,

1 to the timber industry, would that be right?---My brief
2 was to look at spotted tailed quolls. That was
3 totally outside my brief.

4 Yes?---And my area of expertise.

5 So I take it then that when answering the question about the
6 precautionary principle, you had not given any weight
7 to social and economic factors when deciding your
8 answer, would that be right?---I have looked at the
9 consequences for the conservation of spotted tailed
10 quolls.

11 Yes. And you haven't looked at consequences other than
12 that, would that be right?---Yes, that's right.

13 Would you agree with me that in applying the precautionary
14 principle, measures should be adopted that are
15 proportionate to the potential threats?---Probably,
16 yes.

17 And do you accept that a reasonable balance must be struck
18 between the stringency of the precautionary measures
19 which may have associated costs that are not only
20 environmental but also social and economic, and the
21 seriousness and irreversibility of the potential
22 threat, do you agree with that?---In as much as the
23 threat to quolls is clearly demonstrated in the draft
24 national recovery plan, and they are still declining,
25 and the Scientific Advisory Committee for the Flora and
26 Fauna Guarantee of Victoria has stated that unless that
27 decline is stopped, they are likely to become extinct.
28 So I think I have addressed the precautionary principle
29 as far as the spotted tailed quoll goes.

30 Yes. Dr Belcher, I appreciate that that's your opinion, and
31 you have expressed as much in your report. But I am

1 really asking whether you agree with me that in
2 applying the precautionary principle, a reasonable
3 balance must be struck between the stringency of the
4 precautionary measures on the one hand, and those
5 measures have costs that may be environmental but they
6 also might be social and economic, and on the other
7 hand the seriousness and irreversibility of the
8 potential threat. Do you agree with that?---Depending
9 on what your role is, yes. My role is to assess the
10 likely impact on spotted tailed quolls, so again it's
11 not within the brief I was given, nor my expertise.
12 You are talking about an environmental impact statement
13 level of applying the precautionary principle.

14 Yes?---Not on an endangered species level.

15 Yes. Would you agree that once we undertake an assessment
16 of the risk-weighted consequences, bearing in mind the
17 surrounding reserve system which I have taken you
18 to?---M'mm.

19 The fact that there have been established 75 quoll sites in
20 protected areas within East Gippsland, and that there
21 are no records of quolls within these coupes, would you
22 then agree that the proposed harvesting is
23 proportionate to the threat?---No, given the
24 information that has preceded you about the time of the
25 survey being inappropriate, and the timing is during a
26 period where you are least likely to record them, if
27 you look at I guess the bigger picture, most
28 extinctions are incremental, and with your approach -
29 it's an incremental approach, coupe by coupe. And if
30 you look at the current status of quolls, they are
31 still declining. They are having a major range

1 contraction in Victoria from Western Victoria back to
2 East Gippsland. The current management, land
3 management practices haven't halted that on-going
4 decline, therefore the risk that the species will
5 become extinct in Victoria is real and increasing, as
6 they contract.

7 But you would accept, wouldn't you, that that risk, so far as
8 it arises from the logging that's proposed for these
9 coupes, is lessened by reason of the presence of the
10 reserve immediately to the west of coupe 15, and also
11 the 100 metre stream side buffer, and also the modified
12 habitat tree prescriptions, would you accept
13 that?---Only to a limited extent, and again given the
14 area requirements of the species, reserving part of a
15 territory is not going to protect the individual that's
16 living within that habitat. And as far as the reserve
17 system, the 75 sites, we don't know whether they are
18 actually serving the purpose that they have been set up
19 for. And if you refer to the draft recovery plan, it
20 is one of the actions required, to survey those
21 reserves to determine whether or not they are actually
22 protecting quolls.

23 So, Dr Belcher, could you have map 11 before you again,
24 probably under that - you can do away with the volume
25 of the agreed book if it's easier?---Thank you.

26 Dr Belcher, having now been taken to not only the existing
27 reserve system shown on this map, but also the
28 additional reserve system, may I ask you to again
29 assume that it is mature unlogged forest in the
30 additional reserve system save where indicated
31 otherwise on the map in blue? So making that

1 assumption, and factoring those reserves into your
2 assessment, would you not now agree that the proposed
3 harvesting provides the appropriate degree of
4 precaution for the set of risks associated with
5 it?---No, I am sorry, I don't.

6 Do you consider that the additional reserves that I have
7 directed your attention to this afternoon have any
8 bearing on that question at all?---I come from the
9 perspective that the two major factors agreed on in the
10 draft national recovery plan have been responsible for
11 the specie's decline and on-going decline are habitat
12 loss and fragmentation. The habitat in those
13 compartments, or those coupes, from my observation
14 provide optimal habitat, from the arboreal mammal
15 survey undertaken by Henry and Mitchell it reinforces
16 that it's optimal habitat, given the high density of
17 arboreal mammals present, so if you lose that, then you
18 are furthering the process that is likely to bring
19 about the eventual extinction of the species. If you
20 look at it coupe by coupe, there's always an
21 incremental loss, whereas the national draft recovery
22 plan, they highlight the need to look at it from a
23 landscape perspective - - -

24 Well - sorry, go on?---You can argue one bit here isn't going
25 to be significant. But you repeat that time after
26 time then it does become significant. When you are
27 dealing with a species that is currently classified as
28 endangered and there is consensus on what the threats
29 are to that species, and the causal factors responsible
30 for the process of those threats, then losing optimal
31 habitat is a threat. The fact that loss of habitat

1 and then fragmentation of habitat is agreed to be the
2 major threat to the species, that logging these
3 compartments is continuing that threat.

4 Well, I understand the point you make, Dr Belcher, but I am
5 asking you to factor in the additional habitat by
6 nature of the new reserves which you hadn't directed
7 yourself to when you wrote your report, and considering
8 that gain of retained habitat when you are assessing
9 the question of the loss of habitat by reason of the
10 harvesting in the coupes, and when you add in that
11 additional factor don't you reach a different
12 conclusion; namely, that the proposed harvesting is a
13 proportionate response to the threat posed by the
14 harvesting?---No, I don't.

15 You don't accept that?---No.

16 So - - - ?---And I would direct you to the paragraph on the
17 impact of losing small numbers of animals and the
18 likely - or the greatly increased risk of extinction.
19 So in species that currently occur in small
20 populations, like the spotted tailed quoll, because of
21 past land management practices, any increase in the
22 mortality rate is going to significantly increase the
23 risk of extinction.

24 So is it your view then, Dr Belcher, that for the
25 precautionary principle to be applied to this area,
26 there must be zero risk to the spot tailed quoll, is
27 that how you approach it?---Given their current status,
28 if not zero, close to it, yes.

29 I see. And so in other words there ought be no harvesting
30 on any conditions whatsoever in this area?---Not in
31 optimal habitat when that has been recognised as one of

1 the two major factors in their decline.

2 I have no further questions of this witness, Your Honour.

3 HIS HONOUR: Yes. Yes, Mr Niall.

4 <RE-EXAMINED BY MR NIALL:>

5 In answer to a question from my learned friend, Mr Redd, you
6 were asked effectively, given the new reserves and the
7 100 metre buffer and the tree prescriptions, whether
8 they would lessen the problem for the quolls. And in
9 answering that question you referred to not given the
10 requirements of territory for this animal. What do
11 you mean by the requirements of the territory for the
12 quoll?---In optimal habitat, female quolls require in
13 the order of 200 to 300 hectares to be able to
14 successfully breed and rear young. If you are saving
15 a small proportion of the coupe, that's not going to
16 really influence whether or not they are going to be
17 able to breed. If you remove optimal habitat, unless
18 you are saving a substantial amount of the female's
19 territory, you are going to alienate their habitat.
20 And therefore the female - the habitat will be
21 unsuitable for a female to be able to reside in and
22 successfully breed.

23 And your answer to that question dealt with the females.

24 What about the male of the species and its
25 territory?---Males have significantly larger home
26 ranges, but they overlap with a number of other males
27 and the females. So it will have some impact on
28 males, but the critical factor is whether females can
29 be resident and successfully breed. If they can't do
30 that, then the species is going to decline further.

31 You were asked some questions about the existence of quoll

1 sites that had been protected and the management
2 prescription. And in answer to a question you
3 referred to a recommendation or action in the action
4 plan which dealt with existing management
5 prescriptions, can you identify the passage you were
6 referring to by reference to the national recovery
7 plan, Exhibit 41?---On page 16, under objective number
8 4, "Evaluate and manage the risk posed by silvicultural
9 practices." Then under 4.3, "Employ monitoring
10 programs to evaluate the effectiveness of current
11 habitat retention prescriptions at providing habitat
12 for viable populations of spotted tailed quolls in
13 commercially harvested forests."

14 Yes. And do you know whether those programs currently
15 exist?---As far as I am aware, no, they don't.

16 And in terms of the quoll sites that were identified in the
17 question, namely, the 71, in the action statement it's
18 75, do you know over what period of time those quoll
19 sites have been identified?---It would have been from
20 the implementation of the East Gippsland Forest
21 Management Plan, so I guess we are looking at 20-odd
22 years.

23 And do you know whether there's any research and monitoring
24 as to whether those sites are still currently used by
25 quolls?---As far as I am aware, no, there's no
26 monitoring of those sites.

27 And how long do quolls live?---In the wild in Victoria and
28 Southern New South Wales, for a maximum of five years.
29 Now, you were asked a number of questions in relation to the
30 application of the precautionary principle as it
31 applies to the quoll, and in a number of answers you

1 referred to effectively the step towards extinction.
2 Are you able to say to His Honour how close to
3 functionally extinct the quolls are in
4 Victoria?---Well, for the Mt Eccles area, the Otway
5 Ranges area, they would already be functionally
6 extinct. For Northeast Victoria and the Central
7 Highlands, they are getting close to becoming
8 functionally extinct. So we are really only left with
9 the upper Snowy River and tributaries, and the Roger
10 River, Errinundra area.

11 And if the existing decline in the East Gippsland area
12 continues, what's the likely prognosis?---The prognosis
13 for the State, if current management is continued, is
14 that the species will become extinct.

15 Are you able to indicate what sort of time period is
16 involved?---I guess an indication would be in the
17 1940s, David Fleay, who was then probably the expert on
18 spotted tailed quolls, described the Otway Ranges as
19 the stronghold for the State, and now they are all but
20 extinct. So we are looking at a 50 to 60 year period
21 to go from being abundant enough to be described as
22 "the stronghold" for the whole State, to being all but
23 extinct.

24 And you were asked early in your evidence about whether, as
25 far as you knew, there'd been logging at Mt Eccles.
26 Do you know whether there'd been logging in the
27 Otways?---Yes, the Otways have been heavily disturbed
28 both through logging and through clearing for
29 plantations.

30 And in your opinion has that process had any significance for
31 the - that is, logging in the Otways, had any

1 significance for the spot tailed quoll?---I think it
2 has had a dramatic impact through loss and
3 fragmentation of habitat, suitable habitat.
4 Now, something I neglected to do in-chief, Your Honour.
5 Could I just get Dr Belcher to have a look at the
6 photograph of the animal, one up from the bottom on the
7 right. Do you see that, Dr Belcher?---Yes.
8 Are you able to identify that animal from that
9 photograph?---It's a spotted tailed quoll.
10 Thank you. They are the only matters in re-examination, and
11 partly in evidence-in-chief, if Your Honour pleases.
12 HIS HONOUR: Yes. I wonder if you could just clarify
13 something in the documents for me, Dr Belcher. Could
14 you look at the court book at page 409, please. This
15 is the 1995 Forest Management Plan relating to East
16 Gippsland, as I understand. You will see in relation
17 to the spot tailed quoll, it says: "This guideline
18 builds on the FFG action statement for the species",
19 and then there's a reference to Mr Mansergh and
20 yourself. "Until further work on habitat requirements
21 is completed, a precautionary approach of protecting
22 areas of undisturbed forest as foraging habitat will be
23 adopted." And then there's a statement about
24 protection areas. Now, as I understand what happens
25 is that after that, a Flora and Fauna Guarantee Action
26 Statement is revised in about 2000, is that right? So
27 the one you go to, you have been taken to in evidence
28 is subsequent to this management plan, is that
29 right?---Yes.
30 And then after that we have got the national plan?---It
31 should supersede the state action plans or recovery

1 plans.

2 All right. Or perhaps lead to their revision?---I think
3 it's even in the draft national recovery plan that they
4 should supersede the state plans.

5 Yes, all right?---So that if there's any difference, the
6 national one takes precedence.

7 All right. Well, if I go to that, page 16 of that national
8 document that you went to a moment ago, and you
9 referred specifically to 4.3 in the actions, that's
10 implement the monitoring programs?---Yes.

11 Do you see 4.1: "Develop guidelines on minimum habitat
12 requirements that can be used to direct the formation
13 of habitat retention prescriptions in commercially
14 harvested forests"?---Yes.

15 At the moment, if you like, I have - perhaps I shouldn't say
16 "I have" - we have the action statement. Do you
17 understand - do I take it from what you say that you
18 understand this national recovery plan to envisage the
19 development of new guidelines, is that right?---Yes.

20 Yes. Is there anything arising out of that?

21 MR REDD: Not on my part, Your Honour, no.

22 MR NIALL: There's just one question, Your Honour, if I may.
23 Dr Belcher, at page 409 His Honour took you to the part
24 of the management plan that referred to the spot tailed
25 quoll, and the last item under "Spot tailed quoll", it
26 says "Once 50 sites have been identified this guideline
27 will be reviewed." Do you know whether or not that
28 has occurred, and if so when?---Well, it's been
29 increased to 75, but whether it's due to review, I
30 don't know.

31 If Your Honour pleases.

1 HIS HONOUR: Well, perhaps I will ask you one last question
2 about this FMP. If you turn the page, do you see in
3 relation to arboreal mammals, you will see that "Where
4 exceptionally high densities of various mammals" - -
5 -?---Yes.

6 "Are identified, it's envisaged that approximately 100
7 hectares of suitable habitat will be included in the
8 special protection zone." It seems to follow from
9 your evidence that the density of gliders is a
10 significant indicator of optimal habitat for quolls of
11 this type, is that right?---Absolutely, yes.

12 All right. Yes, thank you. Is there anything arising out
13 of that?

14 MR NIALL: No, Your Honour.

15 MR REDD: No, Your Honour.

16 HIS HONOUR: Yes, thank you.

17 <(THE WITNESS WITHDREW)

18 MR REDD: Your Honour, you might recall when I was
19 cross-examining Dr Gillespie I tendered what became
20 Exhibit G.

21 HIS HONOUR: Yes.

22 MR REDD: And we have over the luncheon located the other
23 report, Henry report, and by agreement with my learned
24 friends I can now tender a copy to Your Honour.

25 HIS HONOUR: Yes.

26 MR REDD: Would Your Honour like a working copy as well?

27 HIS HONOUR: Yes, if you would, thanks.

28 MS MORTIMER: Your Honour, I just have that affidavit to deal
29 with, my learned junior will deal with that.

30 HIS HONOUR: Yes.

31 MS KNOWLES: If Your Honour pleases - - -

1 MR REDD: Sorry, I was going to clarify. Is Your Honour
2 adding that to Exhibit G or are we giving that a
3 separate exhibit description?

4 HIS HONOUR: I think we might add that to Exhibit G.

5 MR REDD: Yes, as Your Honour pleases.

6
7 #EXHIBIT G - (To include) Applied conservation management of
8 a threatened forest-dependent frog, *Heleioporus*
9 *australiacus*, 00/09/2008.

10 MS KNOWLES: If Your Honour pleases, on behalf of the
11 plaintiff I now read the affidavit of Eliza Marie Poole
12 affirmed on 24 August 2009, together with its three
13 exhibits.

14 HIS HONOUR: Yes.

15 MS KNOWLES: In addition Ms Poole wasn't required to attend
16 for cross-examination by the defendant.

17 HIS HONOUR: Yes.

18 MS MORTIMER: If Your Honour would mark that perhaps as an
19 exhibit.

20 HIS HONOUR: Yes.

21
22 #EXHIBIT 42 - Affidavit of Eliza Marie Poole.

23
24 MS MORTIMER: Your Honour, Ms Poole identifies one of the
25 pieces of footage as a long footed potoroo, that's the
26 function of that affidavit.

27 HIS HONOUR: Yes, thank you.

28 MS MORTIMER: Now, if Your Honour pleases, those are the
29 witnesses we have available today, and we will have
30 Dr Debus available tomorrow.

31 HIS HONOUR: Yes.

1 MS MORTIMER: We can start at 10 am if that's more convenient
2 for Your Honour.

3 HIS HONOUR: Yes.

4 MS MORTIMER: Our learned friends agree with that. And he
5 will be the last of the expert witnesses for the
6 plaintiff.

7 HIS HONOUR: If you are going to call other witnesses, I
8 would ask you to try and call them tomorrow morning as
9 well, if you can.

10 MS MORTIMER: If Your Honour pleases.

11 HIS HONOUR: For the reasons that I adverted to earlier.

12 MS MORTIMER: I understand. If Your Honour pleases.

13 HIS HONOUR: Yes. We will adjourn until 10 o'clock
14 tomorrow morning.

15 ADJOURNED UNTIL 10.00 AM FRIDAY 12 MARCH 2010

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