

**BOARD OF INQUIRY**

**Turitea Wind  
Farm Proposal**

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**TRANSCRIPT OF PROCEEDINGS**

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**BOARD OF INQUIRY**

**Turitea Wind Farm Proposal**

**Hearing**

**HEARING at PALMERSTON NORTH on 31 AUGUST 2009**

**BOARD OF INQUIRY:**

Environment Court Judge S.E. Kenderdine

Mr D. Bunting

Mr R. Heerdegen

Mr J. Hudson

Mr C. Shenton

**APPEARANCES**

MR J. MAASSEN appeared on behalf of Palmerston North City Council

MR N. DAVIDSON appeared on behalf of Mighty River Power Limited

MR K. JOHNSTON appeared on behalf of Ngawai Farm Limited and Mr J. Poff

MR M. McCLELLAND appeared on behalf of Tararua-Aokautere Guardians Inc (TAG) and Friends of Turitea Reserve

**LIST OF WITNESSES**

**<BRAD COOMBS, sworn [10.05 am] .....1969**  
    <EXAMINATION BY MR DAVIDSON [10.05 am].....1969  
    <CROSS-EXAMINATION BY MR MAASSEN [10.09 am] .....1970  
    <THE WITNESS WITHDREW [10.33 am] .....1980

**<SHANNON BRAY, affirmed [10.35 am] .....1981**  
    <EXAMINATION BY MR McCLELLAND [10.35 am] .....1981  
    <CROSS-EXAMINATION BY MR DAVIDSON [10.48 am].....1986  
    <CROSS-EXAMINATION BY MR MAASSEN [3.57 pm] .....2068  
    <CROSS-EXAMINATION BY MR JOHNSTON [4.24 pm].....2075  
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[10.05 am]

5 HER HONOUR: Yes, Mr Davidson? Good morning, everybody.

MR DAVIDSON: Good morning, your Honour and members of the Board.  
Mr Coombs is to give his evidence. Can he be sworn in and make his  
statement please?

10 HER HONOUR: Yes.

**<BRAD COOMBS, sworn** [10.05 am]

**<EXAMINATION BY MR DAVIDSON** [10.05 am]

15 MR DAVIDSON: Your full name is Brad Coombs and you confirm that is the  
contents of your rebuttal evidence and your supplementary statement of  
evidence to this Board?

20 MR COOMBS: Yes, I do.

MR DAVIDSON: Could you make the brief preliminary statement you have  
Mr Coombs.

25 MR COOMBS: Thank you. I have got a brief summary here which is based  
on the evidence which I prepared for the Mighty River Power  
submission to the Horizons One Plan hearing.

30 Schedule F of the Horizons One Plan identifies a series of  
characteristics and values which lead to areas within the region being  
identified as outstanding natural features in landscapes. In some cases  
those areas within that schedule have been mapped. The mapped areas  
of outstanding natural features and landscapes within schedule F cannot  
35 be relied upon as a full assessment of the region's landscapes has not  
been undertaken using the amended Pigeon Bay criteria.

In my opinion, because a full regional landscape assessment has not be  
completed, the lists of characteristics and values and the map,  
outstanding natural features and landscapes, contained within  
40 schedule F of the plan cannot be relied upon to provide any certainty of  
the actual values present or their locations.

45 And just finally, there is another key issue that I would like to draw out  
from the two statement of evidence that I have prepared and that is the  
identification of a skyline as an outstanding natural feature in  
landscape, and I consider that concept itself to be quite problematical.

So as I have outlined in paragraph 4.11 of my rebuttal evidence and also paragraph 2.4 of supplementary evidence, I would just like to read that paragraph if I could?

5 HER HONOUR: Yes, by all means.

MR DAVIDSON: Just repeat the paragraph please - - -

10 MR COOMBS: Sorry, 4.11 of my rebuttal and 2.4 of my supplementary evidence.

MR DAVIDSON: I may be the only one who cannot hear properly, but I wonder whether with all the wind we are getting in here, ma'am – I am not getting a clear pick up of your voice, Mr Coombs.

15 MR COOMBS: I shall try and be louder.

MR DAVIDSON: Okay, speak a bit louder.

20 MR COOMBS: Okay. 4.11 of my rebuttal and 2.4 of the supplementary evidence: “The concept of skyline is depending on the consideration of both the landscape which is under assessment and also the location of the view. Given the vast area covered by the Tararua Ranges the infinite number of viewing locations throughout the region and the  
25 comments of the Environment Court in the Motorimu decision, in my view it is problematical and therefore poor practice to identify a skyline as an outstanding natural feature in landscape.

30 As noted by a number of witnesses, including Messrs Brown, Wyatt and Anstey, the Tararua Ranges contain a number of characteristics and values represented within the amended Pigeon Bay criteria which will make parts of them outstanding. In my opinion, relying on the identification of the skyline, we can see identification and protection of the ranges, as they are represented in schedule F.

35 MR DAVIDSON: Thank you, Mr Coombs.

**<CROSS-EXAMINATION BY MR MAASSEN [10.09 am]**

40 MR MAASSEN: Just very briefly, Mr Coombs, your evidence addresses the proposed One Plan, does it not?

MR COOMBS: Yes.

45 MR MAASSEN: There have been hearings held by the regional council on the One Plan, is that correct?

[10.10 am]

- 5 MR COOMBS: Yes, that is.
- MR MAASSEN: And you have given evidence in relation to the provisions on living heritage and specifically landscape in the RPS context?
- 10 MR COOMBS: That is correct.
- MR MAASSEN: Your evidence is but one of a range of evidence that has been presented to the hearing panel?
- 15 MR COOMBS: Yes.
- MR MAASSEN: There is, at least in part, a number of – sorry, there have been a number of submitters who have, in relation to the proposed One Plan, advanced more extensive landscape protection or recognition of the Tararua Ranges than you consider necessary or appropriate?
- 20 MR COOMBS: That is correct, yes.
- MR MAASSEN: As yet there is no decision that has been released by the hearing panel?
- 25 MR COOMBS: No, there is not.
- MR MAASSEN: To that extent the process in relation to the proposed One Plan is not materially more advanced than it was at the Motorimu hearing?
- 30 MR COOMBS: Other than the fact that parties have prepared and exchanged evidence, that varying levels of assessment have been undertaken on the landscapes of the region, which I consider to be a key part of the evidence that has been presented to the One Plan panel and, of course, also the line of questioning and the feedback that was received from the panel when I gave my evidence, I think those are all significant additions to the process since the Motorimu hearing – certainly increased my understanding of the region’s landscapes.
- 35 MR MAASSEN: Right. But in terms of formal position of the council, in light of the submissions and all of the evidence, we are no more advanced than the position was at the Motorimu hearing?
- 40 MR COOMBS: From a legal point of view, I do not think we are, no.
- 45

MR MAASSEN: No. So in relation to the operative regional policy statement, we have the narrative recognition of the skyline as a regionally significant landscape?

5 MR COOMBS: Yes.

MR MAASSEN: And the Motorimu decision has interpreted those provisions as applying to the highest ridges and peaks of the Tararua Ranges, is that your understanding?

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MR COOMBS: That is my understanding and, in line with the paragraph I have just read out, the Motorimu decision also stated that being on the skyline of itself is not enough to make a landscape outstanding, and that is the distinction that I am trying to make is that there are, particularly within the Tararua Forest Ranges Park, a number of values present which are recognised throughout the broad range of the amended Pigeon Bay criteria which will clearly make some of those areas outstanding. But to say it is on the skyline and therefore it is outstanding is not sufficient, and I think that that is well supported by the Motorimu decision.

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20

MR MAASSEN: Well, was the Motorimu decision not concerned with whether or not the Te Mata ridgeline qualified as the skyline for the purpose of the operative regional policy statement? Was that not the issue that the Court was dealing with?

25

MR COOMBS: In part, I think it was one of the issues, yes.

MR MAASSEN: And Mr Anstey and the council contended that the Te Mata ridgeline was, because from a distance, a reasonable distance in the plains, it represented the skyline for all practical purposes and the Court concluded that it was only the highest ridges and peaks that were caught by the definition of skyline?

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35 MR COOMBS: That is my recollection, yes.

**[10.15 am]**

MR MAASSEN: And I suggest to you that the Court did not suggest or attempt to diminish the provisions of the regional policy statement as it interpreted them?

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MR COOMBS: No, they probably did not. But then my evidence is not about the regional policy statement, it is about the process that has been undertaken to identify potential outstanding natural features in landscapes within the Horizon One Plan and really I was responding to

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the evidence of Mr Hindrup for the regional council when I prepared that statement. So I was quite careful at the start of my evidence and rebuttal to outline the breadth of my evidence, so I have not gone back and looked at the whole suite of historical policy statements.

5

MR MAASSEN: Yes. So the position is that your evidence is focussed on a proposed policy statement that has not yet even – the form of which has not even been finally determined at the local authority level?

10 MR COOMBS: Insofar as Mr Hindrup attempted to give certain weight to the One Plan in his evidence, yes, that is why I produced the rebuttal evidence.

15 MR MAASSEN: So the council's position at Motorimu was that really proposed One Plan was not sufficiently robust or at an advanced stage to carry much weight in the proceedings, and it sounds to me that you have a similar view now in relation to these proceedings, is that the position?

20 MR COOMBS: I think in terms of the legal position that is correct. But I think certainly all of those parties have been involved in the development of the One Plan and there have been various concessions made by some of them, even since my evidence was produced in June of this year, as to which parts of the region could be identified as an  
25 outstanding natural feature or landscape and which parts should indeed be mapped. So I take your point about the legal status, but I disagree about our understanding, I think that is well advanced from the Motorimu hearing and indeed even since I produced that statement of evidence in June of this year.

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MR MAASSEN: But until we hear from the hearing panel how they have dealt with all of that evidence and come to their own conclusions, really what you are talking about is your discussions and understanding as a result of being a participant in that process?

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MR COOMBS: Yes, and my observations of the other evidence that have been produced as well.

40 MR MAASSEN: Thank you very much, your Honour.

40

MR .....: No, thank you, your Honour.

MR .....: No, ma'am.

45 MR DAVIDSON: No re-examination, thank you, ma'am.

MR .....: No questions, thank you.

MR HUDSON: Good morning, Mr Coombs.

5 MR COOMBS: Good morning.

MR HUDSON: In paragraph 1.6, you say you have been engaged to provide rebuttal evidence to comment on in response to matters raised in the evidence of Mr Hindrup?

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MR COOMBS: Yes.

MR HUDSON: Mr Hindrup is a planner?

15 MR COOMBS: Yes.

MR HUDSON: Are you a planner?

MR COOMBS: No.

20

MR HUDSON: You are not giving planning evidence?

MR COOMBS: No.

25 MR HUDSON: The evidence presented by Mr Brown covered a comprehensive assessment of the region in terms of outstanding landscapes?

MR COOMBS: Yes, I understand he called it a sub regional assessment.

30

MR HUDSON: Sub regional?

MR COOMBS: But as broad as we have seen to date.

35 MR HUDSON: Do you adopt his evidence?

MR COOMBS: Not completely, but to some degree I agree with the method that the assessment was undertaken and broadly with his conclusions.

40 MR HUDSON: So when you have concerns about the process that the One Plan has gone through, could they be made – could the concerns be met by the work that Mr Brown has undertaken?

45 MR COOMBS: To a large degree they could. I think what Mr Brown has clearly completed in expert assessment, which has not been through a public consultation phase, although one could say that the Horizon One

Plan hearings are providing that consultation, but in terms of consultation which is specific to a landscape assessment, I think that that is currently missing from Mr Brown's work.

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[10.20 am]

MR HUDSON: But that is the work that has been undertaken that counsel just referred to in questions to you, as going through the consultation process and the hearings process right now for One Plan, is it not?

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MR COOMBS: Yes, although in terms of Mr Brown's assessment itself, nobody has taken that out to the public to see if they agree or not – whether or not.

15

MR HUDSON: Okay. Well, in terms of the conclusions Mr Brown reached regarding ridgelines, what is your view on those?

MR COOMBS: In terms of the Tararua Ranges, I largely agree with the conclusions that he came to and with the boundaries that he drew.

20

MR HUDSON: And what are your considerations of the status of the ridgeline in the Turitea Reserve?

MR COOMBS: In terms of how it fits within part 2 of the Act?

25

MR HUDSON: Yes.

MR COOMBS: I think in line with the conclusions that Mr Brown came to. I consider that the land which is largely encompassed within the Tararua Forest Park to be an outstanding landscape and the adjacent land, including the Turitea Reserve, to be an amenity landscape.

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MR HUDSON: Now, are you talking about ridgelines here? Are you limiting your evidence to ridgelines, or are you giving evidence on outstanding landscapes as concerned in section 6B and 7C?

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MR COOMBS: I am not purely limiting myself to the concept of a ridgeline, because I think that the consideration of those values is broader. I think the suite of the Pigeon Bay criteria cover a wider landscape area and those values are present within more than just the highest ridgelines.

40

MR HUDSON: All right. Well, have you given consideration to the status of the internal parts of the Turitea Reserve?

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MR COOMBS: To a very limited degree. The position that I have come to in my evidence is that nobody has really gone out and done that in

complete, full assessment. I think Mr Brown has had the best shot at it, has made the best attempt. But nobody has completely and fully undertaken that assessment. I have not completely and fully undertaken it.

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MR HUDSON: Well, working with what we have got, because that is what we have to work with, Mr Brown has done an assessment and there has been a process undergone which you are critical of for One Plan?

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MR COOMBS: Yes.

MR HUDSON: There is the operative regional plan?

MR COOMBS: Yes.

15

MR HUDSON: Regional policy statement. You, yourself, have done work, you have read the evidence, I presume, of the other witnesses that we are having here?

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MR COOMBS: Most of it, yes.

MR HUDSON: What is your opinion on the status of the internal parts of the Turitea Reserve?

25

MR COOMBS: I am not quite sure exactly which locations you refer to as the internal parts of it. Certainly in terms of the boundaries - - -

MR HUDSON: Let us say the catchment.

30

MR COOMBS: Within the catchment?

MR HUDSON: So it is all that flows into the water reserve?

35

MR COOMBS: I think the boundaries that Mr Brown has drawn on the Tararua Ranges I agree with. So those areas that he has identified as an outstanding natural landscape which, as I say, are largely contained within the forest park and those areas which he has identified as an amenity landscape which include the Turitea Reserve and I think the internal areas which you are referring to.

40

MR HUDSON: Well, there has been some discussion about the difference between the internal and external.

MR COOMBS: Okay.

45

MR HUDSON: And you may not have been here for parts of that, but that is why I am asking you about the internal, whether you might consider it to be an outstanding landscape feature as opposed to a significant amenity?

MR COOMBS: I would not have thought so. Can I see if I can find the maps for Mr Brown's -?

MR HUDSON: Yes.

[10.25 am]

MR COOMBS: The copies that I have got are probably at too broad a scale to really identify the subtleties that we are talking about. But that area which Mr Brown has identified as an amenity landscape, which he has identified as number 27, again I would largely agree with that, I would not have the detailed level of understanding of the site to subdivide that down any further. As I have said in my evidence, the start of my rebuttal evidence, it is my work around the Horizons One Plan on which my evidence is based on rather than any detailed understanding of the site itself.

MR HUDSON: Okay, there is no point in pursuing that if you have not assessed to that degree. No further questions, thank you, your Honour.

MR COOMBS: Thank you.

HER HONOUR: Mr Coombs, what is within best practice landscape assessment treatments (**INDISTINCT 10.25.52**)

MR COOMBS: In my view best practice landscape assessment is the suite of assessment methods that I have seen built up, particularly since 1999 when we got some very clear direction from the Court as to how they would see us assessing landscape, and that has really evolved into both broad scale landscape assessment at a district or a regional level where those amended Pigeon Bay criteria are consistently used and also at a project specific level.

And this has, I guess, come to a head within the last couple of years with our professional institute being invited by the Court to get together to put together some guidelines for assessment methods and there has been two particular workshops that have been held that I was in attendance at. We do not have a formal written outcome yet but we are heading towards that and, in my view, that encapsulates what I consider to be best practice landscape assessment. It is the consideration of the

5 last 10 years of case law and assessment methods that have built up largely around those criterion and people subdivide those into different areas, there is various groupings, some people are extending them. In the Horizons One Plan they have provided a much longer explanation as to what they might mean and I think that that is quite useful in that sense. So it is really the 10 years of the use of those criteria that have built up since 1999 and that is what I am referring to when I say “best practice”.

10 HER HONOUR: You cannot detail those criteria?

MR COOMBS: I think I have listed them in my rebuttal evidence.

15 HER HONOUR: I think you have talked about the amended Pigeon Bay criteria which is not quite the same thing, is it?

20 MR COOMBS: I guess there is various descriptions for them. Sometimes the amended Pigeon Bay criteria, the term is used synonymously with the West Sea (ph 10.28.30) criteria and I would consider them to be very similar.

HER HONOUR: Yes, one extended the other.

25 MR COOMBS: Yes.

HER HONOUR: Yes, and since then there has been Long Bay and Okura which has extended it even further.

30 MR COOMBS: Yes.

HER HONOUR: Yes, so that is not mentioned in your evidence?

35 MR COOMBS: No, it is not. Those criteria, obviously, are covered within schedule F of the One Plan which I have referred to, and within my brief of evidence that was presented to the One Plan, it was longer than this one, and probably went into a bit more detail in that regard.

40 HER HONOUR: What is your impression of section 6, do you think it limits things to a hierarchy of regions and districts when it talks about the protection of outstanding natural features and landscapes?

45 MR COOMBS: My observation over the last 12 months with a couple of regions around the North Island, in particular, undertaking outstanding landscape studies of their own. And the example that I would use is the Waikato region, is that at that regional level the landscapes which are being identified tend to be very, very broad in scale and they tend to

relate to broader communities. So, for example, I am aware that one of the draft outstanding landscapes for the Waikato region is the Coromandel Range and clearly that is a very broad scale landscape.

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[10.30 am]

Whereas at a district level we are finding that individual features are being picked up more often because they relate more closely to smaller communities. So that might be something like a hill or a rock outcrop that a particular community identifies with and I have heard of that or I have read evidence that has subdivided that down even further to landscape elements. So, I guess, we are moving down in scale through landscapes, features and then elements which could be a rather small individual feature and I consider it to be a similar gradation in scales from the regions down to the district.

15

HER HONOUR: So you believe that there is a hierarchy of criteria or a hierarchy of landscapes?

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MR COOMBS: Of landscapes. It does seem to be the case with some regions, although I know that others - for example the Greater Wellington Regional Council - have provided a series of criteria and now they are asking their districts to go out and do district studies. Rather than undertaking the study themselves they are setting up a framework and then providing some help and I think it is in terms of organisation and, indeed, some financial help for the districts to go out and undertake those smaller studies.

25

So, clearly, the Greater Wellington Regional Council thinks that that is a process that is best undertaken at a district level and that is my view as well. I do not see any value in having a regional study that is then subdivided up into a whole lot of smaller district studies where you could actually end up with a situation where you set up conflict between the two, I think that that could confuse matters. So I think it is help - - -

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HER HONOUR: Yes, but at the end of the day the hierarchy, whichever way you look at it, deems it to be an outstanding natural landscape?

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MR COOMBS: Yes.

HER HONOUR: At even a minor level in the district?

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MR COOMBS: Yes.

HER HONOUR: Does it worry you that for instance – from memory – the Greater Wellington plan is looking at community structures and strategies under the Local Government Act and not the RMA?

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MR COOMBS: Yes, largely because I work within the RMA, so I do not know how the Local Government Act might help them to provide any sort of protection for features which are value. So because I understand the RMA better than I do the Local Government Act I guess that would worry me.

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HER HONOUR: I think there is concern there that they might conflict but that is outside your brief.

15

MR COOMBS: Yes.

HER HONOUR: All right, and you are aware, of course, in your comment to Mr Maassen about the status of the proposed plan that, of course, that also goes on appeal to the Environment Court if it is not considered sufficient or enough?

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MR COOMBS: Yes, all I can really base my judgement on is the questioning and the comments that were made by the panel when I gave my evidence to the One Plan - which, obviously, I cannot introduce here - but that gave me an idea of what they were thinking and how they were receiving.

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HER HONOUR: Yes, it is still hearsay - - -

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MR COOMBS: Exactly.

HER HONOUR: - - - and it is still quite a long way from finalisation.

MR COOMBS: Yes.

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HER HONOUR: Yes. Well, thank you very much. Thank you, Mr Coombs. Thank you.

<THE WITNESS WITHDREW

[10.33 am]

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MR McCLELLAND: Your Honour and members of the Board I think it is now my turn to call Mr Bray?

HER HONOUR: Yes, Mr McClelland, thank you.

45

<SHANNON BRAY, affirmed [10.35 am]

<EXAMINATION BY MR McCLELLAND [10.35 am]

5 MR McCLELLAND: Thank you, ma'am. Your full name is Shannon Bray?

MR BRAY: Yes, that is correct.

10 MR McCLELLAND: You have prepared a brief of evidence which has been submitted to the Board?

MR BRAY: Yes, I have.

15 MR McCLELLAND: Is it correct you have also prepared a brief opening statement?

MR BRAY: I have.

20 MR McCLELLAND: Ma'am, we do not have copies of that but it is in writing and we will get copies a bit later on.

HER HONOUR: Thank you, Mr McClelland.

25 MR McCLELLAND: If you just read your opening statement.

30 MR BRAY: Good morning. May I first begin just requesting attention to a very small error in my evidence and I apologise. At paragraph 62 of my evidence, which is on page 19, I say, "By contrast south of the Turitea Reserve boundary" it should actually read "north of the Turitea boundary", I apologise for that.

35 If I may I would be bold enough to say that it appears, through the evidence and caucus session between the landscape witnesses, that there is general agreement between myself, Ms Lucas and Mr Anstey in regard to many of the issues of this proposal and that the greatest disagreement of view is between us and Mr Wyatt. I would therefore like to focus most of my opening statement on what I consider are the key variations between myself and Mr Wyatt.

40 Perhaps the best starting point is with our respective methodologies. What I think I can say is that there is general agreement between all of us that there are various tools a landscape architect can use to assess the potential effects of a proposal, some of which are more useful than others. Most importantly I consider it to be the combination of these  
45 tools and their own professional observations and analysis that leads to conclusions and I certainly do not rely on a single tool or method.

5 This, I therefore believe, provides my view on the use of clustering or  
grouping of turbines. Through previous wind farm cases I have come  
to learn that principally the first focus of an assessment is the potential  
macro effects of the proposal. This is as a result of many turbines being  
proposed in a landscape. In many cases the potential effects of one  
turbine compared to an immediate number, when considered on a  
macro level, is likely to be only marginally different. The creation of  
turbine groupings is a way of describing the general potential effects  
without needing to continually reference individual turbine numbers.

15 Obviously when considered on a micro level, such as the effects from a  
single property, individual turbines can have significantly different  
effects. This is why throughout the second part of my evidence I often  
refer to individual turbines within groups as having greater or lesser  
effects than the group as a whole. The groupings I came up with for  
this proposal were principally based on an earlier assessment of the  
landscape units on which they sit.

20 In previous hearings different landscape experts have come up with  
slightly different groups, which highlights my point that groups are  
only designed to suggest generalised effects on a macro scale.  
However, such different groupings has made life difficult for the Court  
and therefore decided to share my groupings with other experts. As a  
25 result I had an early conversation with Mr Anstey where we talked  
about the merits of turbine grouping and I sent him a draft version of  
my suggestion. After some weeks we agreed to adopt the version that  
is presented today.

30 I reinforce to the panel that this is simply a tool to help in the  
assessment and ultimately the description of the potential effects of the  
proposal.

35 In terms of photomontages or photo simulations I think we can  
probably let this issue lie. Mr Wyatt and the caucus notes have  
indicated that these are a tool for assessment and I agree that the  
assessment without them would have been significantly more difficult.  
However, I do reinforce my comments, in paragraphs 146 to 152 of my  
evidence, regarding photomontages and make the note that despite best  
40 intentions there were at least two errors in the photomontages presented  
to residents.

45 As we agreed in the caucus I consider that there was a fair selection of  
viewpoints put forward in the photomontages, however this does not  
follow through that I agree with Mr Wyatt's analysis from such  
viewpoints. In my opinion Mr Wyatt takes a point by point assessment

of the proposal and therefore we differ in our methodology of describing the potential effects. My method was to select a group of turbines and then explore how these might be perceived from numerous points within the landscape.

5

[10.40 am]

10 People, by their very nature, move around and through a landscape. As they do they tend to focus their attention on different parts of the landscape around them essentially focusing on distinctive landscape units even if they might not consciously be aware of it. For example, there are numerous places within the landscape as I have described where Bryant's Hill is a dominant and eye catching landform. People who move around the landscape, particularly local people, will be  
15 aware of the feature of Bryant's Hill and it will catch their attention from numerous different places in their journeys.

20 Therefore, rather than describe the wind farm from single viewpoints, I decided that a more realistic approach was to consider in terms of the landscape it is located on and how this landscape might be viewed on a more continuous or dynamic basis. Effectively having created groups of turbines that, in my opinion, are reflective of distinctive landscape units my assessment considers the effects of turbines not from single viewpoints but rather on a holistic landscape basis. As I have said,  
25 where necessary, I have singled out or discounted the effects of single turbines from certain viewing locations.

30 Perception studies. Mr Wyatt appears to place considerable weight on positive survey results and also local branding and marketing to suggest that turbines are generally seen as desirable attributes in a landscape. Whilst I do not doubt that the surveys Mr Wyatt refers to have been conducted accurately I am not convinced that we can make generalisations that people in Palmerston North will generally approve of this new proposal.

35

40 As no doubt the panel will know from their own experience, landscape is a complex, emotive and often subjective subject. Through my experience in dealing with communities in and around proposed wind farms I often find people who are genuinely in favour of renewable energy but they struggle with the reality that this means a favourite view or a cherished landscape will be, in their terms, "radically altered". What I am learning is that no survey can provide an accurate picture of how local people will perceive a particular proposal in a particular landscape. The perception of a given proposal will be  
45 different based on how many individuals relate to the landscape in which they live and how they choose to interact with it.

5 In this situation one of the biggest issues, in my opinion, is the potential cumulative effects of the proposal given that 286 turbines have already been constructed or consented. An early question I raised in my evidence is whether any more turbines should be consented. I do not think this is something that can be answered in referring to perception studies, there is an old saying “you can have too much of a good thing”. What we do not know from any perception study is how many turbines in this landscape are “too many”.

10 I also have issue with Mr Wyatt’s use of perception studies and positive wind farm branding to perhaps downplay the potential adversity of effects from Red Rock Knob. My evidenced explores the rationale behind why people make the effort to climb to this point suggesting that it is for the reward of the expansive outward view. In my opinion turbines would radically alter this view. I suggest that if people are keen to get up close and personal with a wind farm then they are able to drive to the existing and purposely created visitor car park on Meridian’s Te Apiti wind farm and not make an arduous four to five hour climbing walk.

20 Cumulative effects. I find that I am at great odds with Mr Wyatt’s assertion that this proposal will have minimal cumulative effects. In my opinion the issue of cumulative effects sits at the heart of my assessment. It is not solely the number of turbines that is at issue with respect to cumulative effects, although I note that this proposal seeks to increase the total number of turbines in this landscape - I have got 33 percent but, of course, Motorimu has now been taken out – and increase the spread along the immediate skyline, not including Motorimu, from approximately 15 kilometres to 27.

35 In addition to turbine numbers and expanse is the issue of turbine design and I wish to reinforce my opinion that the existing landscape of wind farm development could potentially be singled out as a world **(INDISTINCT 10.44.12)** example of what not to do. Numerous overseas authors, such as Paul Gipe, Caroline Stanton, Robert Thay **(ph 10.44.17)** of Scottish National Heritage, indicate that consistency of turbine design is one of the most crucial elements in approving the aesthetic quality of multiple wind farms in a single landscape. Our very own Resource Management Act asserts that we must, among other things, “maintain and enhance aesthetic coherence” as defined under amenity values.

45 Whilst the proposed turbines are similar to the existing large format turbines they are significantly taller, 20 percent bigger than Te Apiti, 14 percent taller than T3. In combination with the existing five

different types of turbine designs in this landscape I consider that this height difference will be distinctly noticeable and adverse. As I state in my evidence I also believe this proposal would increase the adversity of Te Rere Hau wind farm.

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[10.45 am]

Outstanding landscape: The caucus notes I believe accurately depict the various landscape experts' opinions on the level of significance of this landscape. I find myself in general agreement that the landscape around Turitea Reserve and Hardings Park has outstanding features and the skyline ridges are outstanding features, but as a whole the landscape is not outstanding.

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Important to me, however, is that the site represents the end of a continuum of vegetation covers that extends from the upper reaches of the Tararua Forest Park. I have also made the observation that the landform around the peak of Marima begins to change, becoming significantly more undulating south of this point. For these reasons, amongst many others, I consider the landscape to be a significant amenity landscape, particularly when viewed from the western side.

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Assessment conclusions: I do not think there is much point in addressing assessment conclusions in my opening statement, as I think it is quite clear from our evidence and caucus meetings that Mr Wyatt and I simply do not agree with regard to the potential significance and adversity of this proposal. Ultimately, I find myself in a very similar position to that of Mr Anstey, that given that there is an obvious desire to harness more of the wind energy present in this part of the country the landscape could potentially absorb some turbines on the upper ridgelines near to the Pahiatua Track, but not in any of the other proposed locations.

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The exact end point for such turbines in this part of the skyline has been somewhat difficult to define; therefore, I am not surprised that Mr Anstey, myself and even Ms Lucas were unable to agree on such a location. In the end, the end point for my turbine envelope is perhaps more based on a change in landform rather than land cover. Whilst I consider that there are significant ecological factors to be considered in the span between the reserve boundary and the peak of Marima, I consider that the wider context to the landscape could be appropriate to consider turbines in this location. However, I assert that they should be of the same design as the Te Apiti turbines.

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Vegetation mitigation: Equally, I believe there is little point traversing the subject of vegetation mitigation as a way to avoid potential effects

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on visual amenity as again both Mr Wyatt and I clearly have different opinions. I guess that I could accept that should a landowner wish to, they could plant vegetation to screen views of turbines, however, I think it is a big assumption to suggest that such landowners would want to. I think it is clear from the submissions received from local residents that the view of the foothills and ranges is an important part of their lives and I therefore cannot accept that such people would wish to plant vegetation in order to screen such a view. I also note that such vegetation would take time to establish.

5

Thank you.

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MR McCLELLAND: Yes, thank you, Mr Bray, and if we can get some copies of that for the Board and various others. Now, if you just stay there please and answer any questions that there may be from counsel and the Board.

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**<CROSS-EXAMINATION BY MR DAVIDSON**

**[10.48 am]**

MR DAVIDSON: Good morning, Mr Bray.

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MR BRAY: Good morning.

MR DAVIDSON: I am going to have to ask you to be patient, as with the Board, I need to go through a good part of your evidence to test it against the case for Mighty River, and in part this will be helped if you have to hand, firstly, your turbine group layout which is an appendix or attached to your evidence?

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MR BRAY: Yes, I have that.

30

MR DAVIDSON: If you just turn that up. I do not know that it has got any description except "Proposed Turitea Wind Farm Turbine Descriptive Groupings"?

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MR BRAY: That is it.

MR DAVIDSON: That is what I have got here. So I am going to refer to that, for one. And secondly, because I think it is quite a useful reference point for my questions of you, Ms Lucas in her attachment 1 provided a wider format layout of the east turbines and also Motorimu - it is in fact the back page to her opening attachment.

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MR BRAY: Can you - - -

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MR DAVIDSON: I am going to give you - - -

MR BRAY: Spare me a spare copy of that, yes, thanks.

MR DAVIDSON: I am going to give you the small version of it.

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MR BRAY: That is fine.

MR DAVIDSON: So this is the document I am looking at. It is attachment 1 behind the frontispiece, for Ms Lucas's attachments. So it has got the Motorimu wind farm in there as well.

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[10.50 am]

I will just get myself set up a bit better than I am here.

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Now, just looking at Ms Lucas's attachment 1, this, I think from my reference to your appendix or your table is basically the same. It should be the same, should it not?

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MR BRAY: I had a brief look at it when her evidence came out and it looked the same to me, obviously a different graphic technique.

MR DAVIDSON: Yes. Now, I just want to clarify something – and I do recognise that you are not in your evidence going to individual viewpoints to the degree that Mr Wyatt, for example, did, that was not your case; Mr Anstey has given evidence of that. But in your evidence and in your sort of macro or broad view, to what extent have you brought to account the fact that this proposal relates to 127 turbine sites, that is how it began life, and whether it is a 3 or 2.3 megawatt proposal, how that affects the number of turbines in this landscape?

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MR BRAY: I think I say at the beginning of my evidence – I will just turn to it, I cannot find it directly, quickly - but essentially I was aware that it was based on an envelope approach, that not all sites that are on the map were potentially going to be turbines, but I did not have detail of exactly what turbine was going to be where.

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MR DAVIDSON: It is not, in any way, a trick question. I am just trying to clarify – I think I have from your answer – you have not sought to distinguish between a 2.3 or 3 megawatt proposal, as such?

40

MR BRAY: No, I have not.

MR DAVIDSON: And therefore, not to examine the photomontage produced by Mighty River, to see in them how it would be affected or they would be affected by whether it was a 2.3 or 3 megawatt proposal?

45

MR BRAY: I have not done that to any degree, no.

5 MR DAVIDSON: Well, I do not want to again force the point, but I just need to understand, have you done it to any degree?

MR BRAY: I briefly had a look at the difference between the turbine designs, but other than that I have considered the taller turbine.

10 MR DAVIDSON: Right.

MR BRAY: The three megawatt turbine.

15 MR DAVIDSON: And one of the key elements I think you do understand, from reading your evidence, is that it is the ellipse that creates the constraint on the proximity and number of turbines that is created? By the sheer size the ellipse effect, turbine to turbine, will restrict the opportunity to space and place the turbines? Do you understand the ellipse effect?

20

MR BRAY: I think I understand what you mean, is that the bigger the turbine the further apart they need to be, is that what you are getting at?

25 MR DAVIDSON: Yes, yes. And what it comes to here is the proposal is now before this Board, is that we are looking at 121 2.3 megawatt machines or 11 3 megawatt machines?

MR BRAY: Okay.

30 MR DAVIDSON: That is right. Now, I will just deal with this whole question of the turbines a little bit more, given your opening. I am just going to ask the registrar to show you RVP 13A, if I may.

35 Now, I am sorry Mr Registrar, I am going to use the version I have got here and ask you to show Mr Bray and counsel and then counsel around the tables and then the Board, if I may please? Could you?

**[10.55 am]**

40 Before I ask you just to look at this, this RVP 13A is to illustrate to you, for my questions, what happens whether you are using a 3 megawatt or a 2.3 layout, and when you look at this you will see that in blue we have got two turbines, 86 and 84, not built under a 3 megawatt layout and in red not built under a 2.3 megawatt layout, and that is 85 and 88. This is RVP 13A, it is Guyland Drive but the location of this perspective is irrelevant to the point I am addressing.

45

I will just ask the registrar to show counsel.

I am just going to – if I may come forward, your Honour?

5

HER HONOUR: Yes.

MR DAVIDSON: Now, Mr Bray, all I am asking you to do is to recognise the way in which one needs to look at each photomontage to recognise that what you see in the representation depends on which of the two formats proceed at 2.3 or 3 megawatt. Do you see the point?

10

MR BRAY: Yes, and whilst I have not taken a viewpoint analysis in the evidence that I have presented, I have visited all of those locations, or most of them, and used the full size photomontages at those locations.

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MR DAVIDSON: Yes. The point, Mr Bray, is to give you the opportunity to see what I am talking about and that what we see in the photomontage needs to be adjusted depending on which layout is being used?

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MR BRAY: That is correct.

MR DAVIDSON: All right. I will ask the registrar to just take, or pass that to perhaps Mr Hudson and down past the Board please. You may need to go in this way.

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**[11.00 am]**

Now, on this question of the turbines that are being used then, apart from whether they are 2.3 or 3, in your evidence at page 25, paragraph 77, you have set out in a convenient way the wind farms, including Motorimu and Turitea proposed, and you have referred there to the number of turbines and so forth. What we are looking at here is with the loss, if you like, of one of the turbines we have got 121 1.3 megawatt turbines, 111 3 megawatt turbines as it is before the Board now, and you have described for Turitea a blade length of 55 metres – do you see that?

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MR BRAY: Yes.

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MR DAVIDSON: And that compares with Te Apiti through to T3 being the largest blade length, and you have got Turitea at 55. Now, I just want to know where that came from, Mr Bray, because as I understand it from my enquiries that detail is not correct, it is not a blade length of 55 metres but 45 metres if it is a 3 megawatt turbine and 41 metres if it is a 2.3 megawatt turbine.

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MR BRAY: If they are the correct numbers then I will stand corrected. When I made my initial assessment of the proposal I could not find details of the exact turbines that were going to be used and, therefore, as I say –  
5 and perhaps I should have asterisked all of Turitea, but what I have based that on is a reference from the website based on a V90 turbine, so that is where that number has come from. So if that is not the turbines that are going to be used then I stand corrected on that column.

10 MR DAVIDSON: Well, thank you for that. And the reason I am raising it with you is that we have already talked about the turbines in question here and you have I think expressed a very strong view about Te Rere Hau in your evidence, have you not?

15 MR BRAY: Yes.

MR DAVIDSON: To the extent you would like to see them removed?

20 MR BRAY: Yes, obviously we cannot do that in this hearing, but that would be my ideal.

MR DAVIDSON: Chance your arm here. But the reason I have to raise it with you is that if we look at that 55 metres, in the following paragraph at page 25, you talk about the consistency between Te Apiti and T3, and you make the comment in the fourth line that the shorter blade on a  
25 taller tower is more favourable to the eye, being Te Apiti, and the T3 a somewhat stumpy appearance although they are taller, and that is because you identify the relationship between the blades and the height of the tower, is it not?

30 MR BRAY: That is correct.

MR DAVIDSON: So in the description which I will adopt for these purposes, you say this appears to happen when the blade length is longer than half  
35 the tower height, and both these turbines have a gentle, graceful turning motion and through simplicity of form have the most sculptural characteristics of the existing turbines, and these turbines could easily coexist in the landscape with minimal adverse effect on visual coherence. So if we are going to get the relationship between the blade  
40 and the tower, we have got to get the diameter right, do we not?

MR BRAY: That is what I think, yes.

45 MR DAVIDSON: So you would not yet have thought about the correlation of these towers if you get the correct blade length to measure against the tower height as you have used the wrong one?

MR BRAY: What I am trying to get to in my evidence is I have spent some time, quite a bit of time, looking at the turbine that are there, existing, and given that they are there for us to look at it is more favourable to my view that the Te Apiti turbines with the smaller blade are a better choice, and so what I am suggesting is that in order to achieve best visual coherence between turbines and best scenic aesthetic that we would use a turbine here that is similar to Te Apiti because that has a more favourable appearance.

MR DAVIDSON: So I understand that, but the reason I press the point a bit more is that you have not yet made the adjustment by getting the correct blade length against the towers proposed here - to get the, if you like, the aesthetic appearance you are describing to assess it against Te Apiti?

[11.05 am]

MR BRAY: Not for the correct blades, no.

MR DAVIDSON: Right. Now at the moment your conclusion on the evidence that were set out at paragraph 237 – I am just going to take you through this conclusion before working back into the evidence itself, is that you have taken a step back, as you describe it, to study the receiving landscape against what is there now being the existing wind farm development. So you really – correct me if am wrong, but you have said what do we have in its entirety here at present viewed from the regional and the local perspective. As to what you mean by step back?

MR BRAY: Yes, I have not done it – I would not say I have done it to a regional level. I clarify that my assessment of the landscape is the ranges and it is the section from just north of Te Apiti through to the foothills around Tokomaru and so that is the landscape that I have based my assessment on.

MR DAVIDSON: Okay. Now, the premise you have worked on is that because we have a significant number of turbines it is likely to be sensitive to further development which I take to mean – we have already got a lot there and therefore any more is an add on to what we have. Is that what you are saying?

MR BRAY: Yes.

MR DAVIDSON: And when you prepared this evidence, I think I am right, you would not have been aware of Motorimu being, as it were, on the cusp or potentially not proceeding?

MR BRAY: I have done some work with wind farms and so I had a fairly good idea that it was not going to proceed but I did not know for certain.

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MR DAVIDSON: And that was – your understanding was based on what you have read or heard about the uncommerciality of that proposal as consent?

10 MR BRAY: That is correct.

MR DAVIDSON: If we just look at numbers based on the Turitea proposal going from either 111 or 121 turbines. Motorimu had 80 did it not?

15 MR BRAY: That is correct.

MR DAVIDSON: And so if we just forget location for a moment and look at numbers we have got an increase of something in the order of 40 at 120 and 30 at 111. That is the net increasing forgetting location for a moment.

20

MR BRAY: If you say so.

MR DAVIDSON: Now, what you have done then starting with this premise of sensitivity and exploring what that means, in your paragraph 2.37 is to say – let's have a look at understanding the capacity for wind farm expansion and you use the expression based on a model of what might be considered as ideal. Now, I just need to understand that; this is your perspective of what would be an ideal model for further wind farms, is that what you are saying?

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MR BRAY: Yes, it is. It is based on, as I set out in my paragraph 32, what I call a scenic aesthetic model. What I am saying is, yes I have had a look and on my professional observations I have tried to determine what would be an ideal window for turbine development based on a scenic aesthetic model.

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MR DAVIDSON: So ideal is – of course we do not have a text we can look at to see what is ideal. This is your judgement of what is an ideal scenic aesthetic appraisal, purely from a visual perspective?

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MR BRAY: It is based on visual and landscape perspective.

MR DAVIDSON: Yes. So it does not have any, if you like, RMA balancing considerations at all in regard to the desirability of the project, relevance to the region, any of those things in it?

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[11.10 am]

5 MR BRAY: It does not take into consideration the perhaps, yes, the more positive effects of wind farms that may be under the RMA or ecological effects. This is based on a landscape and visual appraisal.

10 MR DAVIDSON: Right. And does ideal to you mean an absolute minimisation of visual effect?

MR BRAY: No, it does not. If was to say that was ideal then I perhaps would have come up with zero turbines.

15 MR DAVIDSON: You perhaps would have come up with zero. So ideal does not mean what you might like to see but what you think is ideal in terms of what?

20 MR BRAY: It is ideal given that – I think you do not need to be an expert to know that there is a strong demand to harness the wind energy in this region. I have been involved in wind farm hearings where I have heard evidence to say that. So understanding that there is a need to put more turbines, that is in the back of my mind. I then say, well let's look at the landscape and say if we had to put these somewhere, where would they go and how many would there be? That is my ideal – that is my definition of ideal.

MR DAVIDSON: And do I take it that that means that for example Motorimu would not have gained your support?

30 MR BRAY: I worked on Motorimu and not all of Motorimu gained my support. I was very against the turbines that were on the Te Mata ridgeline and I was okay with the turbines in the basin.

35 MR DAVIDSON: But the proximity in a geographic sense to the forest park moving south on these ranges was not of a concern in itself to you?

MR BRAY: Motorimu is a slightly different landscape. The basin I felt was suitable, was appropriate for turbines from a landscape perspective.

40 MR DAVIDSON: All right.

MR BRAY: And that was my evidence in that case.

45 MR DAVIDSON: So if we work from this so-called ideal, we have at your paragraph 2.39 the attempt to locate or identify the aesthetically ideal window for development and then within that window you say, that is a

pointer to what is acceptable in a cumulative sense, you get within that window, that is the thrust of what you are saying?

MR BRAY: Yes, that was the thrust of what I was trying to get at.

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MR DAVIDSON: But if you go outside that window you identify the potential for those effects being greater as well as - - -

MR BRAY: Yes.

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MR DAVIDSON: Okay. And what we have in your analysis is that the cumulative effects include, what I will call, the sequential traveller, the person driving by or scanning the views, the sequential visual traveller, and you have the recurring view, that which someone confronts for example by living in a part of the Palmerston North where these are, as it were, always there. That is part of that accumulation?

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MR BRAY: Yes.

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MR DAVIDSON: And then that which follows simply from being closer to the city. At your 2.38, you talked about these cumulative effects and the points I have just made to your – referred to you, are set out there, the traveller and so forth. Do you accept the evidence of Mr Wyatt, I will just refer to the rebuttal evidence at page 32, figure 5.6, where he picks up Mr Anstey's comment that topography and vegetation make views transient.

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I am just picking up comment made by Mr Anstey - you do not have to look at this Mr Bray and I am not going to stop you doing so. The point I am getting at is that Mr Wyatt is making the point that in terms of sequential views, whether they are the driver, the walker, the scanner person looking, we have topography and vegetation which make views in a sense transient, a change, nothing is fixed?

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**[11.15 am]**

MR BRAY: That is the nature of a landscape, it is dynamic.

MR DAVIDSON: Have you got Mr Wyatt's evidence there and his rebuttal? I will get you to go to his figure 5.7. So I will get you to go to his figure 6 at page 23. Have you read this part of his evidence before?

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MR BRAY: Yes.

MR DAVIDSON: The point he is making there is that this represents the change in the scenic area for the existing and proposed wind farms.

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This is what the areas from which the wind farm Turitea would be seen in addition to the areas from which the wind farms presently would be seen to the viewer?

5 MR BRAY: Yes.

MR DAVIDSON: It adds something to the perspective overall but there is already a very significant area from which wind farms in this area will be seen?

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MR BRAY: That is correct, but what this graph or this diagram does not show is the proximity of the view to a turbine and the recurrence of turbines in the travel.

15 MR DAVIDSON: Correct and that is the point I was making before from his evidence with regard to the transient nature that we will get recurring views but they will change depending on the position from which you are observant.

20 MR BRAY: They will change and were this proposal to be granted consent, the frequency of turbine views would increase simply because there are more turbines in a greater expanse of the landscape that we have seen.

25 MR DAVIDSON: And the figure that I have put to you that shows the extent to which that appearance becomes obvious?

MR BRAY: Well, yes, but all that figure shows is from what parts of the landscape the turbines can be seen. What it is not showing is how often a particular turbine or group of turbines would be seen on a recurring visit through there.

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MR DAVIDSON: Correct. But the point I want to take you to is this, that as his rebuttal, Mr Wyatt's rebuttal evidence says at paragraphs 5.8 and 5.9, he agrees with Ms Lucas when she says the identity of Manawatu and Palmerston is already associated with wind turbines, he agrees at 5.9. And while the Turitea wind farm will increase the numbers of turbines on the ranges and the numbers we have just been through together, it is debateable whether this association will considerably increase as Ms Lucas claims.

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I just want to test you on this point. Given the numbers we are now talking about, we are getting, depending on this Board's perspective, if a consent is granted, up to about another 40 or less because 40 would be the maximum over Motorimu's deletion, down to 30 at the three megawatt turbine. That is the increase in total number of those built or consented and the point that is being made, and I am putting it to you, is

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that in - given that this is a landscape with a real presence of wind turbines, as this vantage point here tells us, there is no very significant number increase between built and consented and this if it proceeded, but the location of course changes over some 11 kilometres of the hills?

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MR BRAY: And I think your later point there is critical. I think that – you could say that there is only 40 extra turbines but they are in a very different location.

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MR DAVIDSON: Yes.

MR BRAY: They are of a very different size than Motorimu was and they are on a much more prominent landform and therefore more visible than Motorimu would have been from most locations.

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MR DAVIDSON: Yes. You prefer the Motorimu location obviously from what you have said so far?

[11.20 am]

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MR BRAY: I do not know I would say I prefer the Motorimu location, no.

MR DAVIDSON: So reservations about that one too.

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MR BRAY: I did have a number of reservations about that proposal.

MR DAVIDSON: Well, that is one that 280 turbines survived the test of a searching enquiry for an Environment Court hearing?

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MR BRAY: It did.

[11.20 am]

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MR DAVIDSON: All right. Now when you moved from your aesthetic ideal or within that concept, in your conclusions at paragraph 240, you consider the main ridge line from Te Apiti to Marama to be appropriate for development of wind turbines. So if you have to hand Ms Lucas's attachment 1 you get a pretty good look at this. And if we look at turbine 27 on Ms Lucas's attachment, just beneath it I think we have

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“Marama” written, can you see that?

MR BRAY: Marima, yes.

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MR DAVIDSON: Marima, I am sorry. So your conclusion which I am just taking you to, is that in your aesthetic ideal, the main ridge line from Te Apiti to Marima to be appropriate and your reasoning is, that this is

predominantly based on the strongly coherent land form which ends with the steep rise in topography north of, is it Pariti Road?

MR BRAY: Pariti.

5

MR DAVIDSON: And the increase in topographical undulations south of Marima. And then south of Marima, which you call more correctly, the northern Turitea reserve boundary, the indigenous bush cover is a land use which contrasts the northern landscape units. So south of Marima they were compromised a noticeably different landscape unit. But the first of those points you make, we will come back to them in detail, is you see the steep, sorry, the increase in topographical undulations south of Marima.

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So in very raw laymen's language, you see a more coherent even effect of the ridge line to Marima, and then it starts to undulate. Is that the point?

MR BRAY: Yes.

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MR DAVIDSON: But in terms of actual height immediately associated with Marima, we are looking again at the attachment of Ms Lucas, we are looking at - this is in the groups I will come to, this is group D, turbines 28, 29, 30, 31, 32, 33, aren't we. These are those that fall within your, outside your cut off line of Marima, which is turbine 27?

25

MR BRAY: Yes.

MR DAVIDSON: For the reasons I have just been through, this is because of the -, two reasons you give. The increase in topographical undulations and you see a change or the indigenous bush cover is a different land use. Is that right?

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MR BRAY: Yes.

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MR DAVIDSON: But that last point doesn't magically begin at Marima does it? Because all the witnesses seem to refer to the spine or the column of indigenous vegetation which runs in different perspectives right through to the forest park?

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MR BRAY: Yes, I would agree, it was quite a challenge I would say to figure out where a potential boundary would be. And I say that in my evidence. And certainly the ecological values as I understand them are important from the beginning of or the end of South Range Road Turitea boundary, right the way through to the forest park.

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MR DAVIDSON: Yes. I am getting as much as anything else, that the skyline, I was hoping today that I could say sort of turn around and we will look at this. But there is not a great deal of point. But if you have got RVP12A and B there, have you got -, sorry, public viewpoints A and B? You don't have those?

MR BRAY: No, I haven't I am afraid.

MR DAVIDSON: I will have the registrar show these to you.

[11.25 am]

As the board looks at this, I am going to ask the board to note and then you, the advertising sign for the Mad Butcher, which is on the, perhaps not a very legal reference, but -. If I am right, just to the left of the "mad" is Marima. Immediately above "butcher" is Tirohanga. And above photomontage I think is Arawaru. Could you, I don't have your knowledge of the district, Mr Bray, but help me if I am wrong.

MR BRAY: My understanding would be if you see the FMG stadium sign and there is a bank of upper tier seating there?

MR DAVIDSON: Yes.

MR BRAY: At the far left of that upper tier seating, if you go up from there, that small peak there, that is the point of Marima.

MR DAVIDSON: On the, -?

MR BRAY: On the rear sky line, so if you come left of the FMG stadium there is appears to be a lighting rig, there is a white building and there is a lighting rig off there, and then there is some turbines there, head left and then there is a peak there. That is my understanding that that is Marima.

MR DAVIDSON: Right. I am going to try to nail this down, Mr Bray, because - - -

MR.....: Perhaps I could approach and point it out?

MR DAVIDSON: Marima is above 152, right? Mr Baker has just informed me. 152 degrees, is that right?

MR BRAY: Yes.

MR DAVIDSON: Right, well let's use that one rather than the Mad Butcher, because I am out about eight degrees, but in terms of the topography, looking at it from there, the land on that back ridge would appear to fall  
5 away, not to climb at that point.

MR BRAY: It does. Immediately after Marima the land falls away very quickly. I think it drops about around about 160 metres before climbing back up again through a series of undulations to the, there is a  
10 trig station at turbine 33 which is the highest, at 622. It is quite undulating between Marima and that point.

MR DAVIDSON: So, the reason I am asking this of you, is that we are now getting the larger version, it was on the window. Is that you have  
15 created in this aesthetic ideal window, this cut off point at Marima, at turbine 27 and as a result, while in your groups D & E which we will come to you have supported at least the visual perspective location of some 44 turbines. We will come to the detail in a moment.

20 You have excluded those which lie to the south, which is 28 through to 33, isn't it?

MR BRAY: Yes.

MR DAVIDSON: See in the attachment. And because we are using, I am  
25 using Ms Lucas's attachment 1, the effect of your evidence is that while you are supporting with one or two exceptions, which again we will come to, most of, but not all, the red group E and group D for these purposes, we stop on your evidence at 27, Marima, and we don't get  
30 any of the 28 to 33 which as you have just shown us as we are coming off Marima the land undulates before climbing again into the forest park. Is that right?

MR BRAY: That is correct.

35 MR DAVIDSON: And - - -

HER HONOUR: Mr Davidson, we might take the morning adjournment.

40 MR DAVIDSON: Sorry, your Honour, thank you.

HER HONOUR: It might assist people to get their heads around the graphs.  
Thank you.

45 **ADJOURNED**

**[11.30 am]**

**RESUMED****[11.48 am]**

MR DAVIDSON: Mr Bray, now what we have picked up is the way –  
5 looking at your turbine groups or in respect of Ms Lucas' attachment 1,  
you have got this demarcation point at Marima and if we look at the  
compass axis on the top left of attachment 1 and looking at what you  
then call as south. I think you have described those turbines in black  
group D, 28 through to 33, as sprawling south in a southerly direction.  
10 Just pausing here, in the same attachment Arawaru can be seen just left  
of the word Tararua in the Tararua range, can you see that?

**[11.50 am]**

MR BRAY: Sorry, I am looking on attachment 1, yes.  
15

MR DAVIDSON: You see it there just to the left?

MR BRAY: Yes.

MR DAVIDSON: And as I say 767 metres?  
20

MR BRAY: 767 that is correct.

MR DAVIDSON: And go back to Marima which is a turbine 27, and that is  
25 something like 580 that they - - -

MR BRAY: Marima is 563.

MR DAVIDSON: 563 and 700. Just as a point of reference we have got a  
30 scale up there in the top left of attachment 1. There is a three kilometre  
scale, so we would be looking – using this piece of technology I have in  
my hand, namely a ruler - at something in the order of six kilometres  
between those two points.

MR BRAY: Just on seven - - -  
35

MR DAVIDSON: Just on seven kilometres. It is easy with an attachment like  
this or your own group map to think things are in close proximity but  
this spreads out over a long kilometerage does it not, some 11  
40 kilometres, this Turitea proposal as a whole?

MR BRAY: Yes.

MR DAVIDSON: Indeed if we were to look at it from 33 in the black group  
45 D on attachment 1 of Ms Lucas and go through to 97 which is in the far  
right, we would be something in the order of nine kilometres or so?

MR BRAY: Yes, just over nine kilometres.

5 MR DAVIDSON: And the – I will just come to the point with the calculation  
but if we look at group D and group E most of which get through your  
assessment is about 44 turbines in those two groups collectively are  
there not?

10 MR BRAY: Something like that.

MR DAVIDSON: Yes. Spread out as I have just put to you over something  
like eight to nine kilometres?

15 MR BRAY: Yes.

MR DAVIDSON: That is the walk across the hills that they represent?

MR BRAY: Yes.

20 MR DAVIDSON: Now, when you move then to having described your  
window and the aesthetic ideal you have effectively said come to  
Marima and no further south 28 to 33 are out there on this aesthetic  
ideal, for the two reasons you have mentioned. The more undulating  
land form and the ground cover?

25

MR BRAY: Yes.

MR DAVIDSON: And the second or major subset of exclusion, I will put it  
very broadly, are the foothills.

30

MR BRAY: They exclude the foothills, yes.

MR DAVIDSON: Yes.

35 MR BRAY: If you are talking about the main skyline ridges.

MR DAVIDSON: Yes. And so what we have is a very useful reference at  
your paragraph 154, your appendix 5. Sorry paragraph 154, appendix –  
they are in appendix 5 but you have got them here – the mapping at  
40 appendix 5, but we now see how you have got to your groupings by  
taking A, B, C and again we can refer to either your own group map or  
Ms Lucas', it does not really matter. In Ms Lucas' attachment we have  
got the red or orange group A, the blue group B or purple group B and  
the green group C and you have treated these effectively as one unit of  
45 Bryant Hill. That is correct, is it not?

MR BRAY: One landscape unit?

MR DAVIDSON: Yes.

5

[11.55 am]

MR BRAY: Effectively.

10 MR DAVIDSON: Well, we look at your paragraph 245, you say the turbines in groups A, B and C would occupy the landscape unit of Bryant Hill including some recess foothills between this landmark and the track. That is the essence of it?

15 MR BRAY: Yes, I identified Bryant Hill as a more distinctive landscape feature or landscape unit and therefore what I am saying in there is it includes that. Group A being on the forward side of Bryant Hill but group B being on the rear side and then group C being in those hills between Bryant Hill and the main ridgeline and the track.

20 MR DAVIDSON: They are what you call group C, the recess foothills, is that right?

MR BRAY: Yes, that is correct.

25 MR DAVIDSON: So A is the forehead one and that which is closer to Palmerston North City?

MR BRAY: Yes.

30 MR DAVIDSON: Now, the rationale you describe in the summary, which is helpful, is a description that this part of the landscape is valued for its simple rural character contrasting strongly with the more developed plains of Pacific Drive Terrace, and the foothills give a natural boundary to urban development and this is an aesthetically important local landmark. How close on Bryant Hill - let's use your group A -  
35 does rural residential development come?

MR BRAY: I have not got the number exactly to hand but it is – I believe  
40 there are residential developments within two kilometres.

MR DAVIDSON: Yes. And group B?

MR BRAY: A little bit further than two kilometres.

45 MR DAVIDSON: And the recess foothills in group C?

MR BRAY: That is starting to get up to around about three or four kilometres.

MR DAVIDSON: While they are attractively shown in these plans, again using scale, if we look at group A as you have described it, between the southern-most and the northern-most turbines, which is 78 through to 88 group A, are the numbers correct?

MR BRAY: Yes, that is what I have.

MR DAVIDSON: Even within the group A itself we have a span of some two kilometres across your grouping?

MR BRAY: Yes, I have got it at 1.7 but two kilometres is an approximate.

MR DAVIDSON: Yes. And if we go the other way from 82 in group A through to 88 in group C we have a span of something like four and a half kilometres – four, four and a half kilometres?

MR BRAY: Yes.

MR DAVIDSON: Now, the first and immediate proposition is that when we starting grouping in this way and start talking about landmarks of Bryant's Hill, when you group across the span I have just put to you, we are talking about – although it is not a square, it is not an oblong as such – sort of two kilometre depth, if you like, and a span of something in the order of four kilometres the other way - you have got into this group, groups A, B and C, of Bryant's Hill a very large area of country with very different relationship values according to which turbine and which group you are in. That is so, is it not?

MR BRAY: Yes.

MR DAVIDSON: So treating Bryant's Hill as a "landmark" - and I can understand your use of the word – one has to be very careful not to capture by that word an emotional barrier to development in the range on the groups A, B and C as you have set them out. The fact it is a landmark does not reflect, of itself, the relationship between turbines in your groups A, B and C and effect on individual properties necessarily at all?

MR BRAY: No, it does not, and that was in my opening statement, that there are individual turbines when you are looking at micro level, such as individual properties, that individual turbines can have quite varying effects.

MR DAVIDSON: Well, I was not here last week, Mr Bray, but I understand – were you here, did you hear the evidence given last week?

5

[12.00 pm]

MR BRAY: I have not heard all of it, I read most of the transcripts.

MR DAVIDSON: What I am interested in is whether, looking at these groups as you have chosen them, you know how many properties have a view of the turbines in your groups A, B and C?

10

MR BRAY: I do not have a detailed list of exactly what turbines can be seen from every property. In my assessment I visited, I could not tell you, 40 or 50 properties where I went on to the property and made an assessment of what turbines, and that was not done by group, that was done by turbine.

15

MR DAVIDSON: Yes, but your evidence really is not directed to the perspective from individual properties, is it?

20

MR BRAY: No, it is not. I think, as Mr Anstey said, there is a real challenge for us as landscape architects to try and – you know, how much detail do you put into an assessment and that is really the point of the groupings is to say, “I am not going to talk about every single turbine for every property”, that is not feasible. So what I have tried to do is collectively pull together turbines that have very similar effects from a macro scale.

25

If you consider the effects, perhaps between turbines 67 and 70 for example - which are very close - they have very different effects than perhaps 67 and 116, which is completely the other end of the wind farm. So the use of groupings is really just a tool to say, “I am generalising that the effects in that area are what I described them to be”.

30

35

MR DAVIDSON: Yes, and that is what I want to pick up. You, a moment ago, said “in a macro sense the effects underlies the grouping” but the macro sense viewed from where?

40

MR BRAY: Well, as I say right throughout my evidence, it is viewed from numerous locations, it is the collective of all of those locations. I think you could go to any single property and say “in that particular turbine”, and I do that. For example, in paragraph 180 I say, “Turbine 94 in particular would appear as a dramatically tall beacon” so I do pick out individual turbines from particular locations.

45

MR DAVIDSON: Yes, I recognise that but what I am driving at is that, I understand there was evidence last week of people who were within reasonable proximity of turbines but from whose property you could not see the turbines, but that is not part of the assessment that you make, of course, is it?

MR BRAY: No.

MR DAVIDSON: So what Mr Wyatt has done - and it appears to be in accord with Mr Anstey, and I assume you - he has taken a sample of what he considers to be the most affected residential properties and that seems to have broad support, that that is the way to go?

MR BRAY: Yes, that is a method of doing it and I certainly have visited a number of significant properties. What I came to the realisation was in this proposal was that there were a lot of significantly affected properties and how best do I describe the effects of those.

MR DAVIDSON: Yes, all right. Now, we will just keep going because at the moment we are just looking at these maps and we are looking at A, B, C groups and we see from your paragraph 154, this very useful table, we have a total of 26 turbines in these three groups, A, B, C?

MR BRAY: Yes.

MR DAVIDSON: And you discuss them in this way later and I will come back to it. Then using your broad landscape units in your conclusion you have, at paragraph 246, taken another landscape unit to comprise groups G to J and those turbines 28 to 33 in group D. So if we go back to the attachment and we can see it here now, we have those six turbines - 28 to 33 - and then we, if you like, wander down the line past group G and we have those in green, orange, blue G, H, J and K - "I" of course, is gone, right?

MR BRAY: Yes.

[12.05 pm]

MR DAVIDSON: So if we look at the way your groupings work here and, again based on the numbers, we have 10 in group G in green, 12 - I am using Ms Lucas - 12 in group H, 12 in group J and the six in group D. And you have put them into a landscape - you call them "units" - around Browns Flat in the central section of the ranges south of Marima, and you say that at paragraph 246.

Now, to get these into this collation because now you are starting to lump your groups together - and we have just seen A, B, C and now we go to G to K plus some of D – we are getting a kind of a super groups of grouping now, are we not, you are assembling the groups into units which you then have excluded from, if you like, your ideal assessment? This is what we see here, is it not, at paragraph 246 of your conclusion?

MR BRAY: I think what you are seeing, at 246 I think we were at, is rather than me spelling out all of those turbine numbers I am simply saying that there are a number of turbines and I have, for the sake of simplicity, called them as groups that I do not believe are appropriate. So I am not putting them into super groups or units, I am just using that to describe collectively the turbine numbers rather than having to go through every single turbine number.

MR DAVIDSON: Yes, but without any doubt in the way your conclusion is expressed at 246, the turbines on this part of the landscape – and that is all the ones we have just been through, there is a lot of them – and we have got 40 turbines. You have explained this as saying that, again, “The main ridgeline south of turbine 27 dramatically changes in terms of landform and significance of land use” and then you conclude or say that, “The turbines on this part of the landscape would significantly contribute to a perceived excessive occupation of turbines on the landscape”. And this is the rationale I take from your evidence as being this is simply too many turbines on the landscape, these 40 that we are talking about?

MR BRAY: I think I go on to say, “Turbines in these foothills would have significant effects on local residents and wider viewing audience” and 246 is a concluding paragraph, it is not taking into account all of the evidence that I have put in previously, it describes the effects, this is pulling it together.

MR DAVIDSON: I am entitled to ask you about the conclusion, Mr Bray, and I will come back, to be fair to you, to the isolation of these groups. But nevertheless what you are expressing here, in a collective sense, is an exclusion from your ideal setting that you are postulating. Your first statement is, “Apart from the dramatic change on the ridgeline south of turbine 27 on this part of the landscape it would significantly contribute to perceived excessive occupation of turbines on the landscape”.

So that is, if you like, the big perspective and then you go down to the local residents and the wider viewing audience you say “would see a lack of coherence with existing wind farm developments.” That is what I take the rationale summarised to be, is that fair enough?

MR BRAY: Yes.

MR DAVIDSON: Now, again, if we look at the distances over which we are  
5 talking, the span of group J in the northern-most – no, I will go to group  
K, the northern most turbine is 133, is it not?

MR BRAY: That is correct.

MR DAVIDSON: And the southern-most turbine in group F – I am just using  
10 the lineal effect as you have it in the spine of the ranges – I will put to  
you that we are looking at about five and a half kilometres, is that right?

**[12.10 pm]**

15 MR BRAY: Approximately.

MR DAVIDSON: You take me up if you think I am wrong and I will give  
you the ruler.

20 MR BRAY: That is about – you are going 133 to 33, did you say?

MR DAVIDSON: 133 to 116, which is, in group F, the southern-most. Do  
you see that, right beside F?

25 MR BRAY: Yes, it is five and a half kilometres.

MR DAVIDSON: Then if we look at it in the other way and we go from 125  
in group H to Marima, which is pretty much the site of 128 – which is  
30 another one exclude – we get about another four and a half kilometres,  
right?

MR BRAY: Yes.

MR DAVIDSON: So 40 turbines in that span of country, in your express  
35 view, is seen as “an excessive occupation of turbines on the landscape”.  
It is a big landscape though, is it not?

MR BRAY: It is. Where I say “perceived excessive occupation of turbines on  
the landscape” perhaps it is not clear in that statement but what I mean  
40 is on a wider scale, in terms of the whole landscape of the ranges and  
how it relates to cumulative effects of other wind farms, and perhaps  
that is not clear in that.

MR DAVIDSON: Yes, so I take it you were bringing to account Motorimu in  
45 that consideration as well?

MR BRAY: Not so much Motorimu, no, actually. Mainly the turbines on this part of the ranges - Te Rere Hau, Tararua and Te Apiti.

5 MR DAVIDSON: So when it comes to, if you like, congestion of turbines in the landscape if you look at Motorimu as consented, if you went from, if you like, the westerly to the easterly extremities of it, it is just over three kilometres in span, is it not, or 80 turbines?

10 MR BRAY: Yes, I will take your word for that, I have not got a scale for that. I will take your word for that.

15 MR DAVIDSON: And proportionately less if you go the other way, it is about two kilometres, so what I am getting at is that when you start talking about excessive occupation of turbines we have to bear in mind surely, in a landscape sense, that the groups that you have just taken out of play – for the reasons we have been through so far – cover a very large area, which I accept means visually there is a bigger area of land taken up, but they are certainly not in a congested sense, if that is what you mean, as with Motorimu?

20 MR BRAY: It is difficult to compare I think these particular groups with Motorimu because what you are looking at is the actual space in which turbines would be occupied are on the tops of ranges and not in the bottom of the gullies whereas Motorimu was a whole basin in itself. So actually quite different landforms and I do not think it is fair to compare those.

25 MR DAVIDSON: Well, I do not want to be unfair, but I am asking you to say whether you agree with this proposition or not, that when you have widely spaced turbines and Mr Brown used the expression “it allows the land to breathe beneath them” with the larger widely spaced turbines and Mr Anstey made some favourable comments about the larger turbines as well. Do you accept that proposition?

35 MR BRAY: In many situations but not all.

MR DAVIDSON: Well, circumstances alter cases, do they not?

40 MR BRAY: They do.

MR DAVIDSON: We will leave this point with this proposition, and answer as you will, that the Board should, in your view, recognise that in looking at these turbines we have just been through – which is the residual six in group D and G through K – that you are treating them as excluded because of what you call “the foothills effect” and “the south of Marima effect”?

MR BRAY: That is correct.

5 MR DAVIDSON: And the excessive occupation as a whole notwithstanding  
the spread and the geographical distance through which they march?

MR BRAY: Yes.

10 MR DAVIDSON: All right. And then, given that you are rather more with  
the applicant in this regard, we comes to groups D and E and you cover  
those at your conclusion, paragraph 247, and these occupy the main  
ridgeline apart from what we call “the residual six” north of Marima  
and you see very little effect on local amenity but they would have “a  
15 strong connection to the turbines in T3 and Te Apiti”. “Connection”  
you mean in form?

[12.15 pm]

20 MR BRAY: I mean in layout and – your layout along the ranges and in form.

MR DAVIDSON: Larger?

25 MR BRAY: The larger format, although as I say I prefer them to be a  
maximum height of 110 metres, but the larger format. That therefore  
they – by keeping them on the top of the skyline there they have a  
connection with the existing wind farms because they look essentially  
the same and they are laid out on the landscape essentially the same.

30 MR DAVIDSON: And the discordant nature of Te Rere Hau is, as it were,  
subsumed in the fact that on each side we have similar turbines?

MR BRAY: Yes, I think that would make Te Rere Hau significantly more  
adverse I believe.

35 MR DAVIDSON: What, you mean if a different was to be located on Turitea?

MR BRAY: No, if a – sorry, I do not think I am quite following you.

40 MR DAVIDSON: Well, you have said at 247, there are potential adverse  
effects created by “encapsulating Te Rere Hau”, that is a comment you  
made.

MR BRAY: Yes - - -

45 MR DAVIDSON: But what you see is the – and not excluding your groups D  
and E with the few exceptions we have mentioned – you see a strong

connection being effected to the turbines in T3 and Te Apiti so Turitea will have some congruence or coherence with T3 and Te Apiti, that is what I understand you are saying?

5 MR BRAY: Yes, if the turbines that I believe are acceptable, they would have a strong connection with, yes, Te Apiti and T1 despite Te Rere Hau being there but what I consider is that they will make Te Rere Hau stand out as even more different than it is.

10 MR DAVIDSON: Well, it already does stand out, does it not?

MR BRAY: It does but it has some degree of separation from Te Apiti and the T3, partly there is a small gap, it is not large as the **(INDISTINCT 12.17.52)** one forest so that it is sort of located at the other end so that helps and so what – by putting further turbines on the ranges south of  
15 Te Rere Hau that have a strong connection to these larger formats north, you are essentially encapsulating that and in my belief that will make Te Rere Hau more adverse. Yes, it will stick out more, it will be more obvious.

20

MR DAVIDSON: Well, I will put to you an alternative view, and that is that by having a span of some 11 kilometres of widely spaced, significantly spaced large turbines, which in a sense on your evidence match up with Te Apiti and T3 more so, particularly if you get your blade length right,  
25 that these are or would be in visual terms a more cohesive line of turbines than that which we see now, where we have at the end the Te Rere Hau, which you clearly do not like at all on your evidence, and they are the ones we see close to the city, are they not?

30 MR BRAY: Yes, that is right. I think -Te Rere Hau caused me quite a number of problems in trying to deal with cumulative effects. I have done a lot of reading and seen a great number of pictures of wind farms overseas where they have different turbine designs in a landscape and they just clearly do not work together and I think that is a very good  
35 example of what is happening on these hills.

So in my ideal, yes, I would very clearly see Te Rere Hau coming out and having a single turbine design across the ranges, and yes, I think that that would be more aesthetically pleasing.

40

[12.20 pm]

MR DAVIDSON: Yes. So in that sense, if you like, the march of the big  
45 turbines matching up is a positive rather than a negative?

MR BRAY: Yes, it is a double-edged sword; it is a positive because it is heading towards perhaps a more ideal, but in doing that we are also creating a less ideal. And I do not think you can answer either way.

5

MR DAVIDSON: Well, we will leave it in neutral territory, Mr Bray, at this stage. Now, before we come down to some of the specifics of your evidence, as you develop this ideal that we have looked at in your conclusion, you have commented when looking at the cumulative approach on the numbers that we have been through – and this comes at paragraphs 9 and so onwards of your evidence. And we have to change the numbers now, for the reasons I have just been through with you, but you had to consider, in this evidence you have given to the Board, that Motorimu was going to be built. And forget the fact, for a moment, it was off to the side, to the south, separated by distance. We are in effect in totality looking at something in the order of 30 to 40 further turbines with Motorimu gone, as a whole?

10

15

MR BRAY: As a whole?

20

MR DAVIDSON: Yes. Now, I am not talking location because I recognise that is another factor. But when you went into this what you call “scope and approach”, you were looking at a further 122 turbines, depending on which size is utilised if it is consented, and in your head was an entire landscape, the notion of what would have been another third on top of the existing consented wind farms in this area?

25

MR BRAY: Yes.

30

MR DAVIDSON: Do you generally accept, based on the perception studies and your own knowledge, that there is an understanding of wind farms in the Manawatu region as to the desirability of having them?

MR BRAY: Yes.

35

MR DAVIDSON: And is that in part because of the fact that people now have an understanding of what they are and what they look like?

MR BRAY: Partly that.

40

MR DAVIDSON: As well as the fact that they are seen as part of the renewable energy project which the world is engaged in?

MR BRAY: That is correct, yes.

45

MR DAVIDSON: Would you take it so far as to say that there is an element of – in landscape terms – interest held by many people in this area in the wind farms?

5

MR BRAY: I would say there is, yes, there is a reasonable interest.

MR DAVIDSON: You saw Mr Baines' evidence in this regard when he looked at the people who were in the category of "think they had about the right number of wind farms" and how much many of them liked - -

10

MR BRAY: I have not read his evidence in detail, but I am familiar with the work that he did.

15

MR DAVIDSON: If you have not read his evidence in detail, do I take it that you have not, therefore, read that of Mr Kalafatelis and/or Dr Phillips?

MR BRAY: No, I have not.

20

MR DAVIDSON: Well, when you make your visual assessment is there, say, if you like, the cold lens of the visual perspective or do you bring to account at all the sort of perceptions I just described to you?

MR BRAY: That is always a challenging question I think for a landscape architect is where does the visual stop, where does the psychology start and I think we are still trying to find where that barrier is. I think you have to begin your assessment on a very visual level, as what will be there, what will not be there and then I think the appropriateness of those becomes something that is perhaps much wider.

25

30

MR DAVIDSON: Now, that is a very fair answer because I take it from that that you are accepting that the assessment you make is really one which really falls within the aesthetic ideal you have described?

35

MR BRAY: Yes.

MR DAVIDSON: So the acceptance and recognition of wind farms and particular turbines is not really at the heart of your consideration?

40

**[12.25 pm]**

MR BRAY: No, it is not at the heart. I think I describe a – I cannot take it to you quickly, but I think I describe in my evidence that I have taken the assumption that there are some people that find them adverse and therefore I will treat visibility of turbines as an adverse effect.

45

MR DAVIDSON: We are not treating change of itself as adverse, are we?

MR BRAY: No.

5

MR DAVIDSON: So to get to adversity, adverse effect of any kind, it has to sound in someone's eye and mind, does it not?

MR BRAY: Yes.

10

MR DAVIDSON: Have you read the evidence – and it has come at a couple of the parts of the record and I will refer to it only in broad terms – of the fact that wind farms appear to fall into a category almost of their own. So many projects, whether they be thermal, or hydro, or whatever are not countenanced by many people, but the idea of the wind farm and wind energy is countenanced?

15

MR BRAY: Yes.

20

MR DAVIDSON: Now, drawing this point back into the discussion we have just had, can I secure this point from you, that you have not, in coming to your assessment of adverse effects, brought to account in any way the perceptions held by people of wind farms as a whole?

25

MR BRAY: I think you could potentially say that as a whole. What I said in my opening statement is that I have come across a lot of people in and around wind farms who do have a very – you know, they are quite favourable towards wind farm in general, but when it comes to suddenly them being personally affected that can change. And I am learning through my experience is that I do not believe that perception studies can actually nail that. It totally depends on what person you are talking to, where they happen to be living and how they consider their landscape.

30

MR DAVIDSON: Well, I am not going to take you into perception studies because you have not read this evidence clearly, have you?

35

MR BRAY: No, I have not. No.

40

MR DAVIDSON: All I am anxious to secure, and I accept that the process is iterative for Courts, councils, boards and so forth of knowledge being gained, but do you accept this proposition that when you create the aesthetic ideal, which is what you say you have done here, you are not bringing to account that which people are able to recognise, digest and deal with?

45

MR BRAY: I wouldn't, I don't think I can go so far as to saying that, because as part of looking at the landscape, I am, when I am looking at that, I am taking the factors such as how people appreciate elements in that landscape. So such as Bryant's hill for example. The way people have orientated their houses towards that landmark, the way they have developed their gardens, immediately says to me that people find that an attractive part of the landscape, and therefore to change the character of that, that is something that I do take into account. How people would feel about that.

MR DAVIDSON: When you have looked at this area, clearly you have made a lot of the observation in preparing this evidence, have you been to the houses or properties which have been developed over the past eight or nine years since wind farms have been present in the hills?

MR BRAY: Yes, I have been to several.

MR DAVIDSON: Have you noted how people have built their houses, their recreational areas in their properties in any way which reflects the existence of the wind farms?

MR BRAY: I have seen houses that are orientated or have views orientated towards the wind farm. I also have seen many houses that are orientated away from the wind farm.

MR DAVIDSON: So fairly disparate responses from people?

MR BRAY: Yes.

MR DAVIDSON: You are able to look at it, say I like it, don't like it, this is how I respond?

MR BRAY: No, I don't think it is that simple. But I think, yeah, people, I think that is generally how people feel. They will look at it in a certain context and decide whether they like it or not like it.

MR DAVIDSON: See, it is not as though given the history I have just described, the development in areas where wind farms have been present, that people are saying no, that they are voting with their wallets and simply not going there. They are going there. And they are orientating their properties sometimes towards the wind farm, sometimes away. That is our nature of response.

MR BRAY: Some people are.

MR DAVIDSON: Now I know you are not claiming any knowledge of the perception studies, but if it were the case, for example, in Turitea Valley and we had some discussion about that, are you conscious of the discussion with Mr Kalafatelis that took place regarding his -?

[12.30 pm]

MR BRAY: Not precisely, no.

MR DAVIDSON: Well, the debate that then took place before the Board, was when he used a catchment area for his perception study, which he reported to the Board, Mr Baines who came up in opposition as it were, debated the adoption of the size of the Turitea Valley that he used. But even given that, within as he described it, the valley, there was a strong degree of support and there was pretty much the same degree of opposition to wind farm development, further wind farm development.

And I just want to ask you, given that very small piece of information, whether in your considering the site, you determined, or could see that there are widely different responses of people to this proposal?

MR BRAY: I agree there are different responses.

MR DAVIDSON: Now what you have done, when you looked at a third more turbines being created by this proposal, than exist and consented, as opposed to what is now take the extreme as 40 turbines. It is actually an increase of about 11 or 12 percent on the existing and consented turbines, as a whole.

You have, at your paragraph 10, said that “rather than treat the potential cumulative element as a distinctly separate effect, I kept this issue at the heart of my assessment throughout.” So you began with a broad scale assessment of existing landscape and detailed analysis of existing wind farms, independently of MRP. And this was, I take it, to see the receiving environment?

MR BRAY: That is correct.

MR DAVIDSON: And after you had done that, the entirety, which had the map had included Motorimu, you had then gone to visual amenity, within the broad scale ideal?

MR BRAY: That is correct.

MR DAVIDSON: So throughout there is this theme of taking the idealistic, or ideal position that you perceive aesthetically? And for completeness, I don't think you thought to account any of the effects other than the turbines themselves, nothing to do with roads, or utility elements?  
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MR BRAY: No.

MR DAVIDSON: And then when you move in the second part of your evidence, to visual amenity, you have assessed that, having set the broad scale ideal, is that right?  
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MR BRAY: That is correct.

MR DAVIDSON: So it is always driven off the fact that you are creating the ideal before you start this?  
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MR BRAY: Not entirely, no. The second part of my evidence does look at turbines, individual turbines, irrespective of the broad scale ideal. And it looks at how individual turbines or even sometimes groups of turbines will have effects from different viewpoints.  
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MR DAVIDSON: All right. Well, in any event, as you moved into your broad scale landscape assessment, you did have some discussions with people about the effects of turbines, and you also drew on what you knew from other cases, I take it?  
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MR BRAY: Yes.

MR DAVIDSON: And the questions that you say required answers were should any more turbines be consented in this landscape, by which you meant the whole landscape, did you not?  
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MR BRAY: Yeah, the landscape that I discussed in my evidence, which is from north of Te Apiti through to about Tokomaru.  
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MR DAVIDSON: Yes, including Motorimu?

MR BRAY: Including Motorimu, yes.  
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MR DAVIDSON: Then if so, where should they be placed, and how many there should be were the other questions that demand an answer.

MR BRAY: Yes.  
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MR DAVIDSON: Now you were very clear about this, at paragraph 15 about the further question about potential design. But we have fairly well settled that, haven't we, we are going with the Te Apiti T3 model, the large turbines, the blades with the correlative relationship with the height of the tower?

MR BRAY: Yes.

[12.35 pm]

MR DAVIDSON: Now, when you look at this question of cumulative effect, which you say is not a separate identification, but at the heart of your evidence, is how you describe it?

MR BRAY: Yes.

MR DAVIDSON: You have seen three effects. One where you see more than one wind farm in your field of vision. And I suppose we are standing in not a bad spot right here, are we?

MR BRAY: That is correct.

MR DAVIDSON: When the eye, well not with the single field of vision, because we have to track, we brought in Turitea, we have to track along these hills to see - - -

MR BRAY: That is right, that would be successive.

MR DAVIDSON: Ridge. But your combination view that you are describing for cumulative effects, at paragraph 16, is not like that. That is where a viewer can take more than one, see more than one wind farm in a single field of vision, without moving their head. That is what you are saying?

MR BRAY: Without moving their eyes.

MR DAVIDSON: So I just need to understand this. This is in terms of cumulative effect, where you are looking off into the distance, and your eye is able to pan with the peripheral vision we have, a number of wind farms?

MR BRAY: Yes.

MR DAVIDSON: So you see that as an important cumulative effect, and the relevance of that here is that we are talking about an 11 kilometre line of turbines?

MR BRAY: I don't say that that is an important cumulative effect. I am just describing that there are types of cumulative effect. It is often, I have discovered, that people think of cumulative effect as simply that combination. What I am actually trying to get to in that paragraph is to say that it is not just a cumulative effect of when you are standing in one location. But it is the fact that you are looking around or that you are moving through a landscape.

MR DAVIDSON: Yes. And I am accepting all that you say. There is this what we embrace, what we take in, as we look somewhere, we can see a range of activity and it is affected today by weather and light and all kinds of things. We have a second what you call the succession effect, where we have to turn our heads or move our eyes.

MR BRAY: Yes.

MR DAVIDSON: That is to get the bigger landscape into play. And then there is the sequence, or sequential effect, where we need to move viewpoints to see more than one wind farm?

MR BRAY: That is correct.

MR DAVIDSON: Perhaps because we are closer, or we have something obscuring the perspectives. And when you then bring all that together, you refer it is relevant to your conclusion, to the what you call at paragraph 17, "a rich memory of the landscape in which people live or work".

By "rich memory" in broad context you mean the layers, all the things which assemble in our memory for the perspective we hold of an area, of a view?

MR BRAY: Yes.

MR DAVIDSON: Not always good.

MR BRAY: It is not always good.

MR DAVIDSON: Sometimes a rich memory includes an abattoir or a smokestack or something like that?

MR BRAY: Yes.

MR DAVIDSON: Where you concentrate some of your evidence, at paragraph 17, is that the sequential cumulative effects are particularly

relevant when considering visual amenity on local people as people move around during the day?

MR BRAY: Yes.

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MR DAVIDSON: And they see a pattern of what is around them and your point here is, and it seems to be a matter of some emphasis in your evidence, they do not need to see the landscape to make the connections because they are part of the memory bank?

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MR BRAY: That is correct.

MR DAVIDSON: In this regard a memory bank changes, does it not, we deposit and sometimes, not often, we subtract things from the bank? So people who have been looking at the foothills here, from various perspectives on the plains, would have seen the advance of rural-residential activity?

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MR BRAY: They will have.

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MR DAVIDSON: That is part of the richness, the growth, the change?

MR BRAY: Yes.

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MR DAVIDSON: And we absorb these changes, do we not?

MR BRAY: Some of them.

MR DAVIDSON: Sometimes we live them?

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MR BRAY: Some of the - - -

MR DAVIDSON: If we like them at the start we get used to them, some remain, in their eyes, as an abhorrence forever?

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MR BRAY: That is correct.

MR DAVIDSON: Some we quite like. Mr Wyatt gave evidence of people actually, in Australia, not choosing landscape mitigation because they actually like the perspective of the turbines of the kind you described before you?

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MR BRAY: Yes.

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[12.40 pm]

MR DAVIDSON: Looking at the cumulative effect you have said in your paragraph 18, the best way to approach it is to take a broad scale strategic review of future development in the Manawatu region which would have all the mix of things which this Board has to bring to account under the RMA?  
5

MR BRAY: That would be ideal I believe.

MR DAVIDSON: Well, we really have that ideal here, do we not, because here is the Board undertaking all this?  
10

MR BRAY: Well, we do except that we have a proposal. My ideal would be to do it without a proposal because we are, at the moment, limited to assessing the turbine locations that have been put before us. What I would ideally like to have seen is that to have taken place before any proposal was put on the table.  
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MR DAVIDSON: Well, the trouble with proposals is that they take sometimes years to evolve, do they not?  
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MR BRAY: They do.

MR DAVIDSON: And the world marches on?

MR BRAY: Yes, I am not saying it is possible in fact I am – as I say, understandably, however it is not yet been published - it is there by the Palmerston North City Council to say that, “Yes, we should do that, it is 20 years since the first wind farm went ahead, no, it has not happened”. That does not surprise me but I still think that that would be the right thing to do.  
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MR DAVIDSON: Yes, and no doubt one day it will be done, Mr Bray.

MR BRAY: Well, I would hope so.  
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MR DAVIDSON: Now, then looking at the question of the landscape and aesthetic coherence, you have referred to what you describe as “the seminal case” in Wakatipu and you have quoted from the Court’s judgement there. I take it that is with your agreement, we have to agree in the main with what the Court says?  
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MR BRAY: We do.

MR DAVIDSON: We always look for shades of difference if we can find them if it is necessary but we take from this that landscape is a subset of the environment and a link between the individual resources – natural,  
45

5 physical and the environment as a whole. And you then have picked up the Court's emphasis or statement that, "First, this consideration landscape considers a group of natural and physical resources together, perhaps in a arbitrary cultural lumping as landscape and, secondly, our attitudes to those resources affected by social, economic, aesthetic and cultural conditions". Now, that is the part in a way we have just been through, is it not? The landscape for the purpose of your expertise has to draw on these expectations and understandings?

10 MR BRAY: We have to draw on those as best as possible. As I said I think the boundary is becoming more and more blurred as to what is psychology and what is landscape.

15 MR DAVIDSON: Well, the Court is making it plain that the landscape will bring to account these attitudes, perceptions?

MR BRAY: Yes, I agree.

20 MR DAVIDSON: Perhaps I am drawing a longbow here, Mr Bray, but I will try. Mr Anstey, in his evidence, said he did not describe these large turbines as "ugly" but "lovely" or "beautiful", do you subscribe to that view?

25 MR BRAY: I think in the right landscape they can be quite attractive.

MR DAVIDSON: That is what you referred to as "the graceful effect"?

30 MR BRAY: Yes, I think, again it is a difficult one because there is a balance between, as I describe, the design so there are some turbines that are not as attractive - Te Rere Hau I think is a good example. And I think there is also a balance between how many turbines are in a landscape and how they are laid out in that landscape and I think all of those factors combine together.

35 MR DAVIDSON: You do not like congestion of turbines from your evidence?

40 MR BRAY: No, I find when turbine blades crossover they are more adverse so spacing out helps although you have to be careful, again it is depending on location, because if you space them out you take up more of the skyline, you take more up of the landscape and so, again, there is a balance to be made.

45 [12.45 pm]

MR DAVIDSON: And as I discern your evidence what you are talking about then, ultimately, is the aesthetic coherence of a proposal, how the landscape hangs together?

5

MR BRAY: Yes.

MR DAVIDSON: And you lay particular emphasis on the same size turbine, same speed and the sort of spacing that is constant?

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MR BRAY: Spacing, yes, layout.

MR DAVIDSON: Leaving aside your focus on the ridgeline or the spine, and the acceptance of those turbines, and just coming back for a moment to the spacing of the turbines that I have taken you through in terms of distance. Do you accept that these turbines proposed, not just on the ridgeline, have that spaced effect?

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MR BRAY: If you are talking solely about spacing then they have similar.

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MR DAVIDSON: The wide angle view of that, of course, is affected to the extent you have crossover depending on the particular point of perspective?

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MR BRAY: That is correct.

MR DAVIDSON: But, in general, these turbines are proposed to be spaced a wide distance apart allowing the viewer to see and recognise the distance and where there are turbines behind the first line of vision, given that spacing, there is the relief apparent to the viewer - not easily seen from a static photomontage - that the other turbine is at a distance in and behind?

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MR BRAY: That is sometimes the case, not always, but is sometimes the case.

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MR DAVIDSON: But given what we see in the attachments here, we do have wide spacing and so the viewer of these turbines in the front rank, if you like the foothills, will see the other turbines behind extending back and further back to create the relief and height and distance. It is not a wall effect, is it?

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MR BRAY: It is not a wall effect but even so when blades crossover, even if there is some sort of distance involved between them, that crossover effect still catches the eye.

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MR DAVIDSON: I agree. All I am asking you to accept is when we look at a photomontage we see banks of turbines in some photographs?

MR BRAY: Yes.

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MR DAVIDSON: But the viewer from any particular perspective, whether it be from here in the rugby stadium or closer by, is able to make the observation that these are serried ranks or lines extending away?

10 MR BRAY: Yes, they are.

MR DAVIDSON: They do not have what I described as “the block wall effect” but they are spaced and significantly spaced?

15 MR BRAY: Yes.

MR DAVIDSON: Which is not the case when we get a proliferation or a congestion of turbines in a small site such as Motorimu?

20 MR BRAY: That is correct.

MR DAVIDSON: They come across as a bank of turbines?

MR BRAY: They do.

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MR DAVIDSON: And you prefer what we have here in that regard, I take it?

MR BRAY: Again, it depends on the landscape in which they are situated. In the Motorimu situation from nearly all viewpoints that was not discernible because the turbines in the basin were at a lower elevation and therefore mostly screened by the foothills so you did not get that effect.

30

MR DAVIDSON: Right, now, let us just look at the way you have addressed the question of the landscape units just briefly, we can do this before the lunch break. And this evidence comes at paragraph 40 onwards in your brief. What you have done here is observed what Mr Brown has done with regard to the regional landscape analysis. You have read his evidence?

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MR BRAY: Yes.

MR DAVIDSON: And you consider, in paragraph 41, that he has provided a good regional landscape analysis?

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MR BRAY: Yes. I do not know all of the regional landscapes and so I have  
relied on Mr Brown to some extent in assessing those. But the  
assessment, the methodology follows and from what he talks about, the  
landscapes I do know, I would reach much the same conclusions.

MR DAVIDSON: Yes. You deal with this in your paragraph 52 where you  
talk about this site in what you call the central section of the ranges and  
not as dramatic as the southern section, but for the most part visually  
distinctive from the north, with Kaihinu, Marima and Arawaru as the  
more dominant peaks. So are you drawing this from Mr Brown's  
evidence, or that is your own observation?

MR BRAY: That is my own observations.

[12.50 pm]

MR DAVIDSON: And it is because of the foothills, in the bulk of the  
foothills here where you have got more foothill in this part of the range  
than perhaps in other north and southern areas, you see this having the  
effect of making the main ridgeline appear more recessed than north of  
the Pahiatua Track?

MR BRAY: Yes.

MR DAVIDSON: You say that Hardings Park and Turitea Reserve are  
located on the upper ridges and in the hidden gully, at paragraph 53, so  
simply making the point that from most points of observation they are  
tucked away?

MR BRAY: A lot of Turitea is tucked away, although the skyline ridges are  
visible and a lot of Hardings Park is visible from a lot of viewpoints on  
the plains I am talking.

MR DAVIDSON: But when you refer to a hidden gully, hidden from where?

MR BRAY: Hidden from the plains.

MR DAVIDSON: Until you get up to some elevation they remain hidden?

MR BRAY: Yes.

MR DAVIDSON: In looking at the landscape units here or the landscape, Mr  
Brown, in the area we have just discussed, gave evidence – I do not  
want to be unfair to you, have you read his evidence in getting ready for  
this hearing, recently?

MR BRAY: I have to admit it has been a while since I read it, but I have read it.

5 MR DAVIDSON: In his paragraph 13, and it need not be typed into the transcript in its entirety, he says that, “The immediate landscape setting for Turitea wind farm project mostly comprises cut over high country native forest and shrubland with some areas of pasture. The native forest and shrubland covers extensively in the main slopes and valley  
10 corridors that face back towards the Manawatu Plains and along the higher hill country of the main range further south. However, it is substantially restricted to lower level shrub species around the main ridge crests and many of the proposed turbine sites, whereas the pasture and pine forestry exists around the edge of the reserve on its western,  
15 northern and north-eastern margins”. Now, that is an anchor for the evidence which he gave and was tested in cross-examination. Do you have any contest with that?

MR BRAY: No, that broadly looks acceptable to me.

20 MR DAVIDSON: Okay. And then he has, at his paragraph 47, set out two tables, one and two, where he has looked at the outstanding landscapes and features and amenity landscapes and features. I do not want to spend more time on this than your evidence takes me, but at  
25 paragraph 50 he has been through all these subsets of areas so that, for example, in his table two at unit 27, northern Tararuas/Turitea, he talks about the mountain landform sequence, remnant native forest and the mix of pasture and pine forestry, so on, peripheral interplay with the main body of the forest park itself, and at paragraph 50 his conclusion  
30 is set out, “Looking at the study area as a whole it becomes clear that both the outstanding natural landscapes and amenity landscapes are largely residual landscapes, remnant locations and features within a heavily modified, almost entirely rural working landscape”. Do you have any reason to differ with that?

35 MR BRAY: I think that the central section, as we are talking about, I think we are broadly in agreement. The lower parts of that are a rural working landscape, there are certainly forest remnants on the skyline ridges, particularly throughout Turitea and Hardings Park.

40 MR DAVIDSON: Well, all I need to do is gain an understanding of whether we are in agreement, broadly in agreement or not, Mr Bray. Are we broadly in agreement?

45 MR BRAY: I am broadly in agreement with what he has come up with.

[12.55 pm]

MR DAVIDSON: Excuse me for a minute. Now, I come to his conclusion and see how far we get with this, at paragraph 71 he says, although the RPS and the proposed One Plan identify the Tararua Forest Park as the cornerstone of the ranges outstanding landscape, as well as the rather generically defined skyline, his investigations of the existing qualities of the ranges and surrounding landscapes indicates those directly associated with and affected by the proposed development are more consistent with amenity landscapes and outstanding natural landscapes. And he talks about, closer to the vantage points assessed the more immediate landscape is a strong working production landscape quality, something expressed in the Palmerston North District Plan. Are we okay up to there?

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MR BRAY: Yes.

MR DAVIDSON: And then he has said at paragraph 72, because I have to go to this, there is little doubt that the reserve, Turitea Reserve, Hardings Park and the northern reaches of Tararua Forest Park are highly significant, perhaps outstanding when viewed from within, yet the dominance of their pasture, plantation forestry and so forth very substantially erode the landscape values and the integrity of the northern ranges as a whole until south of Browns Flat where forest park starts to emerge. You are broadly in agreement with that?

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MR BRAY: Yes, I think the caucus notes state my opinion very well. Broadly in agreement with Mr Anstey as well, the forest park is clearly outstanding and south of that to the Pahiatua Track the ecology is slightly degraded, I do not think the landform is perhaps as significant as the forest park and so therefore what I come to is that I think there are outstanding features in and around the site and the park, and I believe that the skyline ridges have outstanding qualities, but as a whole I feel that it is quite well as an amenity landscape and not an outstanding landscape.

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MR DAVIDSON: And for ease of reference, essentially that is what you have said in your paragraphs 73, 4 and 5, you have said in 73 you find the minor landscape unit containing Hardings Park and Turitea Reserve is close to being considered outstanding, but it does not get into section 6, as you explain there, it ranks highly within the special amenity landscape category?

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MR BRAY: Yes, I do not believe it gets section 6.

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MR DAVIDSON: And the foothill minor landscape units, at paragraph 75, you have described and mapped as significant landscapes although not outstanding. They do not form the skyline but are significant in contrast to the productive plains, that is how you see those foothills?

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MR BRAY: Yes, I think they are an important amenity.

MR DAVIDSON: Yes.

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MR BRAY: Landmarks.

MR DAVIDSON: Have you read Mr Brown's transcript of evidence?

MR BRAY: Actually, no, I do not believe I have read his transcript.

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MR DAVIDSON: I want to take you there just for a moment. I will just try and deal with a subsection before one o'clock, well throughout the cross-examination there, Mr Bray. I just want to ask you about Motorimu in a different way. Mr Brown's evidence, and it appears in the transcript at 1456, is that he was not aware of Motorimu when he made his Turitea impact assessment in 2006. He made a report to the council at that time.

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MR BRAY: Mm'hm.

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MR DAVIDSON: And he has expressed the view that he was less concerned – this is the transcript, 1473 at line 23 – less concerned about Turitea in its own right extending the wind farm activity. So back to the point we discussed earlier, he did not see it as a concern in terms of extending from Te Rere Hau, but he had a very major concern, expressed at the same page, if Motorimu was in the ring, because with the existing farms and Turitea and Motorimu going further south again, as we can see from the map, he saw it simply getting too close in the entirety to what he saw as the critical landscape values of the forest park. Is that a view with which you would concur?

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[1.00 pm]

MR BRAY: I think that people have talked about Turitea closing the gap, I guess, and that is where perhaps he is heading. Yes, I mean I struggled with the Motorimu wind farm along the main ranges, as I have described, but when it was in the basin it was largely not visible from the plains and, yes, I would agree that in some respect finding an end boundary from the existing wind farms at T3 et cetera, as I have done, I think that is a better suited location for a wind farm than perhaps Motorimu was.

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MR DAVIDSON: Because of the continuation and on the - - -

5 MR BRAY: Because of the continuation and therefore the connection to the existing and proximity, yes, to the forest park. Yes.

HER HONOUR: Mr Davidson, it is one o'clock, I think we will adjourn if that is agreeable. Thank you.

10 **ADJOURNED** [1.01 pm]

**RESUMED** [2.02 pm]

15 HER HONOUR: Yes.

MR DAVIDSON: Mr Bray, I just want to, as it were, mop up a couple of points we discussed this morning.

20 MR BRAY: Sure.

MR DAVIDSON: One of them relates to Motorimu and the other relates to the turbines at the sides and the effect they may have compared with smaller turbines. When Mr Brown gave evidence the point we touched on, and I could not find the reference when I was asking questions, but at page 1486 of the transcript over to page 1487, Commissioner Hudson was asking him some questions about Motorimu to the effect of trying to find out why Motorimu was unacceptable to Mr Brown.

30 And he, at the transcript at page 1486, line 25, was asked a question by Mr Hudson based on the fact that he, Mr Brown, was concerned to see Motorimu go further south to the extent it went south, it was proposed to go south. And the question from Mr Hudson was, "I understand your reasons for that are in relation to the effect that it has on the outstanding landscape of the Forest Park" and the answer was "yes" and the question then followed, "Yet Motorimu is on the foothills" and Mr Brown said, "It might be on the foothills but, of course, most peoples perception of the Tararuas and the Forest Park is actually from the plains as the regional policy statement clearly suggests as well, so I did not think that one could happen without an impact on the other".

40 Are you broadly in agreement with his description of that?

MR BRAY: No, I do not totally subscribe to that. I think that in that landscape the foothills feel quite separate from the main range and, actually, the main aversion I had with Motorimu was really about visual amenity, particularly on local residents.

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[2.05 pm]

MR DAVIDSON: Then the questions continued at page 1487 as to the cumulative effects of Motorimu being in. We have already been over the fact that Mr Brown says Turitea okay but not Motorimu. At line 10 he said, “At a more strategic level, much as I dislike the character of Motorimu and some of the smaller scale wind farms because of their components and configuration, I felt that at a strategic level a choice has to be made about where wind farms as a whole go and in this case it was better to consolidate such activity within an area I thought to be more modified, more cultural, than within part of the Tararuas, even the Ruahines, I regard as fundamentally natural”. So he was identifying getting the wind farm into the modified landscape and broadly, as I understand it, you agree with that?

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MR BRAY: Yes, I would accept that.

MR DAVIDSON: Then on the question of the turbines, because we have spent a bit of time on that, at the transcript at 1476, Mr Brown, at line 42, said as to why he preferred the bigger, wider spaced turbines, “It provides more breathing space. I think when you look at some of the earlier wind farms close to the gorge the landscape is almost overwhelmed in places by the sort of profusion of structures and because the turbines are also small scale they have a certain frenetic quality to their motion”. He went on to describe and used this expression of “allowing the landscape underneath to breathe more”. What he meant by that, as he described it, was you retain a sense of the landform and the vegetation because of the height and the apparent land underneath, there is still a cohesive terrain visible, do you also agree with that?

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MR BRAY: I think it depends on the location and the type of turbine. The turbines that Mr Brown is referring to there partly include T1 and T2 and with the lattice towers they tend to dominate the landscape more. And so whereas the taller towers do not have a lattice, I agree, I think they do do that but not in every circumstance and one of the things that I was involved in, Waitahora wind farm, was actually I believe there that a smaller turbine would have been a better option for that particular landscape.

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MR DAVIDSON: What he is talking about there is that by these larger more widely spaced turbines, which he describes as allowing the landscape to breathe more, that you retain a sense of the landform and the vegetation because of the height, because of the clearance and the appearance underneath, compared with a lattice or smaller structure?

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MR BRAY: And what I am saying is that I think in certain circumstances that can be the case, but not all.

5 MR DAVIDSON: Now, we had a brief discussion this morning about the Turitea Reserve and Hardings Park and we do not have any particular difference, as I discern it, between you and Mr Brown as I put those questions to you at all. But when he gave his evidence with regard to this - you have been into those areas and stood there and looked?

10 MR BRAY: I have not been into Hardings Park but I have been through the reserve and I have observed Hardings Park from the reserve.

15 MR DAVIDSON: At the transcript at page 1458, at line 35, he addressed the separation by Ms Lucas into the separate landscape around the wind farm site and its constituent parts, have you read that evidence of Ms Lucas?

MR BRAY: Can you point me to his evidence that he describes that?

20 MR DAVIDSON: No, this is at his transcript 1458.

MR BRAY: No, I have not read Mr Brown's transcript I am afraid.

25 MR DAVIDSON: Okay. Well, what he says, at line 27, "The reserves forested area is teased apart from the pasture, forestry et cetera that surround it", it is just an observation he makes. But at line page 1458, line 35, he said, "When addressing the views to the ranges from the plains and south of Pahiatua one is primarily exposed to the highly modified foothill periphery that I have already referred to and within  
30 those views the forest, the reserve and even much of Hardings Park displays insufficient visual presence to impose its natural values on the wider range landscape from those perspectives", do you agree with that?

35 [2.10 pm]

40 MR BRAY: I do not know if I would wholly agree with that. I think if it had been a fine day here, for example, the forest vegetation is very clear on the ranges and therefore the natural qualities of it I think can be appreciated.

MR DAVIDSON: Yes, he is talking specifically about the reserve and Hardings Park.

45 MR BRAY: Yes, and I think you can decipher those from numerous locations.

MR DAVIDSON: But the point he is making is that “yes, you can” but they themselves do not, given the wide range perspective of the highly modified area, impose themselves given that extent of the modified landscape?  
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MR BRAY: No, they are not. No, they are not imposing to use that word.

MR DAVIDSON: Thank you. Now, we will come to the question of the skyline and the foothills generally before we drop into your groups. When Mr Brown gave evidence he was cross-examined by Mr Maassen and at the transcript, at page 1464, he was asked in relation to the skyline, at line 40, “The controversial skyline in this section of the Tararua Ranges, what would you regard as the most conspicuous and eminent part of the skyline?” What would your answer to that question be?  
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MR BRAY: I do not think there is a particular part of the skyline that is conspicuous. I think it depends on where you are located, but the highest skyline ridges right the way across both the Tararua and the Ruahine Ranges are important.  
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MR DAVIDSON: Yes, the bolder ranges to the north and to the south stand out?  
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MR BRAY: No, all of them I think. It depends on where you are located but the central section, which includes the existing wind farms, I think they are very prominent.

MR DAVIDSON: Well, this is Mr Brown’s response. He said, at line 43, “That is a very interesting question, I have actually thought about it a bit over the last few days. I think the difficulty anyone faces looking at the Tararuas, from the various viewing points and locations around Palmerston North, you are actually presented rather than by individual peaks what you tend to see is a much shallower sequence of ridges and crests and one sort of gives way to the other”. Now, I am a layperson following that observation, I am putting it to you that that is the form we see in the Turitea proposed site?  
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MR BRAY: Yes, actually I think that is a good answer.  
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MR DAVIDSON: So he says, at page 1465, line 7, “They sort of merge from the city or the coalescence of a sequence of ridges and hilltops rather than any one being dominant”, so I think that confirms what you have just said to me.  
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MR BRAY: Yes. I would add to that though, however, that that there are some particular landmarks which are noticeable and they are perhaps more potentially noticeable by local people who will have studied that landscape a lot more and have a much better understanding of it.

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MR DAVIDSON: Well, when you came to look at, against that backdrop in your evidence, the main ridgeline. At your paragraph 90 you said, “In coming to a conclusion about restricting development of the main ridgeline” - and notwithstanding local amenity effects which you come to – “most of the existing pattern of development is predominantly on the main ridgeline or running down from the main ridgeline”. Then you add, “although it is acknowledged that this is largely due to the lack of any significant foothills north of the Pahiatua Track”. In other words I take it that the opportunity for such was limited by the fact there are not those foothills that we see in the section we are looking at from here abutting Turitea?

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[2.15 pm]

20 MR BRAY: Yes, you could perceive that.

MR DAVIDSON: Now, tackling the point which really appears to be to me the heart of your case, and correct me if I am wrong in this regard, you say, “South of the track the foothills have an important significance on the wider landscape appearing almost separate from the main ridgeline” and you say, on these lower landscape units, if you had a ridgeline consent there would be a “doubling up of the apparent density of the wind farm”, a greater saturation in this part of the landscape. It is the doubling up effect that you identify if the foothills are developed as proposed?

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MR BRAY: Not just the doubling up, I am responding to my comments about pattern. That north of the Pahiatua Track, okay, there are not those foothills but development is limited to being fairly high up on those ridgelines and I was observing that and thinking about aesthetic coherence. Off that main ridgeline, I would see turbines coming off that main ridgeline but I did not feel that they should be on those lower foothills.

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40 MR DAVIDSON: What I want to put to you is - to revert to some of our earlier discussion today – if we look at Ms Lucas’ attachment 1 and we have got the ridgeline or the range in groups D and E, and to come back to the point that if you use group H as an example, or group K, and measure the distance of those developments which have a lateral quality to them - if you look at group H as you have identified and at group K – they are a long, long way from the ridgeline turbines. In fact, as we

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discussed this morning, from parts of group H through to Marima, they are something in the order of four and a half kilometres?

5 MR BRAY: As the crow flies but I think what is important to consider is -  
and I think the photomontages show this – that that would not ever be  
perceived unless you were perhaps flying into Palmerston North on an  
aeroplane. When you are a lot lower down and you are distantly  
looking across that landscape feels a lot more closed up.

10 MR DAVIDSON: Well, one observation that follows from the distance  
perspective, while it may seem more closed up you are going to get a  
different height perception with sufficient certainty to demonstrate the  
distance between the foreground foothills and the ridgeline, are you  
not?

15 MR BRAY: No, I do not think you do, I think you have to be considerably  
distant in order to achieve that.

20 MR DAVIDSON: Well, would you say we would get it from where we are  
standing now?

25 MR BRAY: You would in some places but not in all and I think – I mean you  
gave me this photomontage earlier, VP12, and I think that is easier to  
explain than trying to look out a cloudy window, that there are some  
turbines that come down on that which, yes, are certainly lower but  
there are some on Bryant Hill that appear from that viewpoint as  
effectively the same height as the main ridgeline at the back.

30 MR DAVIDSON: Yes, but the point is that they are not, again it does not  
present as a single flank of turbines of the same size. Any viewer who  
is taking this into the memory bank, as we discussed it this morning,  
will recognise at a considerable distance away the ridgeline turbines, if  
the lighting is correct and will recognise the foothills as a distinctly  
different foreground effect, will they not?

35 MR BRAY: They will.

40 MR DAVIDSON: And thus the doubling up effect is not as if to say the effect  
of the ridgeline times two, it is that there is a different effect which in  
combination will influence the viewer?

45 MR BRAY: Yes, doubling up or layering is, I guess, what I call it, I think  
there is. I think it will be fairly obvious to a viewer that there is a set of  
turbines at the back and then, yes, there is some in the foreground and  
that is increasing that depth.

MR DAVIDSON: You see, the comment you make at paragraph 91 is that,  
“Were turbines not consented on the main ridgeline the pattern of wind  
farm development on the foothills would be in stark contrast to the  
existing pattern of turbine placement”. In other words they would have  
dropped off the higher ridges to a lower level but it is the consenting of  
the ridgeline turbines, which sees the foothill turbines proposed here,  
set against that ridgeline, is it not? That is what you mean by “were  
turbines not consented on the main ridgeline”?

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**[2.20 pm]**

MR BRAY: No, I do not mean that. I mean that the pattern of development  
of wind farms in this area is on that higher main ridgeline at the back  
and I think if you put turbines on the foreground ridges that is a  
different layout to what is existing and I think that would be noticeable.  
And it would be more noticeable particularly if there were no turbines  
at the back.

MR DAVIDSON: Yes, that is what I have taken from your evidence, that you  
are saying if you have a whole lot of ridgeline turbines and suddenly  
you drop down to the foothills you would see – and I presume  
Motorimu is an example of this for you, is it, to a degree?

MR BRAY: Well, not to a degree because, no, that was a different landscape,  
they were in a basin and much less visible but they were still on the  
ridgeline and also quite separate.

MR DAVIDSON: Yes, all right. Well, if we have, as things stand, a higher  
mounted set of turbines through these existing farms and then if you  
drop down to Bryant’s Hill and through the Love property and so forth  
your point is you create the immediate and obvious contrast between  
those positions?

MR BRAY: Yes.

MR DAVIDSON: But what I am taking from your evidence and putting to  
you is that that is much ameliorated when you have a continuing of the  
ridgeline development across this area through the 11, 12 kilometres  
and flowing beneath that or from that to the viewer we have turbines  
coming into the foothills or put another way from the foothills there  
was some development which goes up towards the ridgeline, they are  
seen as a field?

MR BRAY: No, I would not take that from my evidence. If there were some  
turbines, and there are some such as turbines 13 and 14 for example,

which flow off that main ridgeline I would see that as the same pattern, consistency of development as other wind farms.

MR DAVIDSON: Yes.

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MR BRAY: But I do not see that the turbines on the foothills would be the same pattern.

MR DAVIDSON: No, I am not suggesting they are. What I am putting to you and will depart from the way you have expressed it, is that you seem to have accepted in your acceptance of D and E bar a few turbines in groups D and E that there was a logical aesthetic continuum in that placement - - -

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MR BRAY: Yes.

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MR DAVIDSON: So the viewer from a perspective which allows this can see a long run of the turbines as they march across the landscape on the hills.

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MR BRAY: Yes, that would be - - -

MR DAVIDSON: That is a fair description?

MR BRAY: That would be a fair description.

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MR DAVIDSON: Yes, now what I am putting to you is that it must be a relevant consideration in coming off that high ground to come into the foothills that the perspective one has is of turbines which flow from that foothills up towards the ridgelines, recessed and further back. They are not in stark contrast, they are part of a field of view.

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MR BRAY: Well, it is a consideration but it is not something I believe or observe. I think that coming down on the foothills in this circumstance would not be read the same as perhaps what you are suggesting about turbines coming off the main ridgeline further north.

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MR DAVIDSON: Perhaps I better be more specific. I am not suggesting you read them the same.

40

MR BRAY: No.

MR DAVIDSON: I am suggesting that yes they would read differently because they are at a lower altitude and in this case they are closer to the city and residential housing. But that the stark contrast one may see of this proposal was a foothill proposal as opposed to, as we see in Ms

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Lucas' attachment, something with a spinal back tautologis (**ph 2.24.40**) and then coming down in some lateral layouts in the groups that you have chosen – we do not have the groups there, we can see the lateral effect of these different placements. It will be seen from the plains in any event as something which, to reverse it, has some lineal development in what we are calling groups H and K rising back to the lineal development in groups D and E, the foreground and background?

[2.25 pm]

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MR BRAY: You could say foreground and background. I understand where you are trying to go with this and that essentially you are – well, my understanding is you are suggesting that because we have those turbines from the main ridge that means it makes it easier for those turbines of the foothills to exist. I am afraid I do not agree with that.

15

MR DAVIDSON: All right, well what is the – is there an example you can give of that circumstance in actual practice of a foreground and a background and with the lineal development I have just put to you?

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MR BRAY: No, I cannot think of one but the pattern of development that I have been looking at to find my ideal turbine window is based on what I observed in this landscape and observed on the wind farms north of the track.

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MR DAVIDSON: Yes, and I was going to come back to that. We must remember that in this part of your evidence we are looking at the ideal that you are seeking to create, the aesthetic ideal?

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MR BRAY: That is correct.

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MR DAVIDSON: But you then went on in your paragraph 92 by talking about this very point and the significantly lower elevation of protrusion of these foothills and to the upper terraces of the plans. It means that turbines will also appear much more dominant because they are closer and they are nearer the residents or the town and the people. You say particularly if tall machines were installed, that appears to be a qualification to a degree on what your – your proposition. You see lower turbines having lesser effect here, do you?

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MR BRAY: Interesting you pick up on that, I cannot remember why I specifically chose to put those words in. But, yes, the taller turbine on the foothills would certainly be more dominant.

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MR DAVIDSON: Yes.

MR BRAY: But I think I would subscribe to the same view that even a smaller turbine, I would not accept on those smaller foothills.

MR DAVIDSON: Well we are talking about dominance, are we not?

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MR BRAY: Yes.

MR DAVIDSON: And you have chosen to highlight, what is the difference in turbine to height as being an influence on the dominance?

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MR BRAY: Yes, it is generally.

MR DAVIDSON: Yes. Now, again just a core mop up in Mr Wyatt's evidence, I should have put to you the little bit of his evidence about the turbines that we are talking about seem we have just touched them. In his rebuttal at paragraph 3.51 and the sequence of paragraphs which follow, he agrees with you about the two bladed distinctly network utility appearance, turbines at paragraph 3.51. He makes the point at 3.52 that the increase in heights has reduced the picket fence appearance, that is a comment he makes do you accept that, do you agree with that? Bottom turbines reduce the picket fence appearance?

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MR BRAY: Actually I would suggest that the taller turbines have a more picket fence line layout. If you compare them, I mean, as we are talking about here is Te Rere Hau, I mean, that definitely does not have a picket line, that is a very grid format.

25

MR DAVIDSON: Yes, but what he is getting at is that when you have large turbines well spaced, yes, you might have the effect of a lineal structure running along a ridgeline for example, but the sense of separation and size associated with it takes away the clutter, the congestion that goes with the smaller more closely spaced turbines?

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MR BRAY: It takes away from congestion but I would not say that it necessarily takes away from a picket line appearance.

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MR DAVIDSON: Right.

MR BRAY: What is a better way to reduce the picket line appearance is to be much more responsive to landform in terms of how it is laid out on a site.

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MR DAVIDSON: Yes. So the wide spacing or spacing is a significant part of that, is it not?

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MR BRAY: Well, it is a part of it.

MR DAVIDSON: Yes. Well, I am not sure how far we need to take this but he goes on to say that – now, he calls it derogative, I think he means derogatory description in paragraph 3.54, it is the earlier, shorter, smaller turbines than faster and are located much closer together. That is the congestion clutter effect and you are not for that, are you?

MR BRAY: No.

MR DAVIDSON: And his point at 3.55 is that these turbines, the big turbines spin more slowly and have a less phonetic appearance as the result. Do you the normal revolution of these turbines?

MR BRAY: I think they are about 18.

MR DAVIDSON: 16.20.

MR BRAY: 16 to 18 RMA something like that.

MR DAVIDSON: Yes, about 16.

MR BRAY: Yes.

MR DAVIDSON: Compared with what on Te Rere Hau?

MR BRAY: It is about – it is quite high on Te Rere Hau.

MR DAVIDSON: It is well above that.

MR BRAY: 30 something, is it not, or is that the – it in my evidence, I have got that.

MR DAVIDSON: It is well above that, is it not - - -

MR BRAY: It is, it is quite a difference. I mean, I make a point of mentioning that.

MR DAVIDSON: It think it is in your table at page 25?

MR BRAY: That is correct.

MR DAVIDSON: Where you talk about – you have got 50 RMP for Te Rere Hau?

MR BRAY: Yes, that is correct. Yes.

MR DAVIDSON: 29 and T1 and T2 and 18 at Turitea and 17 at T3?

MR BRAY: Yes, and I agree I think the larger turbines have a slower and  
5 more graceful appearance than the smaller ones, particularly Te Rere  
Hau which spins too fast for my eye.

MR DAVIDSON: Right. Now, we now come to the setting that has been  
created, let us just have a look for a reasonably short time at some of  
10 the conclusions you have reached. Starting with the aesthetic ideal of  
not being on the foothills as we have just been through together. Now,  
your questions that you ask of yourself appear, after a rather spirited  
heading at page 31 has the horse bolted, and that seems to be based on  
your concern at 101 and it is a dangerous question to pose as it suggests  
15 we have given up on the landscape. So I suppose in essence you are  
saying we must not treat a compromised landscape as tolerating further  
compromise because it has been compromised?

MR BRAY: That is exactly what I am saying.

MR DAVIDSON: And that is where you come to the rather dramatic proposal  
20 at 102 to remove Te Rere Hau completely from the landscape?

MR BRAY: Well, yes and as I say that is not in the scope of any legal limits.

MR DAVIDSON: No, of course not but yet the point you make is worthwhile  
25 that follows because if you did you would say, well that would give us  
more land to put up some three bladed turbines south of T3 to Marima.

MR BRAY: Yes.

MR DAVIDSON: That is the extent of your belief in these big turbines as  
30 opposed to these Te Rere Hau type. The reason is the coherent design  
of the wind farm, the coherence - - -

MR BRAY: Yes.

MR DAVIDSON: - - - in this broad pan, what it should be.

MR BRAY: That is correct.

MR DAVIDSON: Anyway you conclude at 102 that it is not within the scope  
40 of legal limitations at the Court hearing, may be wiping out a wind farm  
and in that – where it (**INDISTINCT 2.33.20**),

MR BRAY: No, it is not. It is a limited idea.

MR DAVIDSON: As you move to the question of potential effects on visual amenity, which is set out in paragraphs 105 onwards, you have started with the proposition at 105 that whether positive adverse has much to do with individual attitudes, we touched on this this morning, I need not go into this in detail. But as you go into your consideration you are recognising the difference in people's responses, are you not?

MR BRAY: Yes.

MR DAVIDSON: And you conclude at 107 that there is an attachment, or what you call a strong ethic of stewardship or the known local landscape that people have. We do not generally, particularly if we think you live in a pleasant area, like to see changes which we think may alter in some way that landscape?

MR BRAY: That is correct. I think that people particularly in rural areas, but not exclusively rural do form an attachment.

MR DAVIDSON: Right. And we get it at a very simplistic level when even on the edge of the city or even in suburb, suddenly what is seen as a pleasant perspective of a park or trees or whatever is obliterated or effected by someone putting up what we would affectionately would call a monstrosity of a house or a building or a structure?

MR BRAY: Yes, that can happen.

MR DAVIDSON: And does happen, does it not?

MR BRAY: It does happen.

[2.35 pm]

MR DAVIDSON: So you work into this question of effect by saying at 108 there is likely to be some level of local opposition for these reasons. To some people always there will be adverse effects perceived, always.

MR BRAY: Yes, I believe so.

MR DAVIDSON: Yes. And the West Wind judgement you refer to at 109 emphasises that most people dealing with this human response want greater distance between them and the turbines if they are going to happen, as much as they can get?

MR BRAY: Yes, that was that decision and I have experienced that in the assessments I have made of other wind farms.

MR DAVIDSON: Yes. So when you start your analysis we – I think you have acknowledged already today that you could not or did not have the means or time or instruction I think to cover the potential to cover the potential effects of the various groups on every property in close proximity, that simply was not possible?

MR BRAY: I visited many and I can provide my pretty scrappy field notes that describe effects from numerous properties.

MR DAVIDSON: Yes.

MR BRAY: But I did not think it was necessary to repeat those into an evidence. I thought it was better to give an overall observation and analysis.

MR DAVIDSON: Yes, well you have no doubt chose some properties to visit and others you did not think necessary to visit?

MR BRAY: I tried my best to visit every property within two kilometres. There was some I was not able to get into because the gate was locked.

MR DAVIDSON: However, when you went into the section of your evidence at 114 you said, you did not wish to downplay the potential significance of the proposal on visual amenity from viewers on farms or lifestyle properties especially within three kilometres of the proposal and that is because of the perspectives that people gain from large blocks of land from the farm, little farm blocks?

MR BRAY: Yes, people in rural environments do not necessarily spend all of their time in a house.

MR DAVIDSON: Yes.

MR BRAY: But it is not possible for me to visit not only every house, but it is not possible for me to visit every section on a rural property.

MR DAVIDSON: Now, you have used a visual impact zoning, which is set out at page 36 of your evidence, and you have said that matrix has been used at hearings alongside the Sinclair-Thomas Scottish Matrix, and it is one you adopt Mr Bray? Do you adopt this table you set out?

MR BRAY: You are referring to?

MR DAVIDSON: The visual impacts in relation to viewing distance, at page 36?

MR BRAY: Yes, there is a lot of debate about that. What I get to, through my evidence there, is that it is generally accepted that within two kilometres turbines of the height that we are talking have the potential to be significant and dominant, and I subscribe to that.

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MR DAVIDSON: That is your paragraph 122, they have the potential effect on visual amenity that is likely to be significant - - -

MR BRAY: That is correct. Yes.

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MR DAVIDSON: But then in assessing the actual impact you will look at a host of factors including intervening topography?

MR BRAY: In fact, I list them all in my evidence on the following pages.

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MR DAVIDSON: Yes. Well, I will pick out a few as what I see as being pertinent on your evidence. Intervening topography, other structures or vegetation which may be apparent in that landscape in which this is being viewed, the way a property is set towards a wind farm or turbines?

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MR BRAY: Yes.

MR DAVIDSON: They are all in the mix producing, if you like, a peculiar or an individualistic response from different properties and different occupiers?

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MR BRAY: That is correct.

MR DAVIDSON: And even though I am going to ask you about your zones, or both your zones and your groupings in a moment; you do recognise that the zoning is not definitive, it is, if you like, a frame or a guideline?

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MR BRAY: It is a frame, guideline, it is also a continuum.

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MR DAVIDSON: Yes. And when you look at one of those factors being the number of turbines, at your 124 you say there is no case history that you are aware of to suggest how many turbines suggest a significant effect. So we do not know that one or five or ten and where they are produces a significant effect, it is a starting point only to say within two kilometres?

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**[2.40 pm]**

MR BRAY: That is correct. A number of years ago I spoke with the author of the Sinclair-Thomas matrix, Mr Sinclair, and I asked him that very

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question, and the answer is there is no definitive. That model was based on – well, it was based on Scottish examples. The Scottish examples I have seen are very small developments, 30 or 40 turbines, and so the question I put to him was, “Well, what happens when you have 200?”

And well it is a very different proposition, and what I am trying to get to here is to say, well actually if you have a whole lot of turbines, 200 that are within a certain range, they are probably going to be more dominant. But, yes, there are still other factors to consider.

MR DAVIDSON: So the point that you seem to pick up on – slightly distracted by looking over your shoulder at the moment, Mr Bray, that in turbines we can see on the hill just to the right of the church tower there, tumbling away, what sort of distance apart are they?

MR BRAY: I could not tell you off the top of my head.

MR DAVIDSON: Is that -?

MR BRAY: Probably 20 or 30 metres.

MR DAVIDSON: 20 or 30 metres? Okay. Now, what you say at 125 is that you make an observation that turbines which overlap have a greater visual impact, is that because we do not have the spread effect, the sheer effect of the wide space distance that is essentially on the ground here?

MR BRAY: No. When you are looking at a single turbine on a hill the blade has a gentle rotational movement. When you put two next to each other and they overlap that graceful motion is lost and your eye gets caught on where they pass and is drawn to that point where they pass, and as a result you lose that more sculptural form, and in my opinion you get a much more industrial form.

MR DAVIDSON: Yes. Well, you must get that if you have got the farm effect of Motorimu, where you have got – as we see from the plan – a block of turbines with no particular line or lineal distinction between them. That would be the case there?

MR BRAY: Yes, I mean we discussed that this morning and the point I made there was that Motorimu is located in a basin and generally most of it is not seen from a lot of locations, so that crossover effect for that particular wind farm was much less.

MR DAVIDSON: But going away from Motorimu, is that where we have what I am going to call for the question the lineal effect of turbines, if you are seeing those largely in isolation you do not have that crossover effect, do you?

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MR BRAY: No, you do not.

MR DAVIDSON: And it seems from your evidence that you also regard turbines located behind a ridgeline may have increased visual effects if they are only partially visible and that is because the coherence of the skyline is maintained if you are above it, entirely above it?

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MR BRAY: Yes. It depends on where you are and how you can read it. I have made observations of the Te Apiti turbines where turbines are located behind the skyline, but you can somehow register or read that they are and that that makes sense. However, when I was working on the Waitahora wind farm it was very different story and actually I felt that the turbines in that case were going to interfere with the skyline. And so all I am saying there is that those are factors that you have to take into consideration given the location that you are looking at.

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MR DAVIDSON: And together with that, your point at 135 is that a narrow angle of view focuses the viewer's attention and they are likely to be more dominant where there is a narrow angle of view as opposed to putting a wider perspective around the turbines? You take other things in?

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[2.45 pm]

MR BRAY: I think you are looking at each point individually and I say that you cannot do that. It will be true that in some viewpoints where they have a very narrow field of view, if that particular narrow field of view has turbines in it then they are likely to be more noticeable.

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MR DAVIDSON: Yes.

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MR BRAY: However, if you have got a wide field of view, such as what we are looking at from the windows here, and then you fill a long stretch of that with turbines, well, that is an effect to be considered as well.

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MR DAVIDSON: And if you are in a residential environment, looking up at the turbines in the hills and you are able from that residential environment, perhaps in a garden or a paddock and you see turbines but you also can see the spread of the hills, the expanse of the hills, housing, sheds, animals, woodlots and so forth, they become part of the entire view, do they not?

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MR BRAY: Well, this is where I am getting to. They can become part of the view depending on just how much of the view you see and how many turbines are in that view. And what we are trying to do is find a balance between how many turbines is right for the view that you see.

MR DAVIDSON: Yes. And that really is a matter of judgment, is it not, against the perspectives that are held from particular areas and properties?

MR BRAY: Yes, I think it is, yes.

MR DAVIDSON: All I am trying to gain – the part that I am getting at, or not getting at – is that there should not be a prism or lens analysis of turbines being seen from a particular place; they have to be seen in the context of the landscape in which they are based?

MR BRAY: That is correct. And I think what my evidence is getting at too, is that there is no magic formula to say from this viewpoint this is how many you should see.

MR DAVIDSON: Yes. And then you come to the point of your evidence that there are mitigation effects that can be achieved, and you have referred to some already this morning, that house orientation is one and planting is one, it is not something you have addressed other than in broad form, the question of mitigation, is it?

MR BRAY: No. Mitigation, as I say, it is possible. As I also say that there is case history I think from Project West Wind that it is better to rely on vegetation that is already there and is already in control of the landowner.

MR DAVIDSON: Yes.

MR BRAY: But I do not think it is fair, and I said this in my opening statement, to assume that somebody would want mitigation, particularly if they have already chosen to orientate their house towards a particular view.

MR DAVIDSON: Yes. All I am concerned to establish is that again people will take a different approach to mitigation where it actually may be effective according to their wants?

MR BRAY: They can do and the other point I made this morning was that that will take time.

MR DAVIDSON: Yes. And you would have seen examples of this, Mr Bray, you would have seen planting – at least now not incipient but with some years?

5 MR BRAY: I have not seen any planting undertaken by landowners to block a view of a wind farm that has recently been consented.

MR DAVIDSON: Did you read Mr Wyatt's evidence in this regard?

10 MR BRAY: Yes.

MR DAVIDSON: Of the mitigation that he described?

MR BRAY: Yes.

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MR DAVIDSON: - - - which is available to parties affected?

MR BRAY: Yes.

20 MR DAVIDSON: In Australia?

MR BRAY: Yes.

25 MR DAVIDSON: You would generally be in support of that kind of proposal?

MR BRAY: I think it is good for a company – I think it is very generous of a company to offer that mitigation, but I do not think it is acceptable to say that it is mitigation that will make a wind farm more appropriate.

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MR DAVIDSON: Well, I cannot quite leave it there. What I want to have from you, one way or another, is that mitigation cannot assuage all problems, by way of planting vegetation, but it has its place. It can be effective in part, sometimes perhaps in whole, if people choose to adopt it.

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MR BRAY: If people choose to adopt it then it has its place, but it takes time to establish.

40 MR DAVIDSON: Now, I am moving on to two questions, or two issues. One is the question of grouping, which I have to address and then the question of the individual groups you have adopted. And you would be conscious in reading the evidence that there is a very strong opposition, in particular from Mr Wyatt, regarding the grouping which you have adopted?

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[2.50 pm]

MR BRAY: I am aware of that, I am quite surprised by it to be honest.

5 MR DAVIDSON: Well, that is all right. He probably, as you will see from his evidence, was surprised by your grouping?

MR BRAY: He was.

10 MR DAVIDSON: So if we go to the reason there is evidence in contest here, I would suggest to you that what you have done in your adoption of groups is identified areas where you think there is some degree of commonality in the effect these turbines have from the visual ideal aesthetic perspective?

15 MR BRAY: I have, but as I have repeatedly said, the groups are there to just help description and help identify quickly where turbines are without having to labour through number after number.

20 MR DAVIDSON: The reason I have to test this with you, Mr Bray, is that the consequence of grouping in this way, if you are suggesting, as your conclusion indicates, that analysing the group for visual effect means that it falls out of your aesthetic ideal window they all go, do they not? The whole group goes?

25 MR BRAY: No, I do not think that is how I have approached grouping at all.

MR DAVIDSON: I did not say that, but that is the effect of it, is it not?

30 MR BRAY: No, I do not believe so.

MR DAVIDSON: Well, how many of groups G to K have passed muster for you?

35 MR BRAY: Well, none of them. But I would also – you could put that another way and say, if I was to look at individual turbines using exactly the methodology and assessment approach that I have used, which individual turbines would pass that and you would find that the individual turbines that I looked at would fall into the groups that I have called them. So the groups are there just to help me describe the turbine numbers without have to labour each number.

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MR DAVIDSON: I do understand that, but as it happens the groups as you – other than the D and E, minus those few – we will come to that in a moment – they all fall outside your ideal window, do they not?

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MR BRAY: They do.

MR DAVIDSON: Therefore because they do there is no individual viewpoint analysis of those properties affected by those particular turbines?

5

MR BRAY: No, that is not true. Most of the second part of my evidence is regard to the visual amenity effects of particular turbines, and again I do it by group.

10 MR DAVIDSON: Yes.

MR BRAY: What I am doing is I am looking at particular landforms and I do, throughout that evidence single out particular turbines that are more or less dominant. Well, we may be able to make a bit of progress here if -

15

--

HER HONOUR: Mr Davidson, I wonder if I could interrupt?

MR DAVIDSON: Yes, ma'am.

20

HER HONOUR: In the Makara decision we grouped it by groups. The series were H and D turbines, or group one or group I and so on, and there we could not have got anywhere near the individual analysis that we made unless they had been grouped.

25

MR DAVIDSON: Yes.

HER HONOUR: So I completely understand where this witness is coming from and I think there may have been people talking past each other with Mr Wyatt's evidence, maybe, and his opposition to this. And you have just heard the witness explain that he would have come to the same conclusion if he had taken another route which was not grouping particularly. But when we looked at Makara it was set out as in the maps here.

35

MR DAVIDSON: Yes.

HER HONOUR: With groups labelled A to whatever and we simply analysed them from that group and then bored down to the ones that had the most adverse effect. Now, we can spend a lot more time on this and it is really not going to get us anywhere, because from a management point of view when you are looking at a big landscape, particularly this one which is double the size almost of Makara, we are going to go around and around and around, and either we accept Mr Wyatt's proposition or we accept some of the other witnesses, but at the end of the day we have to manage how we look at this situation.

40

45

MR DAVIDSON: Yes.

[2.55 pm]

5

HER HONOUR: So I would be very grateful if you could move on.

MR DAVIDSON: Ma'am, I am taking that all that on board now and I am just trying to, if I may - I will respond to that appropriately, but if I may just take it just a little bit further because I have got some evidence here which has not been answered by Mr Bray and I need to put it to him because it is part of our case. So I will truncate it significantly.

Mr Bray, you will have picked up on what her Honour was saying and I understand, as you will understand, the import of that. What I have to put to you is that the grouping has been chosen by you in Mr Wyatt's view - I am emphasising that - as effectively a bird's eye view perspective. I take it you do not agree with that, you say it is not bird's eye, there is some commonality sufficient to group?

20

MR BRAY: Yes, I believe so. It is not a bird's eye approach. If you look at the groups they respond to localised landforms and ridges.

MR DAVIDSON: Yes. But within the group there will be a wide range of effects of the properties by which those turbines in that group are affected, will there not?

25

MR BRAY: If we were only looking at one particular group and that was the proposal?

30

MR DAVIDSON: Yes.

MR BRAY: Then I could accept that, yes, we could narrow that analysis down and we could start describing the different effects of particular turbines. However, I guess as her Honour has suggested, we are looking at a much larger landscape and we need to find a way to portray information across as succinctly as possible. And I did not feel that given the scale of this proposal it was necessary to go down to that level of detail to describe the different effects within groups.

40

MR DAVIDSON: Well, I think that has answered my question. I will just see if I can encapsulate it. You do see within what you call, for example, group A, sufficient commonality of effect of those turbines within whatever zone you are choosing to consider that they do fall for consideration as a discreet group?

45

MR BRAY: Yes, I do and there is throughout my evidence points where I have singled out particular turbines as being more or less dominant.

5 MR DAVIDSON: Yes. So within the group there will be turbines that are more dominant than others; some that have a greater adverse effect than others on your evidence?

MR BRAY: Yes.

10 MR DAVIDSON: And they are capable of identification and being dealt with individually.

MR BRAY: They could be, yes, they could be. However, my conclusion is that even individually I do not find them appropriate.

15 MR DAVIDSON: If, for example, you have within group A – say you had two turbines you regard as particularly dominant in the context of two residential properties and the balance of residential properties you thought within view of group A were not so affected – they were not  
20 dominant in that context, you would bring that to account?

MR BRAY: I would and, as I say, I have done that in some points.

25 MR DAVIDSON: I will come to that. Well, let us take Bryant Hill west, and at your paragraph 156, this is the group A turbines, you have said this is a dominant foreground landform visible from a large local catchment, and you use RVP 22 as the example and you say it is visible in most of the western side photomontages you have seen. You mean Mr Wyatt's  
30 photomontage?

MR BRAY: I do.

MR DAVIDSON: Yes.

35 MR BRAY: Yes.

MR DAVIDSON: Now, of the 283 private residences within three kilometres, how many have a view of these turbines?

40 MR BRAY: How many have I - - -

MR DAVIDSON: That have a view of these turbines?

45 MR BRAY: I could not tell you an exact number.

MR DAVIDSON: Do you know how many – are there any that you have seen which can see all these turbines in group A?

5

[3.00 pm]

MR BRAY: That can see every single turbine in group A? I do not know if I could give you that number. What I can tell you, as I visited the outside of maybe 150 of those and made assessments that they may not be able to see all of them, so a particular residence might not see all turbines from that particular view.

10

MR DAVIDSON: Yes.

MR BRAY: But if you went two doors down they would see probably a different mix of turbines in that group, and if you went a few doors further down they would see again a different mix. So again, I came back to my point that actually if you put all of that detail together in order to present something it is very easy just to say, well, generally those turbines are going to be dominant.

20

MR DAVIDSON: Dominant again – I have to come back to this question – dominant to whom? Not all those properties within three kilometres?

MR BRAY: Dominant to most of those properties within three kilometres. But it is not every turbine in the entire group from every point, and that is where I think our methodology is different between Mr Wyatt and myself, that he has been very keen to say, “Right, from this viewpoint these are the turbines that can be seen” – you know, that is the photomontages – “this is how dominant they will be”.

30

MR DAVIDSON: Yes.

MR BRAY: I have not taken that approach. I have gone to hundreds of viewpoints and I have said, “Well, you can see those ones from here and they are dominant, if you go a wee bit down the street you can see those ones, you can see those ones from there and every time you move you get a slightly different set of turbines that you can see”, but then you put all of that together and you say, “Well, out of those 50 or 60 or 100 viewpoints that I have been to, actually these are the ones that keep coming up and up again”.

35

40

MR DAVIDSON: Yes.

MR BRAY: And that is what my group is.

45

MR DAVIDSON: Okay, so your rationale for the group is that there is a perspective held by a number of properties which you see within the visual catchment essentially, with varying degrees of effect on those properties?

5

MR BRAY: Yes.

MR DAVIDSON: And dominance in this context you see as being something which has an imprint, a significant imprint on the views that they otherwise enjoy?

10

MR BRAY: Yes. Dominant would be it becomes an element of the view that is unmistakable, it would catch your eye, draw your attention.

15

MR DAVIDSON: And this is within the visual aesthetic ideal that we have been talking about from the beginning of your evidence.

MR BRAY: This is visual amenity that we are talking about.

20

MR DAVIDSON: Yes. Now, in your discussion of this group you say that from dwellings located on the Pahiatua Track, this is paragraph 164, you say, "Much of the view of group A turbines from the road is screened by landform. The group A turbines are perhaps less dominant as they are visible behind the ridge, not a direct line of view". That is the distinction you are making in that area?

25

MR BRAY: Yes, when you travel up the Pahiatua Track the road itself is in a gully and so therefore for most of the time you cannot see those turbines, but from a number of residences you can. Some of them are screened from view.

30

MR DAVIDSON: And your point in that same paragraph is that from views such as RVP 3, which is on the Pahiatua Track, these turbines with group B and some of group C form a noticeably separate group of turbines located in the foreground landscape. Effectively, as I understand it, what you are saying is that they come as a group to the people with that perspective as a single group?

35

MR BRAY: They appear quite removed from the rest of the wind farm, particularly from the main ridgeline turbines.

40

MR DAVIDSON: Yes. And is that reason you say this appears almost as a separate wind farm disconnected from the main groupings of turbines?

45

MR BRAY: Yes.

MR DAVIDSON: They are a kind of a spot out on their own?

MR BRAY: That is my observations from some of those locations.

5 MR DAVIDSON: But particularly you treat groups A and B in this category, some in group C, but A and B in this category primarily.

[3.05 pm]

10 MR BRAY: Yes, that is correct. So again, I mean that is where perhaps the limitations of groupings are and that is what I have been saying all along is that what I am noticing from there is actually there is a group of turbines there that you could collectively call A and B.

15 MR DAVIDSON: Yes. You see, this is the – thank you for the answer, because it is the point I want to come to and conclude on these groups, is that what you say in 167 is that the group A turbines appear significantly closer to the view, and using VP 1 for this purpose, this is Kingsgate Hotel, right, Kingsgate Hotel?

20

MR BRAY: Yes.

MR DAVIDSON: At eight kilometres then the main ridgeline at 11 kilometres and so they feel significantly closer to the urban fringe, so this is a proximity argument, as well, is it not?

25

MR BRAY: Yes.

MR DAVIDSON: It is a sense of location?

30

MR BRAY: Yes.

MR DAVIDSON: And you have said at the end of 167 that group A and group B in combination are a breakaway group from the main thread on the upper ridgelines. Do you see it as a kind of discreet area for analysis?

35

MR BRAY: I think it is particularly noticeable that they are on a separate lower foothill landform.

40

MR DAVIDSON: My point really is just to elicit did you see them as a kind of a breakaway group from the rest of the turbines on the main ridgeline, as your evidence indicates?

45

MR BRAY: From the turbines on the main ridgeline, yes.

MR DAVIDSON: From the main thread of the wind farm?

MR BRAY: Yes. The main thread I consider being the ones on the main  
ridgeline.

5

MR DAVIDSON: And the other existing wind farms?

MR BRAY: Yes.

10 MR DAVIDSON: Is what you are saying. If we go to the group B turbines  
which we have now dealt with in a way already, you say at 170 that  
from Ngahere Park most of the group B turbines would be screened  
from view by the ridgelines with only tips of three turbines being  
15 visible from Ngahere Park, (INDISTINCT 3.07.03), it is Pacific Drive  
as I see it in 169, it has the argument of the same issues for you as the  
group A turbines. Is that the point, you see them as pretty much the  
same as A?

MR BRAY: Yes.

20

MR DAVIDSON: So far as Pacific Drive is concerned?

MR BRAY: From Pacific Drive, A and B have very similar effects, yes.

25 MR DAVIDSON: Yes. And your point is that the same with B as with A that  
you see them as separated in a way that 172 – your paragraph 172  
indicates, it seems like a separate grouping of turbines detached from  
the main expanse of the wind farm.

30 MR BRAY: Yes,

MR DAVIDSON: But when you come to group C turbines which is a group  
of eight turbines, you have described that as located just below the main  
ridgeline of the ranges immediately south of the track. We have,  
35 looking at Ms Lucas' attachment 1, we can see them marked there in  
green, they are that much closer of course to the main ridgeline. You  
have described it as just below and you see it as them separated from  
the group B turbines by the small gully?

40 MR BRAY: Yes, that is right.

MR DAVIDSON: And they are – again you say slightly lower elevation and  
further forward west of the turbines in the main ridgeline at about 400  
metres?

45

MR BRAY: Yes.

MR DAVIDSON: So what are we talking about in altitude below the main  
ridgeline?

5 MR BRAY: Some of them, for example 95, is at the same elevation but that  
drops down to around about 280.

MR DAVIDSON: You say most turbines sit on a small terrace at around 400  
metres?

10

MR BRAY: That is correct, yes. 68, 94, 95 - - -

MR DAVIDSON: So they are just below the ridgeline really, are they not?

15 MR BRAY: They are just below.

MR DAVIDSON: And you distinguish those in your evidence we have just  
been through from groups A and B. They do sit as a slightly different  
subset?

20

MR BRAY: They do but they do have a stronger connection to that main  
ridgeline.

MR DAVIDSON: Yes, thank you. And while you, in this group C, do see  
some domination within residences of two to three kilometres, you  
make the point at 184 that it is combined with groups A and B, they add  
considerable complexity to the simple landscape units. So we stand  
right back from it as you have done in your evidence, Mr Bray, they are  
to a degree discrete from A and B, they have an impact but the impact  
surely must be much affected by their combination with groups A and  
B in the way you group them.

25

30

**[3.10 pm]**

35 MR BRAY: They are and I will admit to struggling a little bit with the  
turbines in this area as to whether they should be accepted or not but in  
the end I determined that the ones I had chosen in that group have  
amenity effects on people around Pahiatua Track and Harrison Hill  
Road to a greater extent than what I believe the main ridgeline was.

40

MR DAVIDSON: I can live with the struggle, Mr Bray. You have identified  
tension here in the determination you make and I am really just trying  
to establish finally that the combination with A and B, you have  
grouped these as a Bryant's Hill grouping effectively, have you not, A,  
B and C? It is the grouping in the entirely connected effect which is the  
strong imprint of your evidence. Separated out they are more

45

problematical for you but they may well be associated with a ridgeline in such a way that they can be seen as part of being associated with it?

5 MR BRAY: I would have to return to looking at my evidence. If perhaps A and B groups were not - were taken out of the proposal and I was to only look at this group in context with what was left, I would have to re-look at it. But I would still say that I felt that that group had effects on visual amenity which were more significant than the ridgeline groups.

10 MR DAVIDSON: Now, we are making good progress and your Honour will realise I am not going into groupings anymore as such as a challenge. But we have just got to deal with groups D and E and the only reason we have to deal with those is that you have taken out of play those south of Marima which is 28 to 33, the six turbines. Okay? And the reasons we have been through this morning are because we move into this undulating country that we have seen. That is essentially that, the reason, is it not?

20 MR BRAY: Yes, it is interesting, when looking at lunchtime from here I think it is actually pretty prominent that the hills south of the point Marima have a much bolder and feel to me much more separate than the ones north of that point.

25 MR DAVIDSON: In the short distance that we are looking - well, the distance we are looking at here, we see even by the visual observation from this room, the way the landform falls away off Marima - - -

MR BRAY: Yes.

30 MR DAVIDSON: - - - rather than climbing in the - starts to climb further, south does it not?

MR BRAY: That is correct, it drops away.

35 MR DAVIDSON: So it falls away rather than climbs into prominence at that point?

MR BRAY: Yes, that is correct.

40 MR DAVIDSON: Thank you.

MR BRAY: That is why I use the term undulating.

45 MR DAVIDSON: Yes, and I want to make sure we are on the downside of the undulation rather than the up side of the undulation, Mr Bray, at that

5 point. But in your dealing with groups - these numbers 28 to 33 - sorry just before we get there, in the group D and E as you - as gone through, as it were, pass your test, you have, at paragraph 194, taken out turbines 13 and 14 and they are fairly visible in the attachment and the reason you have taken them out is that they sit slightly in front of the main row of turbines. Would I be right in thinking they are about sort of 600 metres or so in front - in front of say 8?

10 MR BRAY: 500 metres in front of 8?

MR DAVIDSON: Yes, and 14 - what, 600 metres in front of 7?

MR BRAY: Yes, 500 metres.

15 MR DAVIDSON: And between 12 and 13?

MR BRAY: Distance between 12 and 13 is about 300 metres.

20 MR DAVIDSON: Yes, so they are going to be seen associated with 11 and 12 too, are they not?

MR BRAY: What do you mean they are going to be seen as part of - - -

25 MR DAVIDSON: Well, you pick them out as effectively creating a third row. That is your evidence at paragraph 194. What I am suggesting to you is that they are only a little bit in front of the row 1 through 8 and if anything they are associated with 11 and 12 as well close by.

[3.15 pm]

30 MR BRAY: Yes, okay, so you could potentially pick out 7 and 8 as a third row. I mean, it is that particular point where if you look from the main catchment which is Palmerston North - - -

35 MR DAVIDSON: Yes.

MR BRAY: Where there are effectively three rows because they tend to cross over because of that large plateau that happens to be there.

40 MR DAVIDSON: Yes. So we are what, how far ahead are we from Palmerston North, 10 kilometres?

45 MR BRAY: Yes, at this point in the case. In this room I think we are about 12.

MR DAVIDSON: 12 kilometres away. Well, it is an observation, Mr Bray, but it is not really a game breaker for turbines 13 and 14, is it?

5 MR BRAY: It is exactly that, it is an observation but no, it is not a deal breaker. But what I am highlighting is that they will cause a cross-over effect.

MR DAVIDSON: Yes.

10

MR BRAY: And it will be noticeable, interesting looking out at the - Te Apiti from here you can see that cross-over effect from this distance.

15 MR DAVIDSON: You know, I am not giving evidence but anyone can stand up in this room and see a cross-over effect looking anywhere down this range of hills.

MR BRAY: They can and what I am saying is that if we can avoid that, that is better.

20

MR DAVIDSON: Yes, I understand the point but without labouring it at 12 to 13 kilometres away, the effect of that overlap is much reduced simply by the distance, is it not?

25 MR BRAY: No, I do not believe it is from a distance, no.

MR DAVIDSON: Visually they will not be seen so clearly, obviously?

30 MR BRAY: Yes, distance is a mitigating factor in terms of their dominance, so I guess in that respect. But the cross-over effect still makes them more dominant.

35 MR DAVIDSON: Right, now coming to groups F and K and adopt with the group D turbines, I will not go back into that. But in F through K in the attachment you see what you call a variety of localised visual amenity effects and so you have split them down to look at the individual groups. But you then bundle them in paragraph 198 to say that collectively they give rise to more significant visual amenity effects.

40 So it is the big grouping here which you say brings together the effect of all these G through K. So I take it, it follows if, for example some of them were not there or differently positioned, some of that big group effect would be reduced, which you identify?

45 MR BRAY: Well, it potentially might be from a visual amenity perspective and that is what I am discussing here is visual amenity. But that is not

the proposal we will have on the table but the proposal we have is for all of those and so that is what is being assessed.

5 MR DAVIDSON: Yes, and what I - you understand why I am asking the question. We have to look at the proposal in its entirety and just as we have been through some turbines and placements we need to look at exactly what you are saying here. I had identified this point that you said at 198 that collectively they give rise to more significant visual amenity effects. So you have done a localised and then a collective appraisal of these groups, that is what you have done?  
10

MR BRAY: Yes, I have visited a number of locations throughout that area and identified which turbines give rise to potential effects.

15 MR DAVIDSON: Yes.

MR BRAY: And the same as we described earlier, from different locations it is always a slightly different array of turbines that give them.

20 MR DAVIDSON: Yes.

MR BRAY: And so when you put all of that analysis together - - -

25 MR DAVIDSON: Yes.

MR BRAY: - - - I come to the conclusion that, yes collectively they give rise to visual amenity effects.

30 MR DAVIDSON: That is right. It is the collective view and that is reflected at 199 where you say that all those south of Marima, so Game Ridge, lower than Browns Flat, around Browns Flat significantly contributed to the expanse of occupation of wind turbines in the wider landscape. Now, of itself there is no significant point to be made about the fact there is a greater occupation of landscape, is there, of itself?  
35

MR BRAY: Of itself, no.

40 MR DAVIDSON: Yet this is the point that you have begun with in the analysis of these groups. You are talking about the expansive occupation and we only have to look at the attachment of Ms Lucas to see the - yes, the width of occupation which you have been through this morning, five to six kilometres if we go from group F through to the top of group K and three to three and a half kilometres going the other way. That is the area over which the expanse of occupation is identified by  
45 you?

MR BRAY: Yes.

MR DAVIDSON: It is a big landscape, is it not?

5 MR BRAY: Well, it is a big landscape but it is also a very close landscape for a lot of people and therefore very prominent.

10 MR DAVIDSON: Yes, well I will come to that in a moment. But we are looking at groups G through K, looking at your page 45 in appendix 5, Browns Flat group G, Browns Flat group H, Game Ridge group J, Love property group K we have a total of 45 turbine locations, this is at page 45. Across the landscape of the scale we have just looked at, measured in four to five kilometres one way, two to three another way and with significant difference between the lineal layouts in themselves. It is not  
15 a cluster it is a group, so when you are talking about the expanse of occupation in paragraph 199, I have to put to you that another view of this is that that occupation over such a large area of land is a major mitigating factor. The sheer scale of that landscape under which these 45 turbines are located?

20

MR BRAY: In that location I would not agree.

MR DAVIDSON: Well, I take it from that answer you mean because they come down off the range?

25

MR BRAY: They come down off the range, they are located in – you know we are talking about visual amenity - they are located in a close landscape to a lot of viewers and, as a result, although that on a mathematical analysis of lineal scale using a ruler, yes, it is a big  
30 landscape but when you are there I think the turbines would cover that in an excessive way.

30

MR DAVIDSON: Well, your paragraph 200 takes CVP1, Napier Road, and it has a big angle of view T3, Te Rere Hau, Motorimu et cetera and you say you cannot see all the main ridgeline from CVP1, but turbine 27 can be made out numbered in magenta at the back of the cluster, so we get turbine 27. So we are talking about groups, the turbines are 28 to 33 here so I will come forward and I will come to paragraph 202 and the last three lines and you say, “The foreground foothills above Browns Flat appear higher in elevation than the main ridgeline and are clearly separated from Bryant Hill by the Turitea Valley”, so we have got a demarcation point from Bryant Hill by Turitea Valley around Browns Flat, so we are well away from that point of observation we have been through this afternoon.

45

5 And Browns Flat constitutes, as you say at 203, “The immediate dominant uplift from Pacific Drive and Ngahere Park Terraces and contrasting with the more complex foreground with residences, windbreaks, transmission lines et cetera”. So this is the area we see, so just I am quite clear about this, you are talking about which groups in that paragraph 203?

[3.25 pm]

10

MR BRAY: I am not talking about any groups, I am just describing the landscape in 203.

15 MR DAVIDSON: Right, well, when you are talking about the relevance of these areas, and I am talking about now Browns Flat, you say at 204, “The presence of turbines adds significantly to the overall occupation of turbines on the ranges” and there are local amenity effects you come to that you say “they have a wider viewpoint”. Well, what is that wider viewpoint, that they certainly are not at the same altitude, they have  
20 certainly come down off the ridgeline? But apart from the fact that they are, in that sense, visibly in a different place and closer to the residences they are distinctly identifiable as not part of a wall of turbines with the ridgeline?

25 MR BRAY: Yes, I believe that they are read as, even from that viewpoint, that they are foreground hills, foothills that we are talking about, and therefore the turbines are very distinctively located on those foothills rather than that main ridgeline.

30 MR DAVIDSON: Back to my question of 204 of your evidence, “The presence of turbines around Browns Flat adds significantly” – so I come back to my question now, what are the turbines in question you are referring to, all of G through K?

35 MR BRAY: Certainly group H, certainly group K. I think from that distance – actually some of the group K, which are the ones on Game Ridge actually cannot be seen, but certainly group G and group F.

40 MR DAVIDSON: Sorry, group?

MR BRAY: G and F.

MR DAVIDSON: G and F?

45 MR BRAY: Yes.

MR DAVIDSON: In the same category?

MR BRAY: Yes, they are around Browns Flat.

5 MR DAVIDSON: So is your concern about these groups – did you include group J in that?

MR BRAY: I just said that there were some in group J that are visible but some of the lower ones on Game Ridge would not be.

10

MR DAVIDSON: So which are those?

MR BRAY: I have not got the numbers directly in front of me but probably 63, 64, 65, 66.

15

MR DAVIDSON: So are they in or out on your evidence? What are you saying about them?

MR BRAY: You asked me what turbines I am including from this cumulative viewpoint 1 are the turbines that I consider are around Browns Flat and I suggested that the group H, K, F, G and some of the J from this viewpoint. There are some that are not in J because from this viewpoint they are not visible.

20

25 MR DAVIDSON: Right. So is it the number of turbines you are concerned with in this area?

MR BRAY: It is a combination of the number and the spread of them across the foothill.

30

MR DAVIDSON: So what we are really concerned with here is the expanse over about - if you look at it in a lateral way - we are looking at say four, four and a half kilometres containing, what, 45 turbines?

35

MR BRAY: Yes - - -

MR DAVIDSON: It is somewhat fewer than that because you have taken a few out.

40

MR BRAY: I struggle to deal with it on a mathematical scale like that to say we have got so many turbines per kilometre or square kilometre, it is not about that, it is about how that is read in a particular landscape, and my evidence is that on those foothills those particular turbines, those particular groups, have very dominating and spreading effect.

45

MR DAVIDSON: Well, for some reason, which I think I can read but I will  
get (ph 3.29.26) with you, you have taken the group K turbines which  
you have got there as the Love property in your evidence at paragraph  
5 206, and you have treated them as the most dominant of the turbines at  
the southern end of the wind farm. You have picked them out in this  
group, G and K?

MR BRAY: Yes, I have.

MR DAVIDSON: So your concerns about group G through to K, if you like,  
can be separated to a degree because on the one hand, as a group, you  
see a significant intrusion in the foreground, if you like, the foothills?

15 [3.30 pm]

MR BRAY: Yes.

MR DAVIDSON: But within that you see the Love properties as being the  
20 most dominant and if we look at your evidence – correct me if I am  
wrong – the reason appears to be from the evidence you are using and  
you have taken RVP16, Greens Road at 209, and paragraph 209 you  
refer to the section of Greens Road that doubles as part of the Te  
Awaroa walkway.

25  
And you talk about the relatively complex foreground landscape and  
the ridgeline extending up to the Turitea catchment “with a clean  
simple pastoral character dominating in elevations 200 metres above  
the viewer proposed turbines located at the top of the ridge”. So you  
30 are seeing their positioning as providing or making for a degree of  
dominance, these particular turbines in the Love group?

MR BRAY: Yes, when you are in that valley that I am talking about in  
35 Greens Road, those particular turbines are dominant to viewers in that  
area.

MR DAVIDSON: Yes. Now, we are talking about the residential perspective  
or people who are in that area?

40 MR BRAY: Oh, both.

MR DAVIDSON: Both.

HER HONOUR: Mr Davidson, I think we will adjourn.

45

MR DAVIDSON: I am sorry, I have cut out of the area you directed me not to go, ma'am, but I am nearly at the finish.

5 HER HONOUR: Could I just ask, Mr Maassen, what time do you go away?

MR MAASSEN: I can be here tomorrow morning if it is necessary. I would prefer not to but if that is how it plays out then I will certainly do that.

10 HER HONOUR: Well, Mr Davidson says he is nearly finished so it might be opportune. We will return in quarter of an hour.

MR MAASSEN: Thank you, ma'am.

15 **ADJOURNED** [3.31 pm]

**RESUMED** [3.46 pm]

20 MR DAVIDSON: Mr Bray, we are nearly there. We just work off the alphabet, we are nearly there. I just asked you about the K which is the Low property which you have chosen to treat as a discrete, at what you say is the most dominant of all the turbines at the southern end of the wind farm. But when you have gone to F and G groups, Browns Flat and Red Rock Knob you put them by way of description, on the highest  
25 parts of the site from peak 622 and wrapping around Red Rock Knob.

Now, obviously you have been to Red Rock Knob and I have flown over it. It is not of itself a particularly distinguished landmark is it?

30 MR BRAY: Not in itself. It is more of a recreational destination, but it is a point that you can distinguish when you are in the area, and point that is very desirable to stand on to get good views.

35 MR DAVIDSON: Did you fly in there or did you walk in there?

MR BRAY: I haven't actually, I think I might have said in my evidence, I haven't walked, haven't been to Red Rock Knob itself, but I have walked from turbine 33 down the track there to location 46, and I have driven round I think it is over to 117. I have been right round it.

40 MR DAVIDSON: Mr Wyatt gave evidence about getting to Red Rock Knob and that you have got to walk it. Walking substantial extent in the bush canopy and at the base, and you get up onto the knob, yes, you do get views, but within that area it is, the perspective is very limited until you  
45 get to that elevation.

MR BRAY: Within there, yes, but there is, as a result, the reward of getting to the top is even greater.

5 MR DAVIDSON: Yes. And from the plains as you describe it, these turbines are largely screened from view by Tirohanga? And the ridgeline west of Browns Flat, this is your paragraph 216. Although you can get to see it when you get out to about 13 kilometres, that is the point, isn't it? They are largely screened till you get a distance away.

10 MR BRAY: Yes, that is right.

MR DAVIDSON: But you say that "the additional effect of these groups in conjunction with the more foreground turbines, group K, is negligible. At most they contribute to a degree of blade crossover." So we have  
15 got a negligible effect from these?

MR BRAY: In terms of visual amenity.

[3.50 pm]

20 MR DAVIDSON: Yes. And the key point of your evidence in this regard, is that it is the outward view from Red Rock Knob is the key element of your attention?

25 MR BRAY: Those turbines, yes.

MR DAVIDSON: Yes. And you say, well you refer to the value of the walkway and that they will have a dominating effect from Red Rock Knob and even group 7G, and so they are the groups we see in orange  
30 and green in Ms Lucas's attachment. Again the issue here seems to be squarely, and tell me if I am wrong, it is based on the outward view in your paragraph 2.19?

35 MR BRAY: Yes.

MR DAVIDSON: That is the heart of it.

MR BRAY: It is. In terms of visual amenity.

40 MR DAVIDSON: Yes. Are you familiar with the case called Payeo Developments and the Christchurch City Council, involving the gondola at the top of the Port hills in Christchurch and Mount - - -

45 MR BRAY: No. I am not familiar with the case, I know the site.

MR DAVIDSON: Yes, and you know all the outward view, although we are talking about reserves to a degree in that case, the outward view held, from that site, the dominance, the drama of it?

5 MR BRAY: Yes, I know that, I have been there.

MR DAVIDSON: You don't lose the view, but on your evidence you have the impact coming into your view of these turbines, that is what you are effectively saying?

10

MR BRAY: A very significant dominating view of turbines.

MR DAVIDSON: Yes. And when you go to Browns Flat west in group H, as we see in the attachment, we have got this lineal format along the western ridge, you use those words, distinctly lineal format, along the western ridge of the terrace known as Browns Flat, and it is the eastern boundary of the Kahuterawa Valley. But you don't from many places inside the valley, see the turbines on this ridge, so deeply incised?

15

20 MR BRAY: You see them quite clearly from a number of locations in Pacific Drive.

MR DAVIDSON: Referring to your paragraph 220, "because the valley is deeply incised, there are in fact few locations where turbines will be visible." I take it you mean what you say there?

25

MR BRAY: That is when you are in Kahuterawa Valley

MR DAVIDSON: Yes, that is what I understand. But of the perspectives of these turbines, you treat the most significant effect as from Pacific Drive in RVP22. And as I understand that paragraph, your concern is that the forest which can be seen there, creates a degree of separation of land form from the terrace and the flat clean terrace below the Ngahere Park subdivision becomes the focal point of view so that the turbines would draw the eye up to them.

30

35

MR BRAY: Yes, yes, I think it would.

MR DAVIDSON: It doesn't disturb the terrain of that terrace as such? It is the view from the top as it were?

40

MR BRAY: It is the way you experience that view would be changed.

MR DAVIDSON: Yes, yes. You would lose the experience you presently have, but the actual observation of that terraced land is unaffected, except to the extent there is another element into the landscape?

45

MR BRAY: Well, yes, it is unaffected, but as I say your view of the landscape is altered.

5 MR DAVIDSON: Well, your summary at 224 is that “the group H turbines on their own have somewhat limited effects on visual amenity, but much greater as part of an overall group” a point we discussed before. It is the clustering and the Pacific Drive angle would produce the perspective you are concerned about?

10

MR BRAY: That is the biggest concern under that group.

MR DAVIDSON: Yes.

15 MR BRAY: On a visual amenity perspective.

MR DAVIDSON: And you made a point in regard to paragraph 223 from Greens Road which is RVP16 that the residences you are referring to in that paragraph, 335 and 336 Greens Road, are about two kilometres from turbine 125, and that is the end of group H as we look at the line? Lineal line?

20

MR BRAY: That is correct.

25 MR DAVIDSON: So the closest, we get further away as we go down the line, is that right?

MR BRAY: They do.

30 MR DAVIDSON: That line is something in the order of three kilometres, two and a half kilometres?

MR BRAY: About three kilometres.

35

**[3.55 pm]**

MR DAVIDSON: Yes. So that is a, as we get further away the effect is reduced?

40 MR BRAY: Only marginally. You are talking a distance of being two kilometres away to five kilometres away.

MR DAVIDSON: Well, five kilometres away, the view from those two properties at Greens Road will be reduced, will it not? You will still see them, but the scale and effect will be reduced?

45

MR BRAY: Oh it would be, yes, the effect of turbine 119 for example, is less than 125. But still dominant I believe.

5 MR DAVIDSON: Now finally in group J at Game Ridge you talk about the small valley behind Tirohanga and you describe it in 225 as a “dominant but short ridgeline, a small valley separating a dominant but short ridgeline that juts out into the Turitea catchment, can be seen from locations on the terraces but for the most part they are located in amongst the turbines in group K and they cannot be seen from locations in Greens Road or Kahuterawa Valley”. So they have a lesser effect than that you have described obviously in relation to the Love property?

10 MR BRAY: Yes, the group J turbines are largely screened from view, from external to the site.

15

MR DAVIDSON: Thank you Mr Bray.

HER HONOUR: Mr Maassen?

20 <CROSS-EXAMINATION BY MR MAASSEN [3.57 pm]

MR MAASSEN: Thank you your Honour. Mr Bray, I just want to deal with three topics. The first topic is the spatial extent of turbines that you find acceptable and could I ask you please to look at attachment 18 and 25 19 of Ms Lucas’ evidence?

MR BRAY: Would you mind providing a copy sorry? I do not have those attachments with me. Sorry about that. Thanks.

30 MR MAASSEN: Mr Registrar, if you could also provide the witness with this council booklet. These are views from Fitzherbert Avenue.

MR BRAY: Yes?

35 MR MAASSEN: Do you see the Turitea Reserve distinctly in the distance?

MR BRAY: Yes, I do.

40 MR MAASSEN: From the numbering at attachment 19 the turbines seen in attachment 18 include turbines 21, 22, 42, 23, 24, 25 and 27.

MR BRAY: Yes.

45 MR MAASSEN: Do you see that?

MR BRAY: Yes.

MR MAASSEN: 27 is the outer limit of what you find acceptable.

MR BRAY: Yes, it is.

5

MR MAASSEN: Mr Brown described in a report he provided and which was disclosed in these proceedings, he described the Turitea Reserve as a signature landscape of Palmerston North and then went on to explain that signature meant related to identity and place. Would you agree with that description?

10

MR BRAY: Yes, I would.

[4.00 pm]

15

MR MAASSEN: In your paragraph 70 you have a table in which you have rated the landscape units you have identified and it appears in respect of Hardings and Turitea parks or reserves you have rated as either significant or high ecology, aesthetic values, transient values, legibility and shared and recognised associative values. Is that correct?

20

MR BRAY: Yes.

MR MAASSEN: And that would be justified, would it not, by the view shed in attachment 18?

25

MR BRAY: Yes.

MR MAASSEN: To be fair to you, you said that the precise point at which turbines should stop was a difficult matter and that largely you had made that decision on the basis of topography and elevation. I would like to put to you an alternative method of assessing the appropriate end point. First of all, if I could ask you please to open this map booklet at map 2. At map 2 it can be seen that from approximately turbine 15 north there is not the same degree of natural vegetative cover within the proposed turbine locations than is the case south. Would you agree with that?

30

35

MR BRAY: Yes, that is right.

40

MR MAASSEN: If one was to extend turbines beyond say turbine 15 to 27 you have a length of turbines extending approximately another three kilometres. Do you agree with that?

45

MR BRAY: Approximately.

MR MAASSEN: And that is on top of an already length of turbines which you would find acceptable of approximately four kilometres?

MR BRAY: Yes.

5

MR MAASSEN: In respect of the length from turbine 15 to 27, would you accept that that section of the ridgeline is visible from significant view sheds within Palmerston North City?

10 MR BRAY: Yes, it is.

MR MAASSEN: If one was to - if I ask you to refer to map 1, this is a map which incorporates the entire city and you can see that Palmerston North is on a lineal grid pattern, correct?

15

MR BRAY: Yes.

MR MAASSEN: And that a major axis is Rangitikei Line or Rangitikei Street becoming Rangitikei Line and Fitzherbert Avenue?

20

MR BRAY: That is correct.

**[4.05 pm]**

25 MR MAASSEN: That line continues, not perfectly, to the east through Summerhill Drive to Turitea Road?

MR BRAY: That is correct.

30 MR MAASSEN: If one was to extend that line further east one hits approximately turbine 22?

MR BRAY: That is correct.

35 MR MAASSEN: People travelling along this axis, whether to Massey or to the eastern suburbs or to Ngahere Park, will have at some points and to some degree views of that three kilometre section that I described?

MR BRAY: Yes, there would.

40

MR MAASSEN: Looking at Mr Wyatt's photomontages - I will just check whether I have a better view. Actually, I will ask you please to look at Ms Lucas' attachment 15. Do you see that?

45 MR BRAY: Yes.

MR MAASSEN: The three kilometre section that I am describing is broadly from what she identifies as turbine 39 through to turbine 27.

MR BRAY: Mm'hm.

5

MR MAASSEN: From turbine 39 onwards would it be fair to describe, to say that from a significant number of viewing locations within Palmerston North City from 39 south Turitea becomes a more dominant landscape element because Bryant's Hill declines an elevation and becomes more in the nature of a spur heading south.

10

MR BRAY: Yes, and because of the forest cover.

MR MAASSEN: My proposition to you is that in view of the elements that we have described, the associative values, the high degree of natural character and the viewing importance of this three kilometre section when viewed from Palmerston North that a justifiable ending point in landscape terms could be around turbine 39.

15

MR BRAY: I think that could be a very justifiable end point. As I said in my opening, I was quite troubled to try and find out where that point was and for some time 39 was it. In the end I got to where I came from because of other view points. But no, I certainly agree that that is a very justifiable end point.

20

25

**[4.10 pm]**

MR MAASSEN: Thank you. I now want to move to a different topic, which is glade crossover. You were asked some questions by my learned friend Mr Davidson about glade crossover and I understand that he was in parts in that context referring to the turbines 14 and 13, which you had deleted for crossover reasons.

30

MR BRAY: I suggest their removal for various reasons, yes.

35

MR MAASSEN: Could you please look at attachment 16? Turbines 13 and 14 are approximately, when viewed from Palmerston North City, in a view line with the peak of what is known as Mairekau or Bryant Hill, is that correct?

40

MR BRAY: That is my understanding.

MR MAASSEN: And if one looks at the peak of Mairekau as shown in attachment 16, does one see the crossover effect that you described?

45

MR BRAY: Very clearly.

MR MAASSEN: And what in your evidence is the appropriateness or otherwise on that effect on a landscape feature of this significance?

5 MR BRAY: I think that draws your eye directly to the turbines and away from the landform and I find it adverse.

MR MAASSEN: Thank you. I now want to talk about blade crossover in the context of those turbines that were within the envelope that you describe as acceptable and in particular, those that are seen in  
10 attachment 18 of Ms Lucas's visual photomontage.

Now, we do not know what the Board is going to make of all this evidence but let us assume for present purposes that the Board decides that your ending point is an acceptable one. My question relates to your  
15 view as to the acceptability of the configurations or the location of turbines in this view. Now, we have agreed – you have agreed, I am sorry, that this viewshed is very significant and scores highly on a range of assessment criteria.

20 You will see from attachment 18 that what I perceive to be turbines 23 and 24 merge as a single turbine. Do you see that?

MR BRAY: I think 19 is the same and I think it is turbines 24 and 43.  
25

MR MAASSEN: Oh, yes, I am sorry, yes.

MR BRAY: But yes, I see that.

30 MR MAASSEN: Yes. And also we can see from the plan view that 25, 26 and 27 are quite close together?

MR BRAY: They are.

35 MR MAASSEN: Would you agree that if turbines are to go to this extent, given the importance of this landscape, that good spacing that maintains clear legibility and coherence is desirable?

MR BRAY: Yes, it would be desirable.  
40

**[4.15 pm]**

MR MAASSEN: And conversely the type of effect that you see in attachment 18, where two turbines confusingly appear as one but of a different  
45 design, is undesirable?

MR BRAY: Yes, I find that adverse.

5 MR MAASSEN: Yes. Thank you. I now want to take you to a different topic  
which is turbine design. In your opening statement you emphasise the  
inconsistency in turbine size and design in the Manawatu and  
particularly the Tararua Ranges as an example of what not to do and  
that the inconsistency makes a contribution to the adversity of  
cumulative effects?

10

MR BRAY: Yes, it does.

MR MAASSEN: And consequently you recommend any turbines constructed  
in what I will loosely describe as the Turitea site to be not more than  
15 110 metres high and a blade relationship to tower of 50 percent, which I  
will describe for present purposes as the aesthetic proportion, that is the  
term I will use for it?

20 MR BRAY: Sure, yes.

MR MAASSEN: Is that correct? We know that the total height of Tararua 3  
and Te Apiti are within four metres of each other, ranging from 106 to  
110, is that your recollection?

25 MR BRAY: Yes.

MR MAASSEN: And what is proposed for the Turitea wind farm is a total  
height of 125 metres?

30 MR BRAY: Yes.

MR MAASSEN: Given the range of turbine size that already exists how  
significant in your opinion is a 14 percent increase in the size from the  
already highest turbine height of 110 metres?

35

MR BRAY: I think it is significant. I think it will be discernible, the  
difference, particularly because of the proximity of Turitea to the other  
wind farms and it will be seen as yet another difference between the  
turbine designs that are in this landscape already.

40

MR MAASSEN: Is it your point that already the landscape has a somewhat  
experimental feel and that greater dissonance is undesirable?

45 MR BRAY: That is correct.

MR MAASSEN: Mr Davidson said for a three megawatt turbine proposed by Mighty River Power the tower will be 80 metres and the blade 45 metres. On my calculation that makes the blade length 56 percent of the tower height. Given the importance of the ridgeline which is within your acceptable envelope what significance do you attach to the breach of the aesthetic proportion, as I defined it, by six percent?

MR BRAY: I pulled that out because there are existing wind farms there and because you have an opportunity, and particularly local people who will view wind farms more often, they have an opportunity to dissect the structures and to understand them more and therefore I believe that the aesthetic proportion as you call it – the Te Apiti turbines immediately have a better appearance than the T3 turbines and as a result they will have a better appearance than what is proposed for Turitea.

[4.20 pm]

And therefore I believe that if what is proposed is pushed through, that will be adverse because you are able to compare it to the existing design of Te Apiti which I believe is favourable.

MR MAASSEN: Thank you. I now want to deal with one final topic. You have said on a number of occasions, both in your opening and in answer to questions from Mr Davidson, that cumulative effects lies at the heart of your analysis and is a key factor to consider in the Manawatu context?

MR BRAY: Yes.

MR MAASSEN: And of course you dealt with cumulative effects not only in terms of the proposal in relationship to other existing wind farms but also in relation to the sheer size of the proposal in its own right?

MR BRAY: Yes, internal cumulative effects, yes.

MR MAASSEN: Yes. And you were asked some questions about Mr Wyatt's perception studies which you said were not a particular reliable basis for assessment, do you recall saying that?

MR BRAY: Yes, that is right.

MR MAASSEN: I want you to please open Mr Wyatt's first statement of evidence and turn to paragraph 5.16. I will read this into the record. "In terms of cumulative effect assessment I am aware of no published data on community responses to a number of wind farms within an area

in New Zealand. In Victoria, Australia, community perception studies (relating to the 50 turbine Ararat wind farm) showed a higher level of acceptance of one additional wind farm in the local area than of three additional wind farms". Do you see that?

5

MR BRAY: Yes.

MR MAASSEN: And the footnote describes the cumulative effect assessment as an increase from 50 turbines to 72. Do you see that?

10

MR BRAY: Yes.

MR MAASSEN: My question is this; one case study of a small increment in the total number of turbines from 50 to 72 in an unspecified landscape in an unspecified context, is that a reliable basis in your opinion for reaching conclusions as to the acceptability of cumulative effects in the Manawatu context?

15

MR BRAY: No, it is not.

20

MR MAASSEN: Thank you, Mr Bray. Thank you, your Honour.

**<CROSS-EXAMINATION BY MR JOHNSTON**

**[4.24 pm]**

MR JOHNSTON: Mr Bray, there is a very small number of matters that I need to raise with you. The first is just a matter of clarification and I am quite happy to be told that it is me who does not understand this, but could I ask you to look at paragraph 206 of your evidence, that is the first paragraph in the section where you are dealing with group K turbines, correct?

30

MR BRAY: Yes.

**[4.25 pm]**

35

MR JOHNSTON: Now, at paragraph 209 you direct the Board to Mr Wyatt's RVP 16. Do you have that in front of you, as well?

MR BRAY: Yes.

40

MR JOHNSTON: That is a photograph and a photomontage taken from Greens Road looking south, is it not?

MR BRAY: That is correct.

45

MR JOHNSTON: Now, just looking at a map it appears to me, and as I say I am quite prepared to be corrected on this, but it appears to me that the turbines in the montage must be those in your group H rather than your group K. Do you have a map there so that you can just follow Green's Road past the Love property?

MR BRAY: I am just going to work that out. Yes, that is correct. The turbines in that particular photomontage are the group H turbines, although I think what I am saying there is that – oh, no, sorry, no I am correct. No that is group K turbines on the ridge immediately behind. Greens Road runs through a small valley, it turns off to the left hand side, there is a T-junction and this property is located down the left hand side of that, or the northern arm, and that is looking back up onto the Love property turbines, group K.

MR JOHNSTON: So you say they are, in fact, group K turbines?

MR BRAY: Yes, they are group K turbines.

20

MR JOHNSTON: All right.

MR BRAY: The turbines I think in that view they are 133 on the far left, I would hazard a guess.

25

MR JOHNSTON: Thank you, that is helpful. I just wanted to clarify that.

MR BRAY: The group H turbines are visible from that property but not in the photomontage.

30

MR JOHNSTON: Now, just moving on from that and coming to two or three points of a more general nature. At the commencement of your evidence you distinguish between ecological aesthetic models and scenic aesthetic models for the purposes of analysis of landscape and it is the latter which you regard as the most appropriate and apply here, is it not?

35

MR BRAY: Yes.

MR JOHNSTON: And is the essential point insofar as scenic aesthetic models are concerned that it is not necessary for a landscape to be untouched for it to be aesthetic value and worthy of protection?

40

MR BRAY: That is correct.

45

MR JOHNSTON: And it is fair to say is it – well, let me put it in the form of a question. Is it fair to say that by definition involves a more subjective assessment than would be the case for an ecological model?

5

MR BRAY: Potentially it does.

MR JOHNSTON: Well, is it too simplistic to say that this model involves the assessment of landscape which may have been modified to one extent or another by asking whether it nevertheless is pleasing or valuable?

10

MR BRAY: Well, yes, that is what you are trying to assess, but often those values are widely recognised.

15

MR JOHNSTON: And I suppose this is where your point about the dividing line between landscape assessment and psychological analysis comes in, is it?

MR BRAY: Yes.

20

**[4.30 pm]**

MR JOHNSTON: Well, what I wanted to focus on just for a moment is this, in relation to that I imagine you will accept readily that views about what is or is not acceptable and what is congruent within a landscape change with time?

25

MR BRAY: They do change, yes.

30

MR JOHNSTON: So to give perhaps a rather fanciful example, in 2009 one is not concerned to see tractors as opposed to shire horses in a rural environment?

MR BRAY: Sure.

35

MR JOHNSTON: Now, at paragraph 39 of your evidence you say very fairly that there is a substantial level of acceptance of wind farms in rural environments, I think as I understand it, because of what they represent to some extent?

40

MR BRAY: Yes, that is right.

MR JOHNSTON: Now, what I want to ask you is whether in your capacity as an expert in this area, you expect that level of acceptance of wind farms to continue and to increase as this country and others move to the greater levels of sustainable generation of electricity?

45

MR BRAY: I think that is difficult for me to answer. There is a cost to putting a wind farm up and that is the reason I am here is there is a cost to the landscape. So yes, there is a perceived benefit of renewable energy, but my understanding is that technology moves on so it may be possible to get renewable energy from other sources and therefore the cost may be different or less, so as I say it would be difficult to presume anything.

MR JOHNSTON: I just want to change topics now to deal with your approach to changes to landscapes and whether they represent adverse change or otherwise, and again this is a matter for clarification and it is a topic that Mr Davidson touched on with you earlier in the day and I am returning to your paragraphs 105 to 109. Now, in those paragraphs you face directly up to, in a helpful way I might say, the question of whether changes to the landscape brought about by wind farms should be regarded as adverse or otherwise, and that is the passage in your evidence where you talk about people's attitudes and the 'not in my backyard' view of the world which you refer to.

Now, there are two points that I want to ask you about this. The first is you refer to people who live in rural environments having I suppose a particularly acute sense of these matters and being more sensitive to changes in the landscape than others, is that a fair way of putting it?

MR BRAY: I do not know if "sensitive to changes in the environment", perhaps more aware of changes to their wider environment and also an understanding of a much greater landscape than perhaps urban people would have.

MR JOHNSTON: Yes. Well, that is a helpful response because it leads on to my proposition, which I would ask you to think about and accept if you can, which is this; that those people living in a rural environment, perhaps farmers who have been attached to a particular block of land for a time, may because of that sensitivity be more attuned to changes such as the wind farms coming to properties because of what they represent?

MR BRAY: I am not sure I follow what you are - .

[4.35 pm]

MR JOHNSTON: Probably very badly put. Let me put it again to you. As I understood your evidence, what you were saying was that people living in a rural environment were more attuned to that environment and more sensitive to change?

MR BRAY: No, I did not say “sensitive to change”, I said “aware of changes”, “aware of potential changes”.

5 MR JOHNSTON: My proposition is that awareness might manifest itself in an enthusiasm for changes such as the introduction of wind farms as opposed to a resistance to it?

MR BRAY: It may well do.

10 MR JOHNSTON: And that is, in a sense, the unknown factor in this analysis, is it not?

MR BRAY: That is correct and that is essentially what I say, is people are different.

15

MR JOHNSTON: Well, that is the second point I wanted to raise with you in fact. You say that you made that point but is there not in this section of your evidence a deliberate, and this is not a criticism of it, it is just a question, a deliberate assumption that the change will result in adverse consequences?

20

MR BRAY: Well, it is deliberate because there are some people who will find it adverse and so therefore it is perhaps safer to take that approach that it - of the adversity and to understand the effect of the significance of that adversity. The reason I do it is, I just think it is a safer approach than assuming that everybody is comfortable with it.

25

MR JOHNSTON: So it is just a matter of proper analysis. You make a conservative assumption about attitudes?

30

MR BRAY: Well, it is a conservative assumption but it is also based on the submissions that are received that indicate a level of adversity.

MR JOHNSTON: And that conservative assumption, it is fair to say, is reflected in the balance of your evidence, is it?

35

MR BRAY: My evidence is based on the fact that visibility of turbines should be treated as adverse rather than positive.

40

MR JOHNSTON: I am going to change topics now and talk to you if I can for a moment about the foothills. Now, Mr Davidson and to an extent Mr Maassen, have already touched on this with you. I think I am correct in saying that you have acknowledged that the obvious reason that the wind farms north of the Pahiatua Track do not appear on the foot hills is because there are not any foothills, at least of the same sort as exist in the area we are discussing in this proposal?

45

MR BRAY: There are some foothills and there were turbines in Te Apiti that were removed from those lower turbines, part of those lower foothills I should say.

5

MR JOHNSTON: Yes. You are aware, and you have mentioned in your evidence that the foothills that are included in this proposal are in private ownership and are pastoral in their nature and in fact you have emphasised that at a number of points, have you not?

10

MR BRAY: Yes.

MR JOHNSTON: Have you considered and taken into account in your analysis the planning status of that land?

15

MR BRAY: I have to a limited degree, I am not a planner so I have not gone into that detail, but I have taken some consideration.

MR JOHNSTON: I just do not recall having seen a reference to it in your evidence?

20

[4.40 pm]

MR BRAY: No, there is nothing in the evidence but it is something that I am aware of through my analysis.

25

MR JOHNSTON: Well, do you know what the planning status of the, say the Love property or Nga Wai Farms is?

30

MR BRAY: I could not tell you that off the top of my head, no.

MR JOHNSTON: Would you accept from me that it is rural residential and that the owners of that property are entitled to subdivide down to one hectare blocks as of right?

35

MR BRAY: Sure, as I say I do not know.

MR JOHNSTON: Well, is that relevant in your mind?

40

MR BRAY: It is somewhat relevant, there is a difference, yes. By putting houses up there would change the rural character, however, putting houses up there would be nowhere near as dominating as putting turbines into those locations.

45

MR JOHNSTON: I suppose it rather depends on the houses, does it not?

MR BRAY: I have never seen a 125 metre house.

5 MR JOHNSTON: Well, but you do see foothills that extend higher than that,  
do you not?

MR BRAY: See foothills that extend higher?

10 MR JOHNSTON: Mm.

MR BRAY: Than 100 - sorry, foothills.

15 MR JOHNSTON: Your point to me is that houses are not as tall as turbines  
but the houses can be placed at any point in the foothills I suppose?

MR BRAY: Well, that is where I am having to take your evidence. I do not  
know the planning status.

20 MR JOHNSTON: Nevertheless you are accepting that that is a relevant  
consideration. Now, I do not want to spend any time with you in  
relation to the merits of your grouping exercise at all. But do you  
accept that grouping as a methodology is much more valuable at the  
25 macro level than the micro level, by which I mean it is much more  
valuable at a distance from the site when one encounters the subtleties  
of land formations at very close proximity?

MR BRAY: That is right. When you are looking turbines from one particular  
viewpoint and you are making an assessment from one particular  
30 viewpoint the grouping turbines generally does not help.

MR JOHNSTON: Yes. Mr Anstey's evidence, if I can paraphrase it, was that  
at the micro level ultimately one has to consider viewpoints on a case-  
by-case basis.

35 MR BRAY: That is correct.

MR JOHNSTON: Would you agree with that?

40 MR BRAY: Yes, I would.

MR JOHNSTON: Now the last topic brings me to paragraphs 215 to 219 of  
your evidence which is where you talk about Browns Flat and Red  
Rock Knob. Now, Browns Flat is a 900 hectare park, are you aware of  
45 that?

MR BRAY: No, when I discussed Browns Flat I have always assumed it to be meant in how it has been described to me as a very small plateau or terrace - - -

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MR JOHNSTON: Right.

MR BRAY: - - - consisting of swampy or wetland in between turbines 47, 54 and 52, 111 there is a ridge around there and there is a large flat area. That is - - -

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MR JOHNSTON: Sorry, I have misled you, I am talking about the Reserve not Browns Flat itself. The point I am trying to get to is this, that the Reserve is not itself a destination?

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MR BRAY: Turitea Reserve is not a destination?

MR JOHNSTON: Yes.

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MR BRAY: No, I believe it is off limits at this point.

**[4.45 pm]**

MR JOHNSTON: Yes. And your concern and I think Mr Davidson has covered this. Your concern is, so far as Red Rock Knob and the track, to that point is that when you reach the top of that track and emerge to enjoy the views, your views over the city for example will be interrupted by the existence of turbines in the area, albeit that one does not necessarily see them when in the bush cover itself?

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MR BRAY: That is right, there would be locations on the walk that would see them but the most dominating element would be when you come out of the bush when you come into a viewpoint where you are there to look at the view, that is when turbines would be dominant.

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MR JOHNSTON: Well, they would be part of the view, would they not?

MR BRAY: I say, they would be dominant.

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MR JOHNSTON: Thank you very much.

MR McCLELLAND: No re-examination, thank you, your Honour.

HER HONOUR: Thank you, Mr Clelland. Mr Bunting.

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MR BUNTING: Yes, can I ask two questions please. In the table you have got the dimensions and so on of the various turbines on the different farms at page 25. You are sort of going for a smaller turbine, do you know the tower height for a 2.3 megawatt turbine in your research that you have done?

MR BRAY: Not offhand, I do not, no, sorry. But I am aware that tower height can change, it does not necessarily respond to the power of the turbine itself.

MR BUNTING: Mr Davidson, is it possible that we could get some indication of that?

MR DAVIDSON: Yes, I will get the exact details, sir. I have had two figures given to me.

MR BUNTING: Okay, thank you very much. And my second question really related to the effects from the western side of the ridgeline and in paragraph 189 you have more or less – do you want to go to that on page 54, at the top of the page there? You seem to have been a little dismissive of the effects of properties on that western side. Last week you were not here but we heard from a submitter, Mrs Percy, who lives in Mako Mako Road and she indicated to us that she was very concerned because she considered there would be about 24 turbines that they would have a view of from their living area. So I just invite your comment on the visual effects on the western side of the ridge where your focus, it seems to me, to have been very much on the other side.

MR BRAY: Yes, the focus has, yes, it has been on the western side, on this side of the ranges, because that is predominantly where most of the population lies. The property is at 983 Mako Mako Road I - - -

MR BUNTING: She is at 789.

MR BRAY: Oh, 789, yes. I know the location of those properties and, yes, there are some properties, I have not singled them out, but I have indicated a couple of times that there are properties that are in close proximity to turbines on the eastern side.

The eastern side is quite different to the western side. Here you have not only the city and a large population but you have the plains and then the ranges are a very dominant feature from quite a long way back. Whereas on the other side of the ranges there is a ridgeline, just on the more eastern side again that Mako Mako Road, and so you head further east, actually that ridgeline becomes more dominant than the ranges

themselves. So, yes, I certainly accept that there are residences, particularly on Mako Mako Road, that will be dominated by the turbines that I suggest go forward. Further out they are not nearly as dominant because of the other ridgelines and landforms.

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MR BUNTING: I think it was groups D and E that would impact on her.

MR BRAY: There would be impacts, particularly on the property you are talking about, yes, I am very aware that they would have significant effects on that property.

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MR BUNTING: Okay. Just reverting back to the 2.3 megawatt, the smaller tower, if that was implemented would that change your view at all on - - ?

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MR BRAY: No, it would not change my view in terms of site locations, no.

**[4.50 pm]**

MR BUNTING: So your conclusions would still be the same as to the different groups and - - -

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MR BRAY: They would, yes.

MR BUNTING: But it would have the advantage of those that were left perhaps in your context that they would be more acceptable, is that correct?

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MR BRAY: They would be more acceptable I believe, yes.

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MR BUNTING: Okay. That is all, thank you, ma'am. Mr Shenton?

MR SHENTON: You have talked in your evidence about the visual absorption capacity of the landforms and things like this and, again, you have also talked about the broader aspect of the other wind farms in conjunction with looking at this one. Just a question I have in my mind is the Board has been on several site visits including just having a little bit of a glance at Te Apiti wind farm which I think is probably, in our limited contact, is the best of example of showing how turbines are placed in a gradual sort of elevation up to a point and it seems to me that they get absorbed into the landscape. Are there any opportunities, do you see, within this development where that sort of approach can be applied?

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MR BRAY: Yes, I would agree with you, I think Te Apiti is a very good example of how turbines can respond to landforms and I think there are

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5 still perhaps a couple of the ones further down that are inappropriate. It  
 is a little bit more difficult on this site I think because – bearing in mind  
 that I have come to the conclusion that I do not feel that they should be  
 on the foothills – the range itself, the main ridgeline ranges right up the  
 top there on the skyline are much, much narrower and therefore that  
 limits the opportunity. However, I would accept there is a random  
 spacing or somewhat random spacing and that turbines do tend to be  
 located in relatively good locations, micrositing, which helps but it is  
 limited because there is much breadth up there compared with Te Apiti.

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 MR SHENTON: I suppose one area that I thought where maybe this could be  
 applied was in the northern sector, group C into group D and E, maybe  
 group B, but you know looking up from – just if you have one focus on  
 that aspect of it from the bottom looking up – yes, does it have elements  
 15 of that gradation in that area or not, in your view?

MR BRAY: Yes, it does, to a limited extent. The ridgeline up there drops  
 away very, very quickly and you will have known that from your site  
 visits.

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 MR SHENTON: Yes.

MR BRAY: Whereas, yes, again, if you go back to Te Apiti or T3 it is a much  
 rounder top and so, yes, I think it is obvious that there is some that they  
 have not done a very picket line approach and that is reflected I think in  
 25 the table that I have on page 25, which says that it is a landscape  
 response approach, unlike Te Rere Hau, for example, which is very  
 much, you know, it is a maths grid on the hillside.

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 MR SHENTON: Just another point I think following on from Commissioner  
 Bunting's questions about the effects on Mako Mako Road on the  
 eastern side. It just occurs to me in reading some of the assessment that  
 – I am just trying to remember the numbers now – but towards the  
 southern end, maybe it is Love Ridge and some of the Browns Flat,  
 35 Kahuterawa areas in terms of – I think in some cases you have  
 mentioned like a few local residents are affected and things like this. I  
 am just wondering how you reconcile that sort of balancing with the  
 same aspect on the other side, like Commissioner Bunting said, there  
 are 25 turbines in one residence's view, I mean was there some thought  
 40 balancing in terms of that? I know there is different elements involved  
 but - - -

[4.55 pm]

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 MR BRAY: Yes, there was and I could have in this evidence gone through  
 and given you an individual turbine, you know how significant it is, and

5 I chose not to because I thought actually most of this area I believe is about the major, major scale and whether and how much of this will go ahead altogether. And so, having done that analysis at the beginning of my assessment and sort of determined this window, as I call it, of where it could be, yes, I then understood that that meant that there would be significant effects on some people.

10 And I guess all I can say is I do feel for those people. I would not want to be those people and so, yes, there is a balance that has to take effect. What I did not find was a property where I felt absolutely no way can we put the turbines that I have said to go ahead, absolutely no way should we take this particular one out. I felt that generally weighing everything up, the whole assessment together, that way I put forward was okay.

15 MR SHENTON: Basically for my own information really, the table on page 23, it just talks about the value systems and the – what is the, in terms of the ratings there – and I am looking at particularly just the associational and you have got tangata whenua, a line there – how did you generate those ratings?

20 MR BRAY: Well, tangata whenua in particular there was evidence – and I am afraid I cannot remember who – but there was evidence put forward or a map put forward indicating particular tangata whenua sites and so that is where I was able to perhaps lift those but also it was just through general reading, understanding the background as to what is the importance. Part of the difficulty I suppose of being in my position is that we are not focused on one particular thing but more a generalist and so you just have to take all of these factors and put them together in a context and so that is where they come from. You could potentially pick each one of those and argue should it be a low or a moderate and in the end it sort of became a bit irrelevant, it was the whole picture that I was trying to get to.

35 MR SHENTON: Okay, so it is from submissions or maps?

40 MR BRAY: There were some submissions, there was a map – as I say I cannot remember who did the map – but I remember seeing a map identifying particular tangata whenua sites and historical sites. I have also done a lot of reading about the importance of the ranges to tangata whenua, the cultural history, and so it was drawing on all of that and putting that together as sort of the initial background work to my assessment.

45 MR SHENTON: Yes, just for my own personal view, I thought the Manawatu Gorge might have rated quite highly with the Rangitaane but there you

go. I thought it might have been an east (ph 4.58.44) but there you go that is - - -

5 MR BRAY: Yes, you could well be right, yes.

MR SHENTON: That is fine.

10 MR BRAY: I mean there is a lot of history with that. Part of that the Manawatu Gorge, of course, it was always very impassable so that was one of the reasons perhaps I put it a bit lower but - - -

MR SHENTON: They might have paddled through there but we will just – yes, I just wanted it for my own information so that is fine, thank you.

15 HER HONOUR: Well, Mr Hudson, it is 5 o'clock.

MR HUDSON: It is too, your Honour, how did that happen so fast?

20 HER HONOUR: How long do you think you will be?

MR HUDSON: Probably more than two minutes.

HER HONOUR: A little more than two minutes?

25 MR HUDSON: Probably a little more.

HER HONOUR: A little more. Do you think Mr Maassen should wait and hear this, these gems of wisdom?

30 MR HUDSON: If Mr Maassen is able to come in, in the morning it may help for his closing, yes.

MR MAASSEN: Thank you very much.

35 MR HUDSON: I just want to talk to Mr Bray at a higher level rather than the specifics about individual things.

MR MAASSEN: I will be delighted to come.

40 MR HUDSON: I do not want you to miss your plane to your destination at all but - - -

MR MAASSEN: That is fine. Okay, I won't.

[5.00 pm]

5 MR HUDSON: - - - if that is not too inconvenient. But I do have one question of Mr Davidson, if I can?

HER HONOUR: Yes, of course.

10 MR HUDSON: It relates to supplementary evidence that were emailed from Mr Kalafatelis some time ago and it is just one question. And it is the table and comments which he supplied in response to the offer he made to supply additional information which correlates numbers and viewing distance and visibility of turbines and my question is, does this table simply relate to the survey in relation to existing turbines?

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MR DAVIDSON: I have taken that it does but I think to be cautious I should check with him and tell you in the morning, sir.

20 MR HUDSON: Yes, thank you very, much.

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MR MAASSEN: Can I just make one comment on that topic. I am not sure that the council is satisfied that that response fully answers the question that you raised and there may be some additional request we make to MRP to refine that detail but are you satisfied with that information?

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MR HUDSON: Well, if the information which he provides relates just to existing turbines it does not appear, to me, to advance my understanding of the effects in relation to what I understood he was describing, which is people's potential reaction to the proposed wind farm.

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MR DAVIDSON: I will have to find out, sir, I just do not know. I think - - -

35 MR HUDSON: Right. So if that is the essence of your concerns then – well, that is my concern anyway, I do not know what your concerns relate to.

MR MAASSEN: Well, that is part of it but I will see what the response is and refine that more tomorrow perhaps.

40 MR HUDSON: Yes, I think if that this is the answer, Mr Davidson, I would struggle to see how it supports the argument that he has extended.

MR DAVIDSON: Well, thank you for telling me that, I will check that tonight.

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MR HUDSON: Thank you.

HER HONOUR: Well, thank you very much indeed, we will address this matter in the morning, thank you. We will see you at 9.30.

5 <THE WITNESS WITHDREW [5.02 pm]

**MATTER ADJOURNED AT 5.02 PM UNTIL  
TUESDAY, 1 SEPTEMBER 2009**