

BEFORE THE ENVIRONMENT COURT  
AT WELLINGTON

Decision No. [2011] NZEnvC 232

ENV-2009 – WLГ – 000060  
ENV-2009 – WLГ – 000061  
ENV-2009 – WLГ – 000062  
ENV-2009 – WLГ – 000063  
ENV-2009 – WLГ – 000065

IN THE MATTER OF  
Appeals pursuant to s120 of the Resource  
Management Act 1991

BETWEEN  
  
MERIDIAN ENERGY LIMITED  
  
AND  
  
OHARIU PRESERVATION SOCIETY  
  
AND  
  
R P HARLEY  
  
AND  
  
A & J TOLO  
  
AND  
  
MAKARA GUARDIANS  
INCORPORATED SOCIETY

Appellants

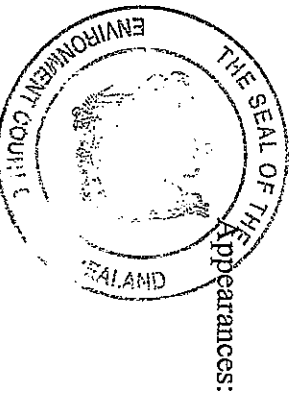
AND  
  
WELLINGTON CITY COUNCIL  
First Respondent  
  
AND  
  
WELLINGTON REGIONAL COUNCIL  
Second Respondent  
  
AND  
  
PORIRUA CITY COUNCIL  
Third Respondent

Court:

Heard:

Environment Court Judge B P Dwyer  
Environment Commissioner D J Bunting  
Environment Commissioner K A Edmonds  
Wellington on 12, 13, 14, 18, 19, 20, 21, 22, 26 October and 23,  
24 November 2010

A Beatson and B Tree for Meridian Energy Limited  
(Appellant/Applicant)  
A Webb and P Tancock for Ohariu Preservation Society



(Appellant)

R Harley for herself (Appellant)

R Harley for Amosa and Janet Tolo (Appellants)

J Jorgensen for Makara Guardians Incorporated (Appellants)

J Bowen for himself (s274 party)

K Bowen for herself (s274 party)

J Easther for himself (s274 party)

S Hawkins for P Hawkins and P Hawkins for himself (s274 party)

W Horrobin for himself (s274 party)

N Beach for Wind Corp Limited (s274 party)

Dr K Mosley for himself (s274 party)

J Jennings for himself (s274 party)

K Anderson and A White (Respondents)

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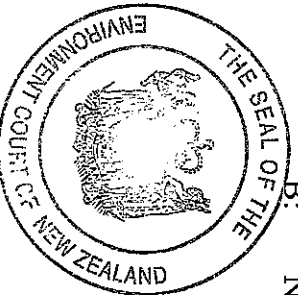
## DECISION

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Decision issued: **12 AUG 2011**

A: The appeals by OPS and Makara Guardians are allowed to the extent that turbines G01, G02 and G03 are removed, and the Council's decision deleting turbines G04 and F11 is confirmed.

B: No order as to costs.



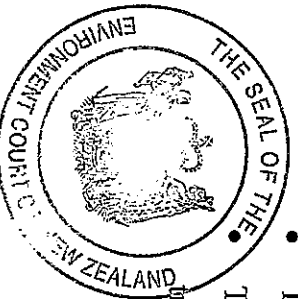
### *Introduction*

[1] On 12 March 2008, Meridian Energy (Meridian/the Applicant) made application to Wellington City Council (WCC), Porirua City Council (PCC) and Wellington Regional Council (the Regional Council) (collectively – the Councils) for various resource consents enabling it to construct, operate and maintain a wind farm (together with ancillary activities) at Mill Creek near Wellington. Meridian's name for the wind farm was Project Mill Creek (Mill Creek).

[2] The wind farm itself will be contained within WCC's district. Some ancillary works (primarily roading) are required within PCC's district. Various aspects of the proposal require Regional Council consents.

[3] A brief description of the Mill Creek proposal (as applied for) is as follows:

- Total capacity of up to 71.3 megawatts (MW), expected to produce electricity to power the equivalent of 35,000 average households annually;
- 31 Siemens 2.3-82 VS wind turbines up to 111.2m in height (to blade tip) with a rotor diameter of 82.4m, coated with a light grey low reflectivity coating, with associated transformer buildings (2.5m high, 4.5m long and 3m wide) and located within a 100m radius of their identified positions on plans to take account of geotechnical and engineering conditions;
- Two 70 metre high wind monitoring masts within a 150m radius of that shown on the plans;
- An electricity substation, an area of 72m by 105m within which would be located a permanent switchgear building (32m by 12m and 5m high), switch yard, transformer, lightning masts and communication equipment) east of turbine G01 adjacent to the existing transmission line (Tower 333);
- The erection of a permanent operations building (approximately 15m by 12m with a maximum height of approximately 5.5m) on the western side of the transmission line opposite the substation;
- The installation of an internal transmission network;
- The realignment of a section of the overhead HVDC earth electrode transmission line located on the site;



- Extensive earthworks, including cut volumes of up to 814,700m<sup>3</sup>, to create turbine platforms and access tracks and roads. The main access road would enter the site from Boom Rock Road and would run through the site in a south-westerly direction and then branch off to provide access to each turbine platform;
- A range of temporary construction activities including geotechnical investigations, extraction and processing of basecourse aggregate, site offices and ancillary activities and on-site dry concrete batching. If required, construction lighting will be supplied via portable lighting rigs. All lighting will be sited to avoid any light spill being directed to any adjoining land. Site reinstatement works are also proposed which include regrading of areas disturbed by heavy vehicles, backfilling with local topsoil over tower foundations, re-vegetating exposed areas of cut and fill, and removal of all the temporary stockpiles of materials and equipment;
- On-site dry concrete batching for approximately 4 months, with location yet to be finalised but set back at least 100m from any waterway; and
- Aviation lighting is proposed to be installed on up to 11 turbines as the site is near the flight path approaches for Wellington International Airport. The lights required by the Civil Aviation Authority are expected to be medium intensity flashing lights, shielded so that they are not directly visible below the horizontal plane of the light.

[4] Site access involves constructing a purpose-built access road through Spicer Forest which would connect to the site via upper Ohariu Valley Road and Boom Rock Road and the widening and upgrading of a 2.3km long section of the northern end of Ohariu valley Road.

[5] The new access road through Spicer Forest incorporates approximately 450m<sup>2</sup> of land within Spicer Landfill (in PCC's district) before connecting to Broken Hill Road, Porirua City. To create the access road through Spicer Landfill earthworks are required. The earthworks would have an approximate cut to waste volume of 2700m<sup>3</sup>, maximum height of cut and fill areas would be 5.5m and the area of land disturbed would be 5200m<sup>2</sup>.



[6] Land use consents for the above activities are required from WCC and PCC. Works requiring consents from the Regional Council are:

- Discharges to land and water from earthworks and soil disturbance to construct 19.4km of road network to access the 31 turbine sites;
- Discharges to land and water from earthworks to create and use fill disposal sites;
- Piping a section of both the permanently flowing Ohariu Stream and Mill Creek;
- Piping and reclamation sections of 21 intermittent and ephemeral streams within the Core Site and Spicer Forest;
- Stream modifications, the placement of new structures and extensions to existing structures within the beds of tributaries of the Ohariu Stream (Ohariu Valley and Boom Rock roadworks);
- The permanent diversion of flow through new structures and realigned channels;
- Discharges to land and water from earthworks associated with the sourcing and crushing of suitable quality aggregates for road surfaces; and
- Discharges to air from the operation of an onsite concrete batching plant.

[7] The Councils identified that the various consents required for the land use activities fell into the discretionary activity category in all cases. There was no challenge to that proposition before us and that is how we have assessed the applications. The Court is required, therefore, to consider the relevant matters under s104, before turning to a consideration of Part II and the purpose of the RMA in s5. Section 104 provides:

***104 Consideration of applications***

*(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to—*

*(a) any actual and potential effects on the environment of allowing the activity; and*  
*(b) any relevant provisions of—*



- (i) *a national policy statement;*
  - (ii) *a New Zealand coastal policy statement;*
  - (iii) *a regional policy statement or proposed regional policy statement;*
  - (iv) *a plan or proposed plan; and*
  - (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*
- (2) *When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if the plan permits an activity with that effect.*

[8] Meridian's application to the Councils attracted a total of 803 submissions; 381 submissions supported the proposal, 417 opposed and five were neutral.

[9] The Councils granted consent to Meridian's application but in doing so declined approval to two of the 31 wind turbines proposed by Meridian, those turbines being described as Turbines G04 and F11. Consent to the remaining 29 turbines was granted subject to conditions.

[10] There were six appeals against the Councils' decision in respect of land use consents.

[11] Meridian appealed against the decline of consent in respect of Turbines G04 and F11 and against various conditions imposed by the Councils. With some notable exceptions, agreement as to the appropriate form of conditions was largely reached by Meridian and the Councils prior to the appeal hearing.

[12] Ohariu Preservation Society Incorporated (OPS), R P Harley (Ms Harley), A and J Tolo (Mr and Mrs Tolo), Makara Guardians Incorporated Society (Makara Guardians) and Ngati Wai O Ngati Tangata Whenua (Ngati Wai) filed appeals. Ultimately they all sought that the consents be declined. Ngati Wai withdrew its appeal prior to the commencement of the hearing.



[13] Eight other parties filed notices under s274 RMA in respect of the appeals. A number of the appellants filed s274 notices in respect of other appeals.

[14] OPS describes itself as being a society of 126 members which is *representative* of the Ohariu Valley community. Makara Guardians is an organisation of about 175 members being residents of the Makara area over 18 years of age. The remaining appellants and s274 parties, by and large, are persons who reside in the Ohariu/Makara area.

[15] WCC and the Regional Council both appeared at the appeal hearing in support of their decisions. PCC abided the decision of the Court.

### *The site*

[16] Mill Creek is to be located on a site approximately 12 kms south of Porirua and 8 kms north of Wellington City between Ohariu Valley and Wellington's west coast. The wind farm will occupy approximately 18 square kilometres of privately owned pastoral farmland. The site is incorporated in a number of allotments and certificates of title which between them are owned by at least six separate individual landowners who have agreed to allow Meridian to establish the project on their land.

[17] The site is part of the crumpled hill country along the west coast, with a series of steep hills and ridgelines that trend north-east to south-west inland of the coastal escarpment. Meridian's intention is to establish 31 wind turbines in 7 groups or *strings* along parts of these ridgelines. The strings of turbines are identified in the application as:

- E01, 04-08;
- F03-11, 13-15;
- G01-04;
- H01-02;
- J01-02;
- K01-03; and
- L01-02.

[18] The areas of settlement nearest to the site are in Ohariu Valley, the northern end of Makara Valley and Makara Beach. There are approximately 126 houses located in Ohariu Valley (Takarau Gorge Road/Makara Road intersection to northern



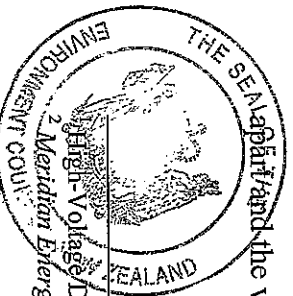
end of Ohariu Valley Road) to the east of the site, approximately 90 on Makara Road between Karori and Makara Beach (including Makara Village) and approximately 35 at Makara Beach. There are also a small number of bachs at the northern end of Makara Beach and at Smiths Bay.

[19] Ohariu Valley has a low-key rural character with several houses centred on a community hall and others scattered throughout the valley on small farms and rural lifestyle blocks. There is a golf course (Ohariu Valley Golf Club). Farming activity is evident throughout the valley and there are pockets of forestry. There are several riding schools near the junction of Ohariu Valley, Rifle Range and Takarau Gorge Roads.

[20] To the south of the site, the southern end of Takarau Gorge Road joins Makara Road, along which there are houses on small pastoral farms and rural lifestyle blocks.

[21] Transpower's Bunnythorpe-Wilton 220 kV power transmission line traverses hill country on the eastern side of the site and Transpower's HVDC<sup>1</sup> ground return line crosses the southern end of the site before terminating 500 metres north of Smiths Bay at the Te Hikowhenua Electrode Station. The pylon line runs through the site to Boom Rock Road before angling east towards Johnsonville.

[22] A prominent feature of the general area and the existing environment we have described is Meridian's Makara wind farm, known as Project West Wind (West Wind) which was approved by a decision of this Court on 14 May 2007 (the *West Wind* decision).<sup>2</sup> West Wind is situated to the south of the Mill Creek site and contains 62 turbines which stretch along Wellington's south western hills to the edge of Cook Strait. The two wind farms are divided by Makara Road, Makara Stream and a small, valley catchment leading from Makara and Ohariu Valleys out to Makara Beach. At their closest, the turbines of the two wind farms appear to be about 1 km apart and the wind farms will be seen together from many viewpoints.





### *Scope of hearing*

[23] There was extensive conferencing amongst expert witnesses on a range of topics prior to the commencement of our hearing. This led to agreement amongst witnesses on the acceptability of the cultural, ecological and sedimentation effects of Mill Creek. The evidence of witnesses on those topics came into the Court by consent and without cross examination, together with agreed statements. We have had regard to that material in reaching our conclusions.

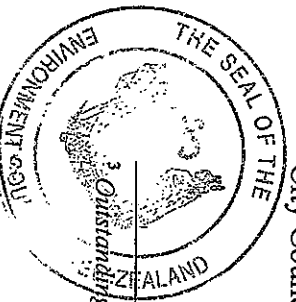
[24] The issues which were in dispute before us involved:

- Energy related matters;
- Traffic;
- Noise;
- Public health;
- Natural character of the coastal environment;
- Landscape (natural and rural character);
- Visual amenity; and
- Planning.

We consider each of these in turn before undertaking our overall evaluation of the proposed wind farm in terms of Part 2 Resource Management Act 1991 (RMA).

[25] The starting point for our consideration is *the environment* as it exists or it can be expected to be, with whatever strengths or frailties it may already have, which make it more, or less, able to absorb the effects of the proposal without a breach of the environmental *bottom line* – the principle of sustainable management.<sup>3</sup> That environment contains West Wind.

[26] When considering the actual and potential effects on the environment of allowing an activity, s104(2) provides that we may disregard an adverse effect of the activity on the environment if a district plan permits an activity with that effect (the permitted baseline). None of the planning witnesses suggested that the Wellington City Council's District Plan (the District Plan) would allow a development of the



nature and scale of a wind turbine. Accordingly, s104(2) is not relevant to our consideration of the effects on the environment of the turbines.

### *Energy related matters*

[27] We consider energy related matters under the general headings of renewable energy, how Mill Creek will fit within the context of New Zealand's electricity market, project finances and economics, and alternatives.

[28] Evidence on these matters was received from:

- Mr A Muldoon (Meridian's Wind Energy Development Manager);
- Mr J Truesdale (a specialist energy sector consultant, called by Meridian);
- Dr B Layton (at the time of preparing his evidence, a Senior Fellow at the New Zealand Institute of Economic Research, called by Meridian); and
- Mr B Leyland (an independent energy consultant called by OPS).

Additionally, Mr John Easter, a Makara resident, made a general submission on these matters. We briefly summarise the competing positions, largely drawing on the evidence of Mr Leyland, Dr Layton and Mr Truesdale.

[29] Mr Leyland opposes wind farms as an economically efficient generator of power for a number of reasons, including:

- The alleged unreliability of wind energy which cannot be guaranteed to be available at any given time;
- The possibility that much of the country's overall renewable energy (wind and hydro) could be unavailable at the same time;
- The need for expensive thermal generation to be available on standby in the event of unavailability of wind energy, together with the need to increase standby capacity as reliance on wind energy increases; and

The questionable validity of the cost data used by energy companies in developing their models for project financial viability.



[30] Dr Layton's reasons for supporting Mill Creek included:

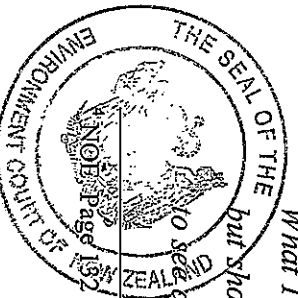
- The acknowledged high quality wind resource. There was no challenge to Meridian's claim that the Mill Creek site provided a wind resource of the very highest quality.
- Its proximity to a large centre of demand with attendant low transmission costs;
- Its contribution towards meeting the Government's target for renewable energy as a proportion of New Zealand's overall energy generation;
- Its contribution towards the displacement of green house gases which would be produced by a thermal plant with the same output; and
- The fact that Meridian is solely responsible for the financial risk of the project as its electricity must be offered to the market at a set price (\$0.01/MWh).

[31] Mr Truesdale advised that the contribution of Mill Creek would be roughly 1.1 to 1.4% of New Zealand's target for 90% of all electricity generation to be from renewable energy.<sup>4</sup>

[32] Dr Layton contended that the costs of all environmental effects of the development and operation of the wind farm which can be valued, have been internalised within the design of the project as a cost to Meridian, with any negative effects which cannot be valued being either mitigated to acceptable levels or avoided altogether. He also contended that resource consent authorities should not assume the role of a central electricity planning authority and endeavour to decide between competing projects and means of generation and that Mill Creek should be considered and evaluated by the Court as a standalone project.

[33] When tested on the question of alternatives by counsel for OPS, Dr Layton responded:

*What I'm actually doing is advising the Court I think it's very difficult but should they want to take that particular line, I have looked around and I can see there are there obvious competing alternatives, I haven't seen any, and*



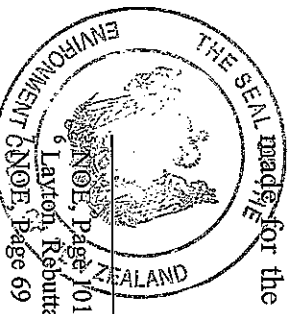
*have expressed the view that this still looks a pretty good project and that's consistent with my view about this being one of a very low long run marginal cost projects, being closely located near Wellington, having the significant advantage that it is this side of the Cook Strait for North-South transmission, there's a whole range of factors that are really quite favourable about this project.*<sup>5</sup>

[34] In response to the concerns raised by Mr Leyland concerning low hydro storage coinciding with little or no wind and the need for additional thermal generation to be available as standby he commented<sup>6</sup>:

*We are a long way from having a level of wind-powered generation at which reductions in output would be a material issue for the electricity system. According to a 2005 study by two major New Zealand engineering consultancy firms with significant involvement in the New Zealand electricity sector, the New Zealand system should technically and operationally be able to cater for 35 percent of all capacity and 20 percent of all production being wind. The latest year for which data are available is 2009. In that year wind's share of capacity was 5.2% and its share of electricity production was 4.9%.*

[35] In answer to a question from the Court as to the financial consequences of the Councils' decision to decline consent to two turbines, Dr Layton did an *off the top* calculation which put the lost revenue from this decision at around \$1.64m per annum.<sup>7</sup> (If we apply the cost information from Para 67 of his evidence, we come to a figure of \$1.4m per annum.) Of course there would also be a one off reduction in the capital cost of the wind farm from the removal of the two turbines.

[36] Dr Layton noted that a 7 year period to give effect to any consent has been sought for Mill Creek to enable Meridian to take advantage of movements in exchange rates, material costs and market conditions before a final commitment is made for the project. Even then, Meridian may choose not to proceed as its final



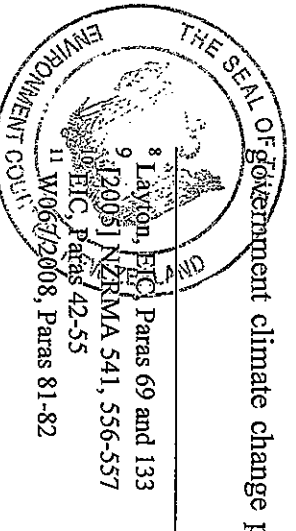
decision would be contingent on the likely benefits outweighing the likely costs, including the cost of capital.<sup>8</sup>

[37] We have traversed these matters only briefly, not because they are not important but because in a general sense they have been considered and discussed comprehensively in earlier decisions of the Court which have identified the benefits of wind generation, notwithstanding its acknowledged limitations. We refer by way of example to the discussion in *Genesis Power Ltd v Franklin District Council*<sup>9</sup>.

[38] We note the very clear policy directions at government level supporting the development of wind energy. These include the *New Zealand Energy Efficiency and Conservation Strategy*, the *New Zealand Energy Strategy to 2050* and the proposed *National Policy Statement for Renewable Energy Generation* which were discussed in Dr Layton's evidence.<sup>10</sup> Meridian acknowledged that Mill Creek of itself would make only a very limited contribution to meeting New Zealand's energy objectives. The project is, however, in accordance with those policies.

[39] We record our reservations regarding the arguments advanced each way as to the viability of this wind farm (and wind farms generally) and the comparisons made as to the costs and efficiencies of various means of electricity generation. The financial viability of any given project will depend a whole range of factors which will vary from developer to developer. By way of example, we refer to the variables which the Court identified in *Motorinu Wind Farm Ltd v Palmerston North City Council*.<sup>11</sup> Consideration of those matters belongs in the boardroom, not the courtroom.

[40] Insofar as the comparative economics of various means of electricity generation are concerned, it appears to us that those matters may be affected by factors such as demand, availability/reliability of supply, cost of raw materials, construction cost, cost of oil, cost of gas, cost of coal, technological advances,



others, some of which change (literally) overnight. We are aware that consideration of the economics of or preference for wind farms as opposed to other forms of generation involves issues arising under s7(b) RMA, however we do not consider that the concept that wind energy has a significant part to play in meeting New Zealand's energy requirements was challenged in the evidence which we heard. We accept the evidence of the Meridian witnesses in that regard.

[41] For the sake of completeness we note the positive effects to the local economy from Mill Creek. These include:

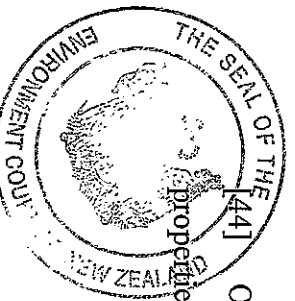
- Expenditure during the construction and operation stages;
- Enabling landowners of the site to supplement their farming income at little or no cost to farming productivity; and
- Improvements to the northern section of Ohariu Valley Road with better sightlines and the ability for cars, pedestrians and horses to better use the road due to improved width.

Those opposed to the project contend that these local benefits come at an unacceptable cost to the local environment. We will address those issues in due course.

### *Traffic*

[42] Meridian's proposed access route for construction plant, labour, materials and turbine components is via a new road to be constructed through Spicer Forest from Porirua, and then along the existing Ohariu Valley Road to Boom Rock Road and from there along a new access track to be built on private farm land. Access via the new road through Spicer Forest will be restricted solely for the use of construction vehicles.

[43] Ohariu Valley Road will need to be widened from its existing terminus at Spicer Forest to its intersection with Boom Rock Road along what is currently a narrow winding alignment with very low usage. All of the required widening can be undertaken as a permitted activity within the existing road reserve.



[44] Over recent years, a number of residents have unofficially extended their properties on to the existing road reserve. These extensions have included areas

fenced off for gardens and in the case of Mr and Mrs Tolo, as part of a horse riding arena. We were told that local residents often ride horses along the road when moving between paddocks.

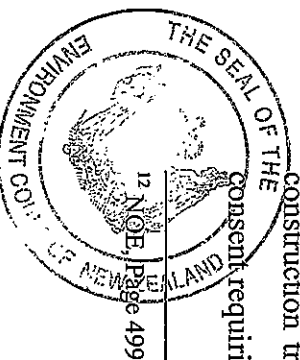
[45] On our site visit we saw for ourselves the road reserve which will be affected by the road widening. Even though residents acknowledge that they have no legal right to their extensions on this reserve, not surprisingly they are upset that they will be required to give up their extensions to allow for the road widening.

[46] Mr Beatson advised that, irrespective of whether it was legally obliged to do so or not, Meridian was committed to continuing discussions with the Tolos to develop a solution to mitigate the Tolos' loss of this land<sup>12</sup>. Meridian appears to us to be taking a responsible approach in working with affected residents to agree details for relocating fence lines and other facilities to clear the road reserve.

[47] Prior to the commencement of the hearing, the traffic experts for Meridian and the WCC (Mr R Galloway and Mr Soon Teck Kong) had reached consensus on all traffic related matters as recorded in their second expert conferencing agreement dated 6 October, 2010. This included provision for a set number of vans to use Ohariu Valley Road on Saturdays, Sundays and Public Holidays between 7:00am and 8:00am, 12:30pm and 1:30pm, and 5:00pm and 6:00pm for the transport of construction workers, with no other construction vehicles to use this road on these days.

[48] Neither Mr R Barraclough, a traffic expert for OPS, nor Mr and Mrs Tolo were parties to this second expert conferencing agreement or gave evidence at the hearing. In addition, neither of the Meridian or WCC traffic experts was called to be cross-examined at the hearing.

[49] In her opening submission on behalf of Mr and Mrs Tolo and herself, Ms Harley sought two amendments to the agreed conditions, the first to restrict all construction traffic to Monday to Friday. The second was for a new condition of consent requiring that the northern end of Ohariu Valley Road be widened to include



a 6.5 metre sealed carriageway, together with a double fenced 4 metre wide irrigated and planted berm on either side of the road at the option of each landowner.

[50] Proposed Condition 59 for Ohariu Valley Road requires:

*Traffic management techniques must be used to ensure safe movements of heavy construction vehicles at all passing areas and widening areas shown in the locations where the 6.5 metre sealed road width cannot be achieved for the duration of construction.*

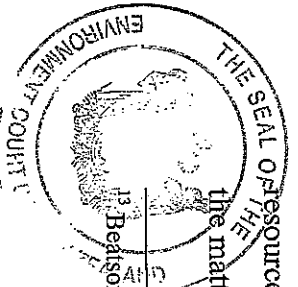
[51] Proposed Conditions 39 to 62 specify the way in which construction traffic is to be managed during the construction of the wind farm. From our overall evaluation of the evidence and submissions we accept these conditions as drafted except for Condition 57 relating to the Spicer Forest Access Road. In his opening submission, Mr Beatson noted, regarding that road<sup>13</sup>:

*This will be a private road and no through access will be permitted apart from construction vehicles. The consent sought for use and development of this road will be limited to use associated with the wind farm only – and essentially limited to the construction period.*

[52] Condition 57 states that:

*The Consent Holder must install barricades to the satisfaction of the Compliance Monitoring Officer at each end of the Spicer Forest access track to ensure that there is no direct public access between Broken Hill Road and Ohariu Valley Road over the access track during and after its construction.*

[53] This condition does not reflect Mr Beatson's opening submission. In order to ensure that there is no misunderstanding as to the restricted use of this access track (road) both during and after construction if consent is granted, we require Meridian and the councils to propose an appropriate condition, which makes the position certain, and to explain the rationale for it. We also need to be informed of what the resource consent application documents stated was going to be the situation and how the matter was dealt with at the first instance hearing.





[54] We agree that it is reasonable to allow the restricted use of Ohariu Valley Road, for the transport of construction workers only, on Saturdays, Sundays and Public Holidays as proposed in Condition 51 during the short, well defined periods of time. This gives Meridian the opportunity to complete the construction of the wind farm in the shortest possible time and allow the return of the road to normal rural use as soon as possible.

[55] We note that Condition 51 for weekend and public holiday access was referred to throughout the hearing as Condition 70. This number will need to be changed in the reference in Condition 62 (r).

[56] We acknowledge that construction traffic will restrict the use of this road for horse (and pedestrian) traffic but we do not consider that Meridian should be required to provide for double fenced 4 metre wide berms as requested by Ms Harley, even if there is room for these (which seems doubtful).

[57] We also acknowledge that the need to widen Ohariu Valley Road will require a number of residents to give up the use of land they currently enjoy on the road reserve. While we have some sympathy for their plight, this land was only ever being *borrowed* (we assume at no cost) and its possible need for roading purposes always existed, however unlikely this may have seemed. We are satisfied from the Joint Statement of the Traffic Engineers that road safety will be adequately addressed.

## *Noise*

### *Experts*

[58] Expert evidence on noise was provided by:

- Mr P Botha, employed by Meridian as a Wind Technical Strategy Manager;
- Dr S Chiles, a specialist acoustic engineer and chair of the NZS6808 revision committee, called by Meridian;
- Mr M Hayes, a director of a specialist UK firm of acoustic consultants, called by Meridian,



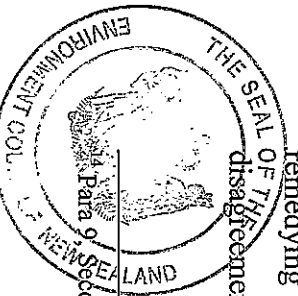
- Mr N Lloyd, a specialist acoustic consultant, called by the Wellington City Council;
- Mr M Borich, Manager, Compliance and Advice Wellington City Council, and a member of the NZS6808 revision committee; and
- Dr J Trevathan, a specialist acoustic engineer called by OPS.

[59] In addition to the above witnesses, Professor (and Dr) P Dickinson of Massey University (an acknowledged expert on noise matters) was subpoenaed to appear on behalf of Makara Guardians. It would be fair to say that Professor Dickinson was a most reluctant witness, he did not participate in any of the expert conferencing, and his evidence was restricted to production of a paper which he had authored titled *Nonsense on Stilts*.

[60] Where we refer to *all of the experts* or *the experts* in this section of our decision, we are referring to the experts other than Professor Dickinson. We address his evidence separately.

[61] The experts filed two joint statements in these proceedings after caucus meetings. The first was dated 6 October 2010 (the first joint statement) and the second was dated 19 October 2010 (the second joint statement). The second joint statement was of particular significance because it established that except for one matter of residual disagreement all of the experts agreed on ...*the fundamental noise prediction, measurement and management methods appropriate for Project Mill Creek*.<sup>14</sup> The matter of residual disagreement related to a wind speed threshold applicable in one specific area around the wind farm. We will address that in due course.

[62] Attachment A of the second joint statement was a set of agreed noise conditions. It was our understanding that all of the experts agreed that these conditions adequately managed the noise effects of Mill Creek in terms of avoiding, remedying or mitigating adverse noise effects, except for the matter of residual disagreement.



[63] Consideration of noise issues in the proceedings requires us to address the following topics:

- District Plan permitted activity noise limits and other provisions;
- New Zealand Standards, particularly the recent issue of *NZS6808:2010 – Acoustics – Wind Farm Noise*;
- Construction Noise;
- Non turbine operational noise;
- High amenity noise limits;
- Professor Dickinson’s evidence;
- The West Wind experience; and
- Public health issues.

[64] We observe that due to the agreed position of the experts our discussion will be somewhat more truncated than might have otherwise been the case.

#### *District Plan and New Zealand Standards Noise Limits*

##### *Construction and Traffic Noise*

[65] The General Provisions of the District Plan specify that noise levels should be measured and assessed in accordance with *NZS 6801:1991 Measurement of Sound* and *NZS 6802:1991 Assessment of Environmental Sound* except as expressly provided for in the District Plan.

[66] This same section of the District Plan notes that noise from construction on any site or on any road shall comply with, and be measured and assessed using, the recommendations of *NZS 6803P:1984*.<sup>15</sup> In addition, the General Provisions note that vehicles driven on a road (within the meaning of s2(1) of the Transport Act 1962) are not appropriately controlled using the *NZS 6802* assessment.

##### *Turbine Noise*

[67] Under Rural Area Rule 15.1.1.1 of the District Plan, the permitted activity noise emission levels resulting from noise associated with (among other things)



<sup>15</sup> This Standard has now been superseded by *NZS 6803:1999 Acoustics - Construction Noise*. The RMA provides that the Schedule 1 process would need to be followed to replace the incorporation by reference of the old standard with the new standard – Clauses 31, 33 Schedule 1.

power generation when measured at or within any receiving site boundary are as follows:

7.00am to 7.00pm	55dBA (L10)
7.00pm to 7.00am	45 dBA (L10); and
7.00pm to 7.00am	75 dBA (Lmax)

or when measured at or within any *conceptual boundary*:

<i>Monday to Saturday 7am to 8pm</i>	45dBA (L10)
<i>All Days 8pm to 7am</i>	60 dBA (Lmax)
<i>At all other times</i>	35 dBA (L10)

(Conceptual boundary is defined in the District Plan as meaning... *a line 20 metres from the wall of any building or from any land directly occupied by the activity. If the site boundary is closer to the building or activity, the conceptual boundary definition does not apply.*)<sup>16</sup>

#### *New Zealand Standards*

[68] In their decision, the Councils' Hearing Commissioners noted that it was common ground among the experts that setting wind turbine noise limits represented a special case in that these operate in wind conditions above the limits which would apply to *normal* noise standards and that this was why NZS 6808:1998 *Acoustics - The Assessment and Measurement of Sound from Wind Turbine Generators* was developed<sup>17</sup>. The Commissioners made reference to this standard in reaching their findings on noise. Since that decision there has been a new Standard issued (March 2010) NZS6808:2010 – *Acoustics – Wind Farm Noise* replacing NZS6808:1998.

[69] WCC *Plan Change 32, Renewable Energy* became operative in July 2009 following the first instance decision and is now part of the District Plan as Sections 25 and 26. Sections 25 and 26 (to which we are to have regard under s88A(2) RMA) do not refer to either NZS 6808:1998 or to NZS 6808:2010.

[70] However, NZS 6808:2010 is particularly relevant to our consideration of turbines noise issues, either to inform our consideration of potential noise effects under s104(1)(a) RMA or as *any other matter* under s104(1)(c), although we are not



bound by the provisions of a New Zealand Standard in determining whether to grant consent or the appropriate conditions to apply.

[71] For completeness, we note that Rule 26.3.1 of the District Plan provides that in determining whether or not to grant consent to any wind farm proposal, the Council will have regard to (among other assessment matters):

*26.3.1.1 The actual or potential noise effects of the proposal.*

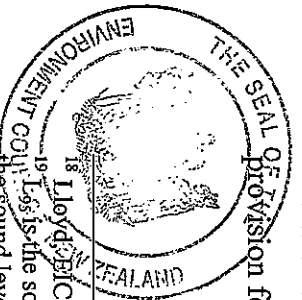
We are required to do that anyway under s104(1)(a).

[72] We comment on two relevant matters concerning the differences between the permitted activity standards in the District Plan and both the old and new NZS 6808 for wind turbine noise.

[73] Firstly, Mr Lloyd notes<sup>18</sup> that the General Rural area noise limits in the District Plan are expressed as  $L_{10}$  and that NZS6808:1998 states that  $L_{95}$  is typically 5 dB lower for wind farm noise. From this, he concludes that a turbine which generates a sound level of 35 dBL<sub>95</sub> would have an  $L_{10}$  value of 40 dB.<sup>19</sup> Accordingly, if comparing the noise limits between the District Plan and NZS 6808:1998, 40 dBA under the Standard is 10 dB more than the permitted activity noise standard under the District Plan using the same measurement system.<sup>20</sup>

[74] The District Plan provision to which Mr Lloyd was referring is a permitted activity standard, breach of which triggers a resource consent application in which consideration of noise effects is required.

[75] As we have said NZS6808:1998 was superseded by NZS6808:2010 – *Acoustics – Wind Farm Noise* in March 2010. The key difference between the two versions of the Standard affecting this proposal is that the 2010 version has a new provision for a more restrictive noise level to be imposed in *High Amenity Areas*.



<sup>18</sup> Lloyd, BIC Para 28

<sup>19</sup>  $L_{95}$  is the sound level which is equalled or exceeded for 95% of the total measurement time.  $L_{10}$  is the sound level which is equalled or exceeded for 10% of the total measurement time.

<sup>20</sup> NOE Pages 737,738

The Standard contemplates that *high amenity noise limits* might apply to High Amenity Areas. Standard 5.3.1 relevantly provides:

*....A high amenity noise limit should be considered where a plan promotes a higher degree of protection of amenity related to the sound environment of a particular area...*

The new Standard also uses the notation of  $dB L_A$  for  $A$  frequency weightings rather than the alternative notation of  $dB A$ . We will also adopt the same notation.

[76] All the noise experts agreed that the District Plan promotes a higher degree of protection of sound amenity in the Rural Area of Wellington City as compared to other Areas (zones) contained in the District Plan, so that the Rural Area (including Mill Creek) is a High Amenity Area as defined in NZS6808:2010. They agreed that the Standard required that wind farm noise level received by Mill Creek's neighbours during evening and night-time should not exceed the background sound level by more than 5 dB or exceed 35 dB  $L_{A90}$ , whichever is the greater. (In the balance of this decision we will refer to this as the *high amenity noise limit*.)

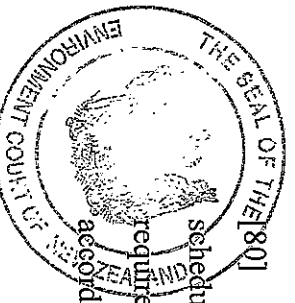
[77] The experts agreed that Mill Creek could comply with the high amenity noise limit and we accept that it is the appropriate noise limit which ought to apply to Mill Creek. We will however return to this issue when we discuss the area of residual disagreement between the noise experts.

[78] In the light of those findings, we now consider the noise effects of traffic, construction, and turbine operation.

#### *Construction Noise*

[79] During the construction of the wind farm, noise will be generated by on site construction equipment and by vehicles transporting workers, equipment and materials to the wind farm site.

[80] Condition 11 of the proposed Resource Consent Conditions includes a schedule of the activities which can be expected to occur during construction. It requires that noise measurements, assessments and controls be undertaken in accordance with NZS6803:1999 *Acoustics - Construction Noise* (NZS6803) with the



noise limits being within those set out in Table 2 of this Standard (for works of long term duration).

[81] Conditions 12 and 13 require preparation of a Construction Noise Management Plan and a Decommissioning Noise Management Plan, both to be prepared in accordance with the relevant provisions of NZS6803.

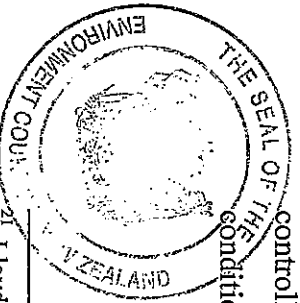
[82] Mr Lloyd stated that construction works will take place at locations generally in excess of 500 metres from the nearest *non wind farm* residential dwellings, with the resulting noise levels predicted to be well below the NZS6803 noise limits.<sup>21</sup>

[83] It was also Mr Lloyd's view that a proposed 7am to 7pm weekdays only restriction for construction vehicles on Ohariu Valley Road (23 November 2010 Resource Consent Condition 51) will ensure that construction traffic does not result in night-time sleep disturbance for residents who live along this road. Likewise he was satisfied that the predicted day time noise levels from construction traffic will be within acceptable levels.

[84] The joint statements from the noise experts make no reference to construction or traffic noise. From this, we infer that the experts agree that noise effects from traffic and the construction of the wind farm are adequately controlled by the proposed conditions. Accordingly, we accept that the proposed conditions for traffic and construction noise are appropriate for the project.

#### *Operational Noise*

[85] Condition 16 of the proposed Resource Consent Conditions sets limits for non turbine operational noise. The joint statements contained no reference to non turbine related operational noise. Again, we infer that indicates that the noise experts agree that the non turbine operational noise effects of the wind farm are adequately controlled by the proposed condition. Accordingly, we accept that the proposed condition is appropriate for the project.



*High Amenity noise limit*

[86] We have referred to the residual disagreement between the noise experts, identified in their second joint statement, as to a wind speed threshold which was to be the *trigger* for the application of the high amenity noise limit for certain specified properties<sup>22</sup>. The experts had agreed that the conditions of consent applicable to the operational noise of turbines should contain the following provisions:

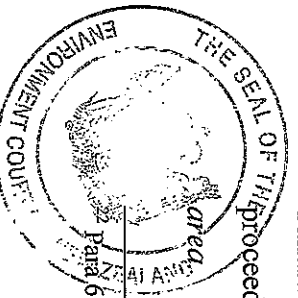
- a) During daytime or at any time when the wind speed is greater than 6 m/s (metres per second), the noise limit shall be 40 dB<sub>L<sub>A90</sub>(10min)</sub>, provided that the noise limit in (c) shall apply in the circumstances stated;*
- b) During night- time at any wind speed 6 m/s and lower, the noise limit shall be 35 dB<sub>L<sub>A90</sub>(10 min)</sub>, provided that the noise limit in (c) shall apply in the circumstances stated;*
- c) Not relevant;*
- d) Not relevant.*

[87] Dr Trevathan and Messrs Borich and Lloyd proposed that there ought be an additional condition added in the following terms:

- e) For assessment positions shown on Figure N1 the wind speed of 6 m/s in (a) and (b) above shall be 10 m/s.*

[88] What the witnesses were proposing was that a small cluster of properties near the wind farm should be subject to a higher level of noise protection so that, for those properties, the threshold at which the high amenity noise limit would become applicable was when wind farm wind speeds were 10 m/s, as opposed to 6 m/s which would be the threshold for all remaining properties receiving wind farm noise.

[89] The small cluster of properties to which we have referred is a group of nine properties in close proximity to the wind farm's eastern boundary. These properties are situated on Takarau Gorge Road between numbers 182 and 252. Number 252 Takarau Gorge Road is the home of Mr John Third who was a participant in these proceedings. For the sake of convenience we will refer to this cluster as the *Third*





[90] The significance of the 6 m/s or 10 m/s is found in paras 5.3.2 and C5.3.2 of NZS 6808:2010, which provide (inter alia):

*5.3.2 A high amenity noise limit should only be applied, and can only be maintained, under wind conditions when low background sound levels are common at a noise sensitive location, while the wind farm is operating.*

**C5.3.2**

*Wind farm wind speeds of 6 m/s and lower would generally coincide with the periods of lowest background sound levels at the noise sensitive locations.*

[91] The noise experts agreed that the 6m/s threshold for the high amenity noise limit identified in NZS 6808:2010 is appropriate for the majority of the noise sensitive locations around the wind farm site. However, Dr Trevathan, Mr Borich and Mr Lloyd contended that background noise levels of 25 dB L<sub>90</sub> (10 min) in northerly wind conditions measured at properties in the Third area are sufficiently low to warrant a wind speed threshold of 10m/s. Mr Botha, Dr Chiles and Mr Hayes disagree and propose that 6m/s as recommended in the Standard should apply over the whole site.

[92] All of the experts agree that the Standard does not provide an objective method for determining alternative thresholds, with the 6m/s being a recommendation only. They also agree that the only practical consequence of their disagreement as to which threshold speed should apply, is that a threshold of 10m/s would mean that the high amenity noise limit would apply for more of the time than a threshold of 6m/s (due to the fact that the wind speeds of 10 m/s are more common than 6 m/s). Para 11 of the joint statement records:

*We agree that as the wind farm sound levels are generally predicted to be below 35 dB at all locations at all times, whether the threshold for the High Amenity Noise Limit is set as a wind speed of 6 m/s or 10 m/s is not expected to have a practical effect for Project Mill Creek. The actual wind farm sound levels that will be experienced by residents would be the same.*



[93] We consider that the key factors in determining the threshold wind speed are the following:

- Whether a background noise level of 25 dB L<sub>90</sub> (10 min) measured at the Third property could be considered as being typical of a rural area, or is it so low that the area requires a higher standard of noise protection than is to apply to other rural properties in the vicinity;
- The merit or otherwise of having different threshold speeds for different parts of the wind farm;
- The effects on noise levels from each of the two wind speeds; and
- The desirability of introducing a different wind speed from that recommended in the new Standard.

[94] We were told a number of times by the experts that the only difference between a wind speed of 6 m/s and one of 10 m/s was that if the threshold was set at 10 m/s then the high amenity noise limit would apply for more of the time. Turbines would accordingly have to be turned off for longer periods to achieve the high amenity noise limit. There was extensive cross examination of the experts on the background noise surveys undertaken at the Third property (and a nearby property known as the Bruce property) and the resulting regression analysis plots of the survey results prepared by Mr Hayes. This focussed on the additional down time which would result if the wind speed threshold was set at the higher 10 m/s where there were *low* background sound levels of 25 dBA or less.

[95] Mr Lloyd considered that the high amenity noise limit should apply when the background sound levels are 25 dBA<sup>23</sup> or less although in answer to a question from Mr Beaton, he agreed that the Standard did not provide for the high amenity noise limit to be imposed at those background levels<sup>24</sup>.




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<sup>23</sup> Lloyd, EIC, Para 100

<sup>24</sup> NOE, Page 979

[96] What emerged from questioning of the various noise witnesses is that 25 dBA is not an unusually quiet night time noise level in rural areas. Mr Beatson asked Mr Lloyd<sup>25</sup>:

*Do you agree with the other experts who have experience outside Wellington, including Dr Trevathan, that 25 dBA is not unusually quiet for a rural area?*

Mr Lloyd concluded his response by saying *...you get a high variation but I agree with your proposition that it's not unusual, yes.*

[97] The disagreement between the experts is not about whether a high amenity noise limit is applicable in this area, it is applicable. The disagreement, in essence, revolves around the proposition that the Third area, with a measured night time background noise level of 25 dBA, is so comparatively quiet as to require an additional layer of protection. The evidence did not establish that proposition.

[98] In considering the merits of having different threshold speeds applicable to different parts of the wind farm, we refer to the response from Mr Botha to a question from Mr Beatson concerning the West Wind noise conditions for triggering secondary noise limits.<sup>26</sup> The West Wind conditions apply different wind speeds for different wind directions at various receivers. This has resulted in a complex noise monitoring and compliance process for West Wind. We heard detailed evidence about monitoring, compliance and enforcement difficulties with West Wind.

[99] Mr Botha commented that it was with the knowledge of these difficulties that the NZS6808 Committee of the Standards Council (the Committee) had sought to develop an approach for determining the threshold limit for high amenity areas which was simple to apply and which would allow straightforward monitoring and assessment. The Committee had concluded that this would be best achieved by having a single wind speed for triggering the high amenity noise limit requirement and that this should apply to all of a wind farm.<sup>27</sup>



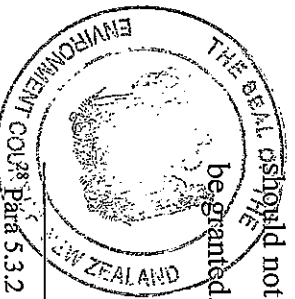
[100] We accept the logic of that proposition as a general rule, particularly in light of the difficulties experienced at West Wind. The Standard recognises that there may be ... *meteorological, topographical and acoustical grounds* which justify the application of an alternative wind speed threshold to 6m/s in any given case.<sup>28</sup> We do not accept that there is anything sufficiently special about the noise environment in the Third area which justifies such a departure in this case, particularly in light of the enforcement difficulties which potentially arise from having different thresholds applicable in different areas.

[101] In summary, we find that:

- Actual wind farm noise levels received at the Third area will be the same at both 6m/s and 10m/s wind speeds;
- A 10 m/s wind speed threshold would result in only a slightly longer time for the high amenity noise limit to apply compared with a 6m/s wind speed;
- The measured background noise level of 25 dBA in the Third area is not atypical of many rural areas throughout New Zealand; and
- There is considerable merit in the wind farm operator, the consent authority and the local community having a consistent wind speed threshold across the all of the wind farm as this is simple to understand and allows straightforward monitoring, assessment and subsequent speed of response if any compliance issues should arise.

[102] Overall, we have concluded that any extra *high amenity time* resulting from a wind speed threshold of 10 m/s for the Third area would be minimal and that any localised benefits from this would be more than offset by the much wider benefit of having a single wind speed threshold of 6 m/s applying across all of the site for triggering the high amenity noise limit. As a consequence, proposed Condition 17(e) should not be included in the conditions applicable to this wind farm, should consent

be granted.



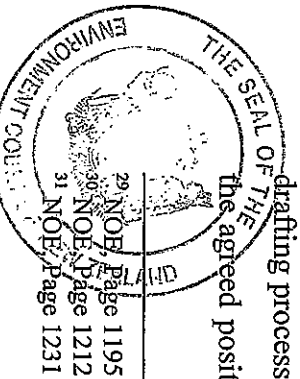
[103] Turning briefly to the evidence of Professor Dickinson, we note that he was the representative of Massey University on the Committee. We also note the statement in the Acknowledgements at the start of the published Standard that... *The representative of Massey University, while recognizing the revised Standard is an improvement on the original, does not support the Standard.*

[104] During cross examination, Professor Dickinson advised that he did not support a number of the provisions of the Standard, and in particular those provisions on high amenity noise. He also advised that he had not read any of the other noise evidence or legal submissions for this hearing nor had he had any contact with any of the other noise experts<sup>29</sup>. His evidence was restricted to the production (under subpoena) of his paper *Nonsense on Stilts* which contained many criticisms of NZS 6808:2010.

[105] In response to a question from Mr Beatson, Professor Dickinson considered that with windows of residences receiving noise from Mill Creek open, there would be an attenuation of 6 to 8 dBA<sup>30</sup> in noise received inside as opposed to outside. In response to a question from the Court, he advised that he would have been happy if the Committee had set a fixed limit of 35 dBA as the high amenity noise limit rather than linking the limit to the background noise level as has been adopted in the Standard<sup>31</sup>.

[106] Even if we accept Professor Dickinson's proposition, with noise levels at the notional boundaries of receiving residences predicted to be no more than 35 dBA, the maximum internal noise level (after allowing for attenuation of 6-8dBA) would still be less than the recommended WHO guideline of 30 dBA.

[107] NZS 6808:2010 is the outcome of a process which involved representatives from 11 nominating organisations with a range of interests in wind energy and wind farm noise. We have no doubt that compromises were made by participants in the drafting process. With the exception of Professor Dickinson, the Standard represents the agreed position of the participants as to the appropriate methods for prediction,



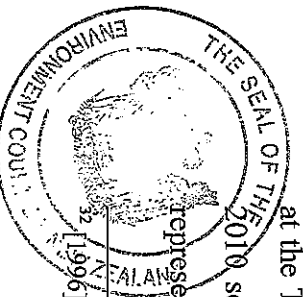
measurement and assessment of received sound from wind farms. Para 1.3 of the Standard states that *...the provisions of this Standard are intended to protect noise sensitive locations that existed before a wind farm.*

[108] The Court is not bound by the provisions of the Standard in determining the appropriate conditions to apply when granting consent to this or any other wind farm (or whether to grant consent at all). As was said by the Planning Tribunal in *McIntyre v Christchurch City Council*<sup>32</sup>:

*However parties to resource consent proceedings are not bound to accept that compliance with a New Zealand standard would avoid adverse effects on the environment that should be taken into account in deciding whether resource consent should be granted or refused. Because New Zealand standards are not given particular status by law, parties must be free to assert that significant adverse effects on the environment would occur despite compliance with the standard. ... opposition to a resource consent application based on an assertion of significant environmental harm despite compliance with a relevant New Zealand standard would usually need to be supported by expert opinion to be worthy of serious consideration.*

*McIntyre* was a case relating to installation of a cell phone tower which complied with the requirements of NZS6609:1990 as to the discharge of radio frequency radiation. The Tribunal held in *McIntyre* that notwithstanding such compliance it was still required to consider all of the evidence to determine whether or not there would be adverse effects on the environment from operation of the tower. We accept that is our obligation in this instance.

[109] In this case, all of the experts (except for Professor Dickinson) agreed that the Standard provided an adequate level of protection for residents, save for their disagreement as to the threshold speed for application of the high amenity noise limit at the Third area. NZS 6808:2010 was issued by the Standards Council on 1 March 2010 so at the time of our hearing had been in effect for around seven months. It represents the consensus of the Committee, with one notable exception. Under those



circumstances we accept that it sets the appropriate noise standards to apply to Mill Creek.

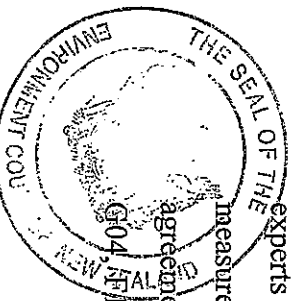
[110] Many of the submissions made both by Makara Guardians and Makara residents focussed on noise problems which had arisen on commissioning of West Wind and concerns that similar issues could arise at Mill Creek. OPS also raised these issues. These concerns had their genesis in the low frequency tonality sounds (or special audible characteristics (SACs)) which had occurred following the commissioning of West Wind, and the time subsequently taken by Meridian to address and eliminate these sounds.

[111] The response of both Meridian and the WCC to numerous noise complaints was perceived as unsatisfactory by a number of the witnesses we heard. There is an element of cynicism about claims made by Meridian as to the noise effects of wind turbines and a heightened sensitivity to wind farm noise with this continuing to affect (to varying degrees) at least some residents in the Makara community. We heard evidence of ongoing sleep disturbance and health problems still being experienced by Makara residents from West Wind.

[112] It is neither possible, nor necessary, for us to address all of the complaints arising out of the commissioning of West Wind. However, we do need to be satisfied that if Mill Creek proceeds, it avoids the problems which occurred at West Wind and that appropriate conditions to achieve that are imposed.

[113] It is our understanding that the turbines used for West Wind were purchased from the manufacturer on the basis that they were *SAC free*. Unfortunately this did not prove to be the case. After the wind farm was commissioned and operating it was ascertained that the turbine noise did have SACs with consequent effects on those receiving the noise.

[114] In order to avoid a similar situation arising at Mill Creek, all of the noise experts have agreed to imposition of a condition (Condition 20) requiring the measurement and assessment of the noise from three turbines (to be selected with the agreement of the Compliance Monitoring Officer) and providing that turbines G01 to G04, F11, F13 and F15 are not to be operated until it has been confirmed that the



three measured turbines do not exhibit SACs. Turbines G01 to G04, F11, F13 and F15 have been chosen as they are closest to residences potentially affected by wind farm noise.

[115] We concur with the imposition of Condition 20 should consent be granted. If an equivalent condition had been in place at West Wind, this should have led to the early identification of the SAC problem and allowed its elimination before it became such a major concern for so many residents. The precise wording of the condition may need to be revisited in light of subsequent findings in this decision.

[116] In Para 10 (c) of the October 19, 2010 Joint Statement, the noise experts agreed that a wind farm noise compliance report is to be prepared by a suitable qualified independent person agreed to by the WCC (our emphasis). This has been carried through to Schedule 1 Condition 19 of the proposed conditions (23 November 2010). The engagement of an independent person to undertake the compliance report seeks to remove any concerns of bias which might arise if the report was prepared by a Meridian employee.

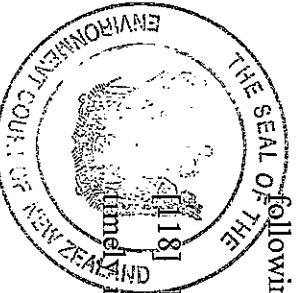
[117] Review Condition 89 authorises the WCC Compliance Monitoring Officer to review any or all conditions of the consent on an annual basis from the date of the commencement until five years after the completion,... with respect to noise....:

(c) *To review the noise requirements for the following reasons:*

- *At any time subsequent to the commencement of Project Mill Creek should the noise emissions differ significantly from those detailed in the report required by condition 26, and*
- *to deal with any non compliance with agreed standards resulting from wind farm sound, including sound with any special audible characteristic which may arise from the operation of the wind turbines.*

(We suspect that the reference to condition 26 should in fact be to condition 19 following changes to the conditions.)

[118] It was apparent from the evidence which we heard regarding West Wind, that timely responses to complaints about noise was a real priority for many residents.





Condition 85 of the consent conditions contains a complaints procedure which includes a requirement for the consent holder to keep a complaints record.

[119] Condition 85(f) requires that the complaints record must include measures taken to acknowledge and assess complaints. There are no requirements for acknowledging to the complainant that a complaint has been received; for a response time for this acknowledgement; for an estimated time to deal with the complaint; nor for a close out action once the complaint has been dealt with, including advice to the complainant of this. All of these things were shortcomings arising out of complaints in respect of West Wind and would need to be addressed in the conditions for Mill Creek if consent is to be granted.

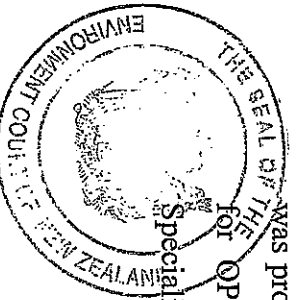
[120] In concluding this section on noise we refer to the Hearing Commissioners' first instance decision to decline consent to turbine F11 for both visual and noise amenity reasons. The *noise* related reason for this as described in Para 570 of the Commissioners' decision is ...*As this turbine is only 560m from the house site, and despite the land contour, we find that this turbine poses a very significant risk of adverse noise effect that is unlikely to be mitigated.*

(The house site referred to is a consented but not yet built site at 1000 Makara Road at the top of a very exposed coastal escarpment.)

[121] Following the first instance hearing, there has been considerable further work undertaken by the noise experts. In their 19 October 2010 Joint Statement, they make no reference to adverse noise effects from turbine F11 on this house site. We understand that is because of the exposed location of the site, it will be subject to very high background noise levels irrespective of any turbine noise. Based on the evidence we heard, we do not consider that consent to turbine F11 should be declined for noise amenity reasons.

### ***Public Health Concerns***

[122] Expert evidence on public health concerns arising from wind farm operation was provided by Dr D Black and Professor K Petrie for Meridian and Dr C Phillips for OPS. Dr Black is a qualified medical practitioner with Auckland Medical Specialists as well as being an Honorary Senior Lecturer in Environmental Medicine



at University of Auckland. He has provided evidence on health issues for many wind farm projects. Professor Petrie is a Professor of Health Psychology at the Faculty of Medicine and Science at the University of Auckland. His evidence focussed on the psychological factors associated with environmental annoyance. Dr Phillips' key qualifications are a doctorate in public policy from Harvard University and post doctoral fellowships in health policy research and the philosophy of science.

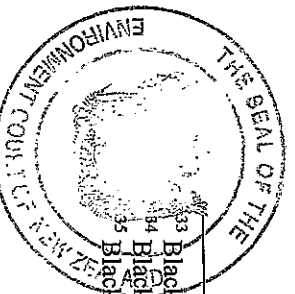
[123] Potential concerns surrounding the operation of Mill Creek identified by Dr Black were flicker, glare, blade glint, noise and vibration<sup>33</sup>, with the latter two being the primary issues in dispute before us.

[124] Dr Black addressed the concerns of some submitters that the rotating blades of the wind turbines may cause flicker which in turn could cause epilepsy. He testified that epilepsy cannot be worsened or precipitated by any aspect of Mill Creek.<sup>34</sup> He noted that his opinion was supported by the conclusions reached in a paper on the effects of wind farms on epilepsy published in 2008 in the *Epilepsia Journal*. Dr Black's evidence on this subject was not contradicted by any other evidence which we heard and we accept his conclusion that the wind farm would neither cause epilepsy nor exacerbate that condition in anyone already suffering from it.

[125] Condition 4 (d) of the proposed conditions of consent includes a requirement for all parts of the turbines to be painted in a light grey colour to minimize blade glint. Dr Black considered that this requirement would satisfactorily mitigate any potential adverse health effects from glare and glint and we accept his uncontradicted evidence in that regard.

[126] In terms of the wider health effects of Mill Creek, Dr Black stated:<sup>35</sup>

*As noted, Mr Hayes has determined the auditory effects of the proposal at Mill Creek will be within the levels set out by NZS 6808. In my opinion, having reviewed the relevant literature and the recommendation of the WHO, I consider that this level of noise causes*



<sup>33</sup> Black, EIC, Paras 3.1, 3.2

<sup>34</sup> Black, EIC, Para 5.19

<sup>35</sup> Black, EIC, Para 5.24

*effects that are no more than minor. To the extent that noise effects exist at these levels, they are an issue of amenity rather than public health.*

[127] In support of this statement, Dr Black quoted from a WHO document titled *Guideline for Community Noise* which states that .... *where noise is continuous, the equivalent sound pressure level should not exceed 30 dBA indoors if negative effects on sleep are to be avoided.*<sup>36</sup> He noted that no residence outside the project site is predicted to have an outdoor noise level above 35 dBA as a consequence of the establishment of Mill Creek. With modern buildings having sound attenuation capacity of up to 15 dBA, internal noise levels will be well below the 30 dBA guideline to avoid sleep disturbance.<sup>37</sup> He concluded by expressing the view that noise at these levels is insignificant from a public health perspective.

[128] We refer back to our earlier discussion of Professor Dickinson's evidence. Using his attenuation figure of 6-8 dBA (as opposed to Dr Black's 15), on the basis of the predicted outdoor noise levels, the maximum internal noise levels at affected residences would be in the order of 29 dBA, still less than the WHO guideline of 30 dBA.

[129] In response to a statement made by Dr Phillips, Dr Black said that while a public health standard attempts to protect the entire main population curve with an adequate safety margin, it does not attempt to cover a hypersensitive population as this is not generally practical. He noted that a hypersensitive population, if it exists, lies outside the definition of the *general public*.<sup>38</sup>

[130] Dr Black referred to a suggestion in the literature that the mere presence of a wind farm can be sufficient to trigger anxiety and distress in some people, with this condition verging on a diagnosable phobia in psychiatric terms<sup>39</sup>. In this context there was some debate between Dr Black and Professor Petrie on the one hand and Dr Phillips on the other as to whether the lack of well being from sleep disturbance



<sup>36</sup> Black, EIC, Paras 5.34, 5.35

<sup>37</sup> Black, EIC, Paras 5.37, 5.38

<sup>38</sup> Black, Rebuttal, Para 2.36

<sup>39</sup> Black, EIC, Para 5.48

suffered by some people could be classified as being caused by a medical condition or as a symptom of anxiety and worry over the presence of a wind farm.

[131] For our part, we have little doubt that wind farm induced sleep disturbance and feelings of ill health still being suffered by a small number of Makara residents are very real, irrespective of how these responses might be classified by health professionals. Any sensitivity to wind farm noise would have been exacerbated by the unanticipated problems with SACs which occurred at the time of the commissioning of West Wind.

[132] Dr Black also addressed the issue of whether some people who live or work near the wind farm might develop tinnitus. He described tinnitus as *..the perception of sound in the absence of corresponding external sound....not a disease in itself but a symptom resulting from a number of underlying causes...often caused by noise induced damage to hearing.* He stated that wind farm sound pressure levels cannot cause tinnitus as they are too low by a factor of more than 30 dB.<sup>40</sup>

[133] A particular concern expressed by some witnesses for Makara Guardians was the potential for persons living near the wind farm to suffer adverse health effects from vibration generated by the turbines. Dr Black advised that subsonic vibration does not extend below noise levels of about 85 dB with the threshold for acute noise damage being 140 dB, both considerably in excess of any noise levels predicted to occur at Mill Creek.<sup>41</sup> He also briefly discussed vibro-acoustic disease (VAD) described as... *a multi-systemic entity caused by occupational or chronic exposure to large pressure, low frequency noise.*<sup>42</sup> With the separation distances proposed, it was his opinion that VAD would not be an issue for Mill Creek.

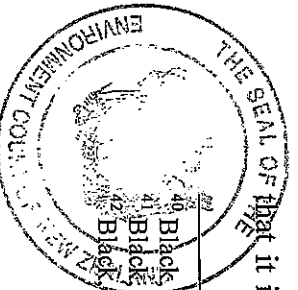
[134] Dr Black's opinions on the subjects of tinnitus, vibration and VAD were not contradicted by any medical witness. We accept his evidence.

[135] What was apparent from the evidence of Makara residents which we heard is that it is vital that if Mill Creek proceeds, there is full compliance with consented

<sup>40</sup> Black, EIC, Paras 5.29, 5.31

<sup>41</sup> Black, EIC, Para 5.47

<sup>42</sup> Black, EIC, Para 5.26



noise limits from the outset. The failure of West Wind to do that led to the high degree of community distrust of Meridian which was evident to us. However, accepting the evidence of Dr Black and relying on the WHO guidelines, we conclude that if full compliance with the consented noise limits is achieved from the outset, wind farm noise from Mill Creek will not pose a level of health risk such that consent should be denied.

[136] We are satisfied that full compliance can be achieved, notwithstanding the unsatisfactory experience of West Wind. The imposition of a set of conditions, which have been drafted in light of the West Wind experience, including Condition 20 which provides for testing prior to the operation of identified turbines, satisfies us as to that.

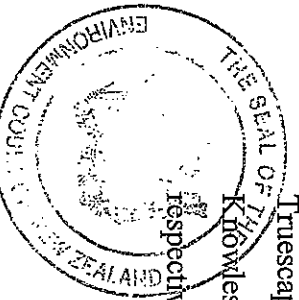
*The Coastal Environment, Landscape (Natural and Rural Character), and Visual Amenity Expert Evidence*

[137] We had evidence from four qualified and experienced landscape architects, all of whom had considerable experience with wind farm assessment:

- Mr P Rough for Meridian;
- Mr G Mansergh for Meridian;
- Mr S Brown for the WCC; and
- Ms A Steven for OPS.

In addition to the landscape witnesses, these matters were the subject of evidence from planning witnesses.

[138] During the course of the hearing, we expressed our concern about the volume of material contained in the lengthy evidence of the landscape witnesses. Those witnesses provided us with approximately 630 pages of evidence and 280 A3 pages of photographs and other visual material. Additionally there were bound A3 Truescape photosimulations which ran to 126 A3 pages with supporting documentation. There was also the evidence of Mr R Maunder, for Meridian, on the Truescape photosimulations and on the K2Vi 3D visualisation model from Mr C Knowles for OPS (the graphic material which informed the evidence of the respective landscape architects).



[139] We appreciate that this application involved a substantial project encompassing a wide area with numerous potential viewpoints, affected parties and features to be taken into account. However, the Court and the witnesses would have benefited from a considerably more focussed and collaborative approach to the evidence and (particularly) graphic material presented in these proceedings. A common bundle of agreed photographs and photosimulations would have enabled a more efficient consideration of the parties' positions.

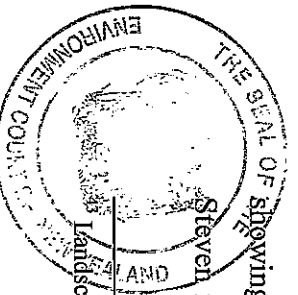
[140] The expert conferencing process provided an opportunity to cut through the extensive material and to present a clear outline of the matters we needed to decide with the differences in opinion between the landscape witnesses. However, the joint witness statement<sup>43</sup> was superficial. It did not logically set out or work through the issues that were in front of us. The RMA differentiates between the natural character of the coastal environmental, natural landscape and landscape features and visual amenity. Unfortunately the landscape witnesses frequently did not appreciate the difference and conflated these matters not only in their evidence but also in the joint statement.

### *Coastal Environment*

[141] Under this head we consider the evidence on the extent of the coastal environment, its natural character, and the likely effect of the proposed wind farm on that coastal character. We also consider the relevant planning documents, including provisions on the appropriateness of a coastal wind farm and coastal development.

#### *Extent of Coastal Environment*

[142] There was no agreement between the landscape witnesses on the extent of the coastal environment in the vicinity of the wind farm and whether or not any part of the wind farm lay within that environment. However the extent of disagreement was limited to an area in the south western corner of the wind farm. There was no disagreement that in a physical sense, the majority of the turbines lay within the rural hinterland rather than the coastal environment. The witnesses provided a plan showing their respective views as to the extent of the coastal environment. Ms Steven identified the coastal environment as extending furthest and on the basis of



her interpretation 14 turbines (10 of the F series, H01 and 02, E05 and E04) are proposed to be situated within that environment.

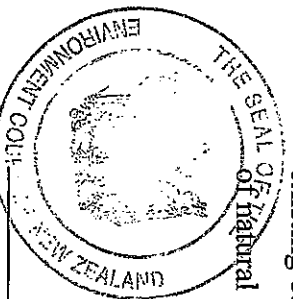
[143] We do not need to resolve the differences between the witnesses on this subject. The Court has previously observed that the coastal environment is often not easily defined by hard boundaries and there will commonly be *grey areas*.<sup>44</sup> As Mr Mansergh observed there is a transition in this case from dominant coastal influences to dominant rural hinterland landscape characteristics.

[144] We concur with Ms Steven's evidence that the theoretical extent of the coastal environment was somewhat academic, given that the scale and prominence of the turbines is such that they will be seen as part of the coastal environment even if not physically located in it. This is particularly the case where the ridge a turbine stands on is hidden from view yet the turbine appears to be placed on the escarpment. Mr Brown also made the point that it did not matter if he drew the boundary line elsewhere as the turbines would be visually juxtaposed with the coastal environment and have to be assessed in those terms.

#### *Natural Character Values of the Coastal Environment*

[145] Objective One of the Wellington Regional Policy Statement (RPS) seeks to preserve the natural character of the coastal environment by protecting regionally significant areas and values. Table 9 of the RPS identifies the coastal escarpments and small beaches from Paekakariki to Owihiro Bay (including the coastline near Mill Creek) as *Landscapes and Seascapes of Regional Significance*. Table 10 of the RPS refers to the Makara Stream Flats as an *Outstanding Geographical Feature* and a *Landform of Regional Significance*.

[146] In their joint statement, the landscape witnesses agreed that in general, the existing coastal environment can be considered to have a moderate (or greater) level



<sup>44</sup> *Kaipokonui Beach Society Inc v South Taranaki District Council* W 030/2008 para [46].

[147] Mr Rough divided the coastal environment into four landscape character areas within the vicinity of the site and assigned the following natural character values to them:

- Pipinui Point – high;
- Smiths Gully – moderate-high;
- Smiths Bay - low-moderate; and
- Ohariu Bay low-moderate.

He emphasised the modification of vegetation as reducing naturalness, along with the baches at Makara Beach and Smiths Bay and the Oteranga Bay structure in particular detracting from the natural character of the area.

[148] Mr Mansergh identified key attributes in a table for the beach and rocky shore, coastal escarpment, seaward ridgeline and Cook Strait areas, but did not provide an evaluation of where on the natural character spectrum these divisions rated.

[149] Mr Brown considered that re-emerging native shrubland across the Bowen property (above Makara Beach and Smiths Bay), the Smiths Stream gully and corridor, and the rock ledges, headlands, shoals and pebble-lined coves at the sea's edge imbued much of the coastline north of Ohariu Bay with a significant level of natural character. He considered this was diminished by the lack of or the nature of vegetation (including open pasture) in some places and by baches in and near Smiths Bay and Makara Beach. He concluded that the coastal landscape does not as a whole display a consistently high level of natural character. Rather, it retains a veneer of naturalness that is still important in terms of the public perception and appreciation of the coastline.

[150] Ms Steven assessed the natural character of the Ohariu Bay-Pipinui Point environment as high. She considered that the limited number of buildings and structures in this area (two small clusters of baches, the HVDC line and earth electrode station and farm fences) appear small and subservient to landform and marine elements and are well tucked into the landscape. She said that this coastline is remote and referred to as the *wild coast*, indicating the perception of a wild, natural and rugged coast. Ms Stevens considered that the presence of West Wind to the south





of Mill Creek, accentuated the relatively unaffected coastal landscape north of Ohariu Bay, when that part of the coast with turbines in it is compared to that part with no turbines on it.

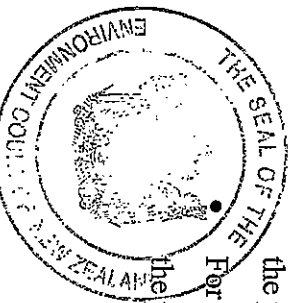
### *Effects*

[151] Both Messrs Rough and Mansergh acknowledged that the F series turbines (eight on the first inland ridge) would appear, from some perspectives, as if they are atop the coastal escarpment even though they are some distance inland, and that this effect would diminish the natural character of this part of the coastal environment to varying degrees depending on the vantage point.

[152] Mr Rough considered those impacts would be substantial for views of the coast for up to approximately 2km offshore and from Fisherman's Point. In some locations the turbines would be screened from view by the coastal escarpment. From other publicly accessible viewing situations (such as on the Makara Walkway and at the southern headland of Smiths Bay) turbines would be clearly visible. Mr Rough considered that the turbines would form an important but not defining element in the view with a moderate effect on the natural character of the coastal environment. He considered there would be minor effects on the natural character when viewed from some locations on the Skyline Track and Mt Kaukau trig as some turbines would disrupt the land/sea junction.

[153] Mr Mansergh's opinion was that the turbines would affect the natural character of the coastal environment to some extent and more so when seen from the coastal edge or nearby inshore waters. He summarised potential effects on elements of the coastal environment as follows:

- For the beach and rocky shore: low effect due to the visual and physical separation from the wind farm;
- For the coastal escarpment: low-moderate adverse effect associated with the perception of the turbines being atop the escarpment in some views; For the seaward ridgeline: low-moderate adverse effect associated with the perception of turbines atop the ridgeline; and

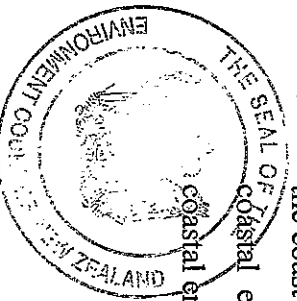


- For the broader Cook Strait landscape: negligible effect due to the separation between the turbines and the water when viewed either landward or seaward.

[154] Mr Mansergh emphasised that views to the Mill Creek turbines from the coastal edge would be limited. Also he said that where the turbines would be visible, for example along the Makara Walkway, the beach and Cook Strait would remain the dominant elements influencing the experience of the coast. He considered this part of the coastal environment would remain natural and continue to be perceived as being predominantly wild in nature.

[155] Mr Mansergh gave evidence that under the proposed layout, from some coastal locations it is likely that a small number of turbines would be perceived as being within the coastal environment, giving the example of Fisherman's Point where turbines F10 and F11 appear to be located at the top of the escarpment. However, he considered that it is the broad extent of the Mill Creek turbines visible from some coastal locations and seen in the context of the escarpment rather than their exact location that would have the greatest influence on natural character values. Accordingly, removing some (but not all) turbines would not change that influence.

[156] Mr Brown was of the opinion that the level of effects of Mill Creek turbines on the natural character of the coastal environment would be moderate to moderate/high. He said that the turbines would erode some of the naturalness and endemic value of the coastal landscape, but not to the same degree as they would if that same landscape was more extensively revegetated and rehabilitated and did not contain the existing level of farming and built development (including the northernmost West Wind turbines). In his opinion the physical set-back of the turbines from the coast would also help visually and physically dissociate them somewhat from the coastal environment, thus reducing their overall prominence and impact on the coastal environment.



[157] Ms Steven was of the opinion that the natural character of the coastal environment including the coastal escarpments would be substantially adversely affected by Mill Creek turbines.

[158] Mrs C Foster (planning witness for Meridian), considered that the character of this part of the coastal environment would remain predominantly natural even with the addition of Mill Creek turbines, evidenced in her view by the way in which the natural character of the coastal environment in the vicinity of West Wind predominates.

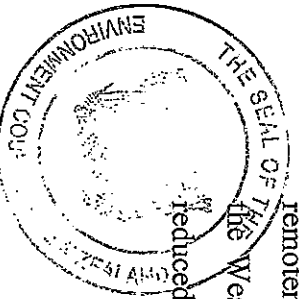
#### *Cumulative Effects*

[159] Both Messrs Rough and Mansergh gave evidence that the visual impact of the Mill Creek wind farm would contribute to cumulative effects on natural character in combination with West Wind.

[160] Mr Mansergh gave evidence that the Mill Creek turbines would be seen within the wider context of the West Wind turbines and would appear as an extension to that development. Notwithstanding this he thought the coastal environment would remain natural and continue to be perceived as being predominantly wild in nature.

[161] Mr Brown gave evidence that even though cumulative effects would occur, they would be unlikely to be as significant as the direct effects associated with Mill Creek.

[162] Ms Steven considered the cumulative effects to be significant. She gave evidence on a number of adverse effects that came as a result of the consenting of West Wind, also referring to it as reaching what she described as a threshold of adverse effects. She said that the Environment Court did not consider West Wind to preserve the natural character of the coastal environment and found that it would have unavoidable adverse effects. Ms Steven considered that the aspect of remoteness which is associated with wildness, found by the Environment Court in the West Wind decision to be significantly reduced, would be further significantly reduced by Mill Creek turbines.



*Are the adverse effects unacceptable or inappropriate?*

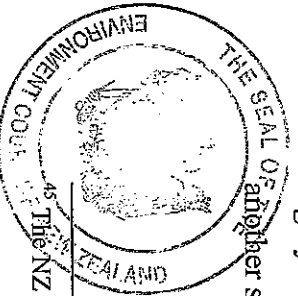
[163] The Commissioners at first instance did not find the adverse effect on natural character of those parts of the wind farm visible from the shoreline, coastal cliffs and sea, so significant as to require either the removal of particular turbines or series of turbines.

[164] A live issue is Policy 1.1.1 in the New Zealand Coastal Policy Statement in force at the time we heard the application<sup>45</sup>. That Policy states:

*It is a national priority to preserve the natural character of the coastal environment by:*

- a) encouraging appropriate subdivision, use or development in areas where the natural character has already been compromised and avoiding sprawling or sporadic subdivision, use or development in the coastal environment;*
- b) taking into account the potential effects of subdivision, use, or development on the values relating to the natural character of the coastal environment, both within and outside the immediate location; and*
- c) avoiding cumulative adverse effects of subdivision, use and development in the coastal environment.*

[165] Mrs Foster accepted that the proposed turbines would diminish the perception of natural character of this part of the coastal environment (including the coastal escarpment) by introducing highly-visible structures to an inland site. However, she considered the natural character in the vicinity of the Mill Creek site to be already compromised and the effect therefore not of a degree that would undermine the overall natural character of this part of the coastal environment or result in being considered to be no longer natural. She said that the effect is also in regional terms highly localised and occurs at a point along the regional coastline which features another similar development with West Wind.



<sup>45</sup> The NZ Coastal Policy Statement 2010 was not before us by any party.

[166] Mr Brown was of the opinion that the level of effects on the coastal environment, although moderate to moderate/high would not be unacceptable given mitigating factors such as the lack of original vegetation and the physical set back of the turbines from coast.

[167] Policy 3.2.4 of the District Plan seeks that cumulative effects are not adverse to a significant degree.

[168] Mrs Foster gave evidence that in the context of the broader expanse of the coastal environment of the Wellington and Wairarapa region the cumulative visual effect of existing (West Wind and the single Brooklyn turbine) or consented wind farms (Long Gully) would not be experienced collectively from other than a few distant positions and would not be significant.

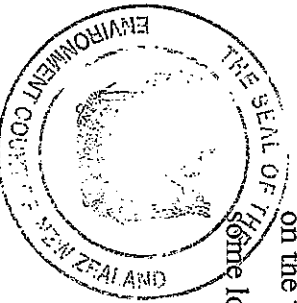
#### *Evaluation*

[169] We find that the coastal environment extends to the line inland suggested by Messrs Rough and Brown, but agree with Mr Brown and Ms Steven that the definition is not critical in terms of the effects.

[170] We accept that parts of the coastal environment have a high natural character, and that looked at overall, notwithstanding the nature of the vegetation and the presence of baches and other structures, a wild character remains. That is also the case with the coastal environment affected by West Wind turbines.

[171] We accept that the turbines would be prominent in the view from sea out to 2 km, adversely affecting the natural character of the coastal environment.

[172] We accept that the Mill Creek turbines would have significant adverse effects on the views and experience of the natural character of the coastal environment from some locations around the coastline, added to the effects of West Wind.



[173] We accept that removing individual turbines (even F11 as the Commissioners at the first instance did but not for this reason) would not remove the adverse effects on the views and experience.

[174] However, this is not determinative of whether or not the turbines are inappropriate development in terms of s6(a) or Policy 1.1.1 of the NZ Coastal Policy Statement. Section 6(a) considerations do not *trump* s5 and other Part 2 matters in the RMA. We return to this issue when undertaking our overall evaluation under Part 2.

### *Landscape*

[175] Section 6(b) declares as a matter of national importance:

*The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.*

[176] Landscape is also relevant to considerations in s7, such as the maintenance and enhancement of amenity under s7(c) and the quality of the environment under s7(t).

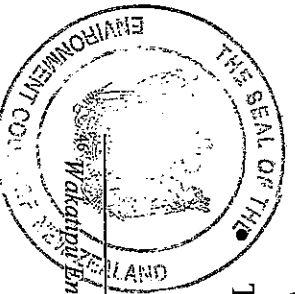
### *Landscape Context and Character*

[177] In considering the landscape, the landscape witnesses looked at the *modified Pigeon Bay factors*<sup>46</sup>.

[178] The landscape witnesses divided the context landscape into landscape character areas – definable areas of land with a broadly homogenous landscape character and sense of cohesiveness and place. Mr Brown subdivided the landscape into six landscape character areas:

- The coastline from Ohariu Bay northwards;
- The suite of pasture-dominated ridges inland;
- The line of rural-residential hugging the floor and lower slopes of Ohariu Valley;

The Takarau Gorge and its southern mouth;



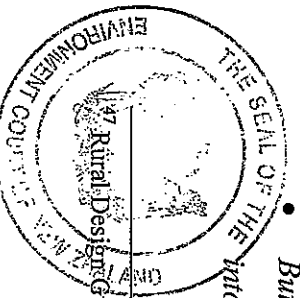
- The broad valley and marginal slopes at the confluence of the Ohariu and Makara Streams, extending through to the back of the existing Makara Beach settlement; and
- The settlement of Makara Beach.

[179] For our purposes it is sufficient to use the three landscape character types identified by Messrs Rough and Mansergh and Ms Stevens (the differences in boundary and name are not important) and recognised in the District Plan Rural Design Guide:

- The coastline (which we have already discussed);
- Ohariu Valley; and
- Makara Valley.

[180] In the appendix of the Rural Area Design Guide to the District Plan the following are listed as a summary of *Ohariu Valley's* landscape features<sup>47</sup>:

- *Open pastoral hill country with a strong sense of order, coherence, security and stability.*
- *The natural dimension of character is overwhelmingly pastoral rather than indigenous.*
- *Characterised by largely undivided open space running from valleys, up gentle slopes and out onto rolling tops and ridges. Maintaining uncluttered hills and ridges is fundamental to sustaining the rural character and the sense of space and freedom.*
- *The location of woody vegetation, almost exclusively exotic, follows a very coherent pattern. Older plantings of pine and macrocarpa reflect functional farming requirements; shelter for stock, buildings and working areas.*
- *Areas to the north of Makara Beach and west of Ohariu Valley are remote and sparsely populated but intensively managed with developed pasture and few areas of scrub weeds and re-growth.*
- *Buildings of any significance are generally scattered and folded into valleys so the structured dimension of the landscape is low key.*



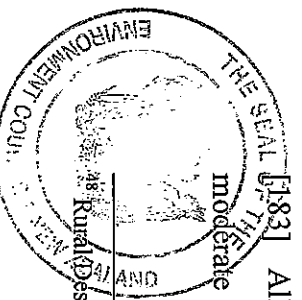
- *With the exception of a few recent buildings designed for views, and hence assuming an uncharacteristic detached dominance, buildings are typically understated and unobtrusive.*

[181] For Makara there is the following summary of landscape features<sup>48</sup>:

- *Although having an overall rural character the Makara Stream environment includes areas of intensive cultural development and activity with a village character.*
- *At the southern end of the south Makara Valley, where the valley widens, there is space to accommodate an intensification of development.*
- *Pastoral farming is interspersed with extensive areas of reversion.*
- *Settlement and cultural structures tend to be located in valley bottoms and along road corridors, clustered where flat land is limited and dispersed where valley bottoms are wider in the South Makara Stream.*
- *Slopes above the valley bottoms are often steep and difficult to build on with ridges being exposed and inhospitable.*
- *Although ridgetops are open with rough pasture the faces are generally steep with reversion occurring; indigenous regrowth is often well advanced on south facing slopes.*
- *The very broken and difficult topography has meant that access has largely been confined to the bottoms of valleys, along ridgelines, and along the coast.*

[182] We did not understand the landscape witnesses to disagree with those summaries. Since the preparation and inclusion of these matters in the District Plan, West Wind turbines have now become a skyline feature from within Makara Valley, especially from various locations in its southern half. The West Wind turbines are also a skyline feature in views from within Ohariu Valley, especially at its southern end and from elevated positions.

[183] All the landscape witnesses assessed the Ohariu landscape as having a moderate level of naturalness, with openness and a pastoral land use as defining





elements. Ms Steven considered Ohariu had a high level of legibility with landforms being a dominant element in the way of large ridges and small hills and spurs.

[184] Messrs Rough, Mansergh and Brown used the term openness in the spatial sense, meaning expansive, grand, and not contained. Ms Steven used the term in a sense meaning free of built form, an absence of human clutter, and getting away from it all.

[185] The main difference between the experts was as to the effect of West Wind on the character of the different areas. Ms Steven gave evidence that the presence of West Wind on the Makara hills reinforces the distinction between Makara and Ohariu Valleys, with the Takarau Gorge an area of transition. She said that for Makara, wind turbines are a defining element, with large prominent built forms on skylines and ridgelines with much reduced openness. Mr Mansergh said that the presence of West Wind now makes the Ohariu Coastal Hills more open and undeveloped in contrast.

[186] Mr Mansergh stated that turbines may now be considered part of the landscape and Mr Rough referred to them as landmarks. Ms Steven said that while this is so in a physical sense that does not equate to an acceptance of their presence or that the perception of adverse effects has decreased since construction.

*Outstanding natural feature or landscape?*

[187] The site is not identified in any regional planning instrument as on or part of outstanding natural feature or landscape. The operative Regional Policy Statement and the District Plan do not identify any outstanding natural features and landscapes within the district. No elements of the site are contained within Table 10 (Outstanding Natural Features, Landforms and Sites of Historical Importance) of the Operative Regional Policy Statement. The site is not specifically referred to within the Proposed Regional Policy Statement or District Plan as an outstanding natural feature or landscape.



[188] Our considerations are not confined by whether the planning instruments refer to an area or feature as an outstanding natural feature or landscape<sup>49</sup> but all the landscape witnesses agreed that the landscape is a cultural rather than natural landscape and that the site is not an outstanding natural landscape under s6(b). However, Mr Rough, Mr Mansergh and Ms Steven were of the opinion that the distinctive coastal escarpment on the seaward edge of the site (a feature which prevails around the south-east coastline from Titahi Bay to Owihiro Bay) is a candidate for ranking as an outstanding natural feature under s6(b).

[189] Mr Brown, while agreeing the outer edge of coastline comes close to being an outstanding natural feature said that is not sufficiently natural and unified overall to be outstanding.

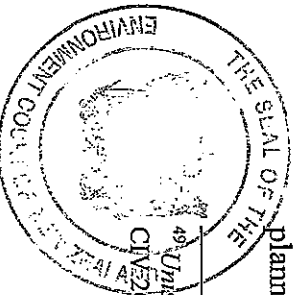
[190] We find that the site is not an outstanding natural feature or outstanding natural landscape either in the regional and district planning documents, or because of its attributes and characteristics. However, we accept that the distinctive coastal escarpment on the seaward edge of the site could be a candidate for an outstanding natural feature.

#### *Effects on the coastal escarpment*

[191] No turbines would be located on the coastal escarpment itself. Messrs Rough and Mansergh agreed that the turbines would be far enough away not to affect the integrity of the coastal escarpment even though turbines would be visible in the context of escarpment. Mr Brown said that while the turbines would be viewed atop the wider coastal environment they would not be seen as being directly atop the coastal escarpment. He considered there to be a sense of separation and setback from the coastal escarpment.

[192] Ms Steven did not agree. She considered the wind turbines would be viewed as sitting on the coastal escarpment, a significant adverse effect.

[193] In the District Plan, Open Space zoning extends along the coastline but the planning and other witnesses were unclear about whether it only covered the beach



or whether it climbed up the immediate coastal edge/cliffs. That open space zoning brings into play Policy 16 of the District Plan (Open Spaces) which is to:

*16.5.2.1 Identify and protect from development and visual obstruction landforms and landscape elements that are significant in the context of the Wellington landscape, and in particular significant escarpments and coastal cliffs.*

*16.5.2.2 Restrict the construction of buildings, structures and earthworks on identified ridgelines and hilltops.*

[194] We find that the turbines may affect perceptions of naturalness associated with the coastal escarpment. The turbines would not be placed on the coastal escarpment and would not visually obstruct the escarpment and therefore not offend Policy 16 of the District Plan, wherever the Open Space zoning line extends to.

#### *District Plan Ridgelines and Hilltops Overlay*

[195] The District Plan has part of the Mill Creek site as an identified (hills and) ridgeline in the overlay of the planning maps. However, that is not the same as an outstanding natural feature or outstanding natural landscape (or significant amenity landscape – which we address shortly), as the District Plan makes clear.

[196] The Ridgelines and Hilltops overlay does not prohibit wind turbine development. The relevant objectives and policies are:

*14.2.2 To maintain and enhance the character of the Rural Area by managing the scale, location and rate and design of new building development.*

*14.2.2.2 Control the construction and siting of new buildings, structures and earthworks on identified ridgelines and hilltops in ways that avoid, remedy or mitigate adverse visual effects and effects on any natural, recreational or heritage values that may exist in these identified areas.*

[197] We accept the evidence of Mr Rough (with which Messrs Mansergh and Brown agreed) that the ridgeline of Mill Creek Hill, subject to the Ridgelines and Hilltops overlay (and in which turbines E06, E07, J01 and J02 are proposed), is not a particularly distinctive feature within the site nor in the general context of the



surrounding landscape. The wind farm would not have a particularly significant effect on any standing the overlay area may have as a landscape feature.

*Significant Amenity Landscape?*

[198] There was some debate among the landscape witnesses as to whether the Mill Creek landscape was part of a significant amenity landscape as provided for in policy 26 of the Proposed RPS which relevantly states:

*Identifying significant amenity landscapes – district and regional plans*

*District and regional plans shall identify significant amenity landscapes*

*taking into account the following factors:*

- (a) Natural science values: these values relate to the geological, ecological, topographical and natural process components of the landscape: ...*
- (b) Aesthetic values: these values relate to scenic perceptions of the feature or landscape: ...*
- (c) Expressiveness (legibility): ...*
- (d) Transient values: ...*
- (e) Shared and recognised values: ...*
- (f) Tangata whenua values: ...*
- (g) Historical associations: ...*

[199] Policy 27 goes on to provide:

*Where significant amenity landscapes have been identified in*

*accordance with policy 26, district and regional plans shall include*

*policies, rules and/or methods for managing these landscapes in order*

*to maintain or enhance their significant amenity landscape values.*

[200] It is clear that Policy 27 requires that the management of significant amenity landscapes falls to be considered under the amenity provisions of s7(b) RMA as a matter to which particular regard is to be had.

[201] The Council position was that until a landscape has actually been identified as a significant amenity landscape in any relevant district or regional plan (and this landscape has not been), any relevant policies, rules or methods do not apply to that



landscape. Instead the relevant policy of the Proposed RPS is an interim policy, Policy 49.

[202] Mr J Rusbatch (a planner with the Regional Council) advised us that work has not commenced to identify significant amenity landscapes under Policy 26 as it is subject to appeal seeking its deletion, as is Policy 27.

[203] Ms Steven maintained that, applying the Policy 26 criteria the landscape is a significant amenity landscape. However, Ms Steven also acknowledged that ... *from my experience of observing many rural farm landscapes, it's pretty typical but it does have its own distinctive characteristics.*<sup>50</sup>

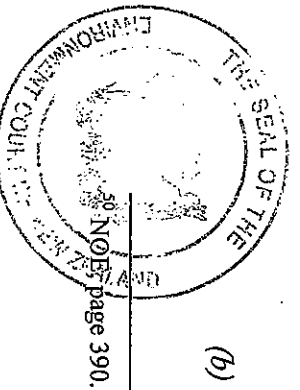
[204] Messrs Rough, Mansergh and Brown were all of the opinion that in order to determine if the site was part of a significant amenity landscape an assessment was required within a wider regional context and that had not been undertaken.

[205] Mr Rough said that all landscapes probably have some amenity value. He considered the rural hinterland incorporating the wind farm site to be a reasonably appealing rural landscape with amenity value, but with nothing special about it. Mr Brown also stated that while the landscape affords amenity, it falls short of the qualities required for a landscape to constitute a significant amenity landscape.

[206] Policy 49 of the Proposed RPS requires that:

*When considering an application for a resource consent, ... a determination shall be made as to whether an activity may affect an outstanding natural feature and landscape, or significant amenity landscape, and/or in determining whether an activity is inappropriate particular regard shall be given to:*

- (a) the degree to which the natural feature or landscape values will be modified, damaged or destroyed including:*
  - i. the duration and frequency of any effect, and/or*
  - ii. the magnitude or scale of any effect;*
- (b) the irreversibility of adverse effects on landscape values;*



- (c) *the resilience of the natural feature place or area to change;*
- (d) *the opportunities to remedy or mitigate previous damage to natural feature or landscape values; and*
- (e) *whether the activity will lead to cumulative adverse effects on the natural feature or landscape values.*

[207] Mr Rusbatch said that Ms Steven was correct to assess the landscape against Policy 49 as this is an interim policy applicable before significant amenity landscapes were identified in district and regional plans. However, he advised that this policy has also been appealed with the appellants seeking its deletion and therefore we should give it limited weight. In any event, the relevant matters in Policy 49 are all matters that the witnesses traversed in considering the effects of the turbines.

[208] We conclude that the landscape is not a significant amenity landscape under Policies 26 or 49 (regardless of the weighing these policies should be given and the way in which they should be applied). We accept the persuasive evidence of Messrs Brown and Rough that there is nothing which singles this area out from other rural areas. Indeed Ms Steven acknowledged that as being the case.

#### *Effects on Makara and Ohariu Valley Landscapes*

[209] Mr Rough gave evidence that the wind farm would have an unavoidable visual effect on skylines, varying according to the viewing distance from, elevation of, viewpoint and the number of turbines or parts of turbines visible on the skyline. However he considered that from many salient viewpoints the section of skyline on which turbines are visible in a view is often a low section on the horizon, which appears to be framed by closer hills with more proximate, and visually significant, sections of skyline.

[210] Mr Mansergh gave evidence that the wind farm would introduce tall built structures onto skylines valued for their natural form and contribution to the rural character of the area. He said for some people this is likely to detract from their appreciation of the rural landscape. However, rural activities would continue. He accepted that the large size of the turbines would draw attention to them rather than



the rural land surrounding them and this would alter people's perception of the open spatial character of the landscape. He rated effects on the existing landscape as varying between very low to moderate-high depending on location.

[211] Mr Brown said that wind turbines leave many if not most landscape features, elements and patterns intact. Wind farms add to the landscape but are not physically transformative of it. He considered the combined effects of Mill Creek turbines on the Ohariu Valley and Makara landscapes would be of a low to moderate order and not high. In his opinion in Ohariu Valley the turbines would float atop the ridges and vegetation around Mill Creek, allowing those much more substantial and grounded elements to still dominate the western valley slopes and horizon. He emphasised the human intervention and modification already apparent in the character of Ohariu Valley, including the existing transmission corridor.

[212] Ms Steven considered that overall the proposal would have significant adverse effects on the landscapes of Makara and Ohariu Valley and their associated values. She based this on the effects of the turbines on openness (including open character and open natural skylines), visual coherence, and what she considered to be a change the landscape from a traditional open pastoral or natural one to an energy production landscape which we understand to mean a landscape dominated by wind turbines and electricity transmission lines.

[213] Mr Rough was of the view that in terms of openness, open space is sustained by the spread out nature of the turbines and Mr Mansergh considered that the sense of open space is not entirely compromised by them. Mr Rough stated that the strongest effect of the turbines would be when they obtrude into the general sweep of open space as seen from elevated vantage points such as the Skyline Track. He considered that this effect was mitigated because the turbines generally appear to occupy a relatively small sector of very expansive views of open space. Ms Steven did not agree and said that the greatest effect on openness would be from viewpoints where there is an expectation of open skylines and uninterrupted layers of land and/or sea and sky.



[214] Ms Steven also addressed visual coherence and considered how the wind farm elements and patterns fit in to the character of the existing pastoral landscape and whether its elements are congruent or incongruent. She considered that the scale and form of turbines and their relentless rotating action are fundamentally at odds with the rural landscape setting, compounded by their multiplicity. She concluded that from viewpoints within a reasonable range (a few kilometres) they would dominate or co-dominate the landscape because they draw the eye due to their movement, scale and uncharacteristic pale solid vertical form.

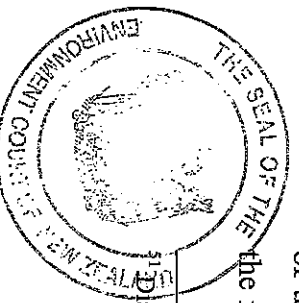
[215] Ms Steven considered that the addition of the Mill Creek turbines would extend the energy production landscape of West Wind over an extensive part of the remaining landscape surrounding Wellington thereby having an adverse cumulative effect. Messrs Rough and Brown did not agree with Ms Steven, considering the scale of the site and the landforms meant that the turbines would not dominate them. None of the other landscape witnesses considered that the landscape would become an energy production landscape.

[216] Ms Steven contended that whether the landscape remains rural in character is not at issue, but that the question to ask is will the proposed wind farm maintain the existing distinctive character of this rural area, an open pastoral to wooded character with a moderate level of naturalness and a high level of openness. She considered it would not retain that existing landscape character.

### *Rural Character*

[217] The District Plan contains several provisions relating to the Rural Area which refer to rural character<sup>51</sup>. It treats rural character differently from amenity values. Although the District Plan does not define what constitutes rural character it is clear from commentary within the Plan that elements such as naturalness, lack of development and farming activities are seen as contributing to rural character.

[218] Many of the lay witnesses we heard expressed their concern about the effect of the wind farm and particularly the turbines on rural character. Some referred to the non-statutory Rural Community Plans for Ohariu Valley and Makara as well as



<sup>51</sup> District Plan, Objectives 14.2.2 and 14.2.3 together with Policies 14.2.2.1, 14.2.2.2 and 14.2.3.1



the Rural Design Guide, and their expressions of what is important to the community in describing that rural character. The lay witnesses (including several from Makara) considered that the presence of West Wind turbines had changed the rural character of that area significantly and not desirably.

#### *Effects on rural character*

[219] The Commissioners at first instance agreed the rural character of Ohariu Valley would not be irreversibly affected by the wind farm, but there would be some significant short term effects from the construction phase and during the operational phase while re-vegetation and landscaping initiatives take hold.

[220] Mr Rough considered that the spacing of turbines and continuation of underlying landform and rural activity mean the site would remain rural in character. He said that in a general sense, with the proposed wind farm built, the site and Ohariu landscape would maintain a moderate level of naturalness and a high level of openness, as can be seen at West Wind. Mr Mansergh was of a similar opinion.

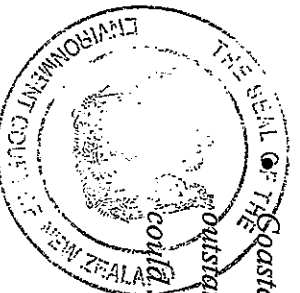
[221] Mr Brown emphasised that it was not possible to fossilise amenity or rural landscapes but it is a case of managing change. For wind farms he saw it important that the primary production use endures, setting wind farms aside from other activities which change the very nature of the landscape.

[222] Ms Steven accepted that if the proposed wind farm proceeds the landscape would remain rural in character. However, she said that the question to ask is whether the proposal would maintain the *existing* distinctive rural character, being an open pastoral to wooded character with a moderate level of naturalness and a high level of openness. She acknowledged that it is inevitable that all landscapes change.

#### *Overall Evaluation*

[223] Mr Webb submitted that within what he called the *amenity landscape* affected by the proposed wind farm there is:

*Soastal environment with a high natural character (almost outstanding but for a degree of cultural intrusion) but potentially could still be outstanding after a regional assessment;*



- *Coastal escarpment that could also be an outstanding natural feature after a regional assessment;*
- *Rural hinterland that is still a clean, uninterrupted landform with minimal manmade structures. It is "bare" in the sense of lots of pasture and few trees; and*
- *Ridge line within the Hills/Ridge line overlay.*<sup>52</sup>

He submitted that these factors elevated the values of this amenity landscape.

We do not agree with that proposition for several reasons.

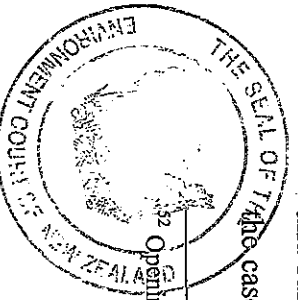
[224] We find that the coastal escarpment may be an outstanding natural feature in terms of s6(b) RMA but we agree with those witnesses who considered that the turbines would not affect the integrity of the coastal escarpment. We have already dealt with the indirect effects of the turbines under the heading of coastal environment.

[225] The ridgeline of Mill Creek Hill, subject to the Ridgelines and Hilltops overlay (and in which turbines E06, E07, J01 and J02 are proposed), is not a particularly distinctive feature within the site nor in the general context of the surrounding landscape. The wind farm would not have a significant effect on any standing the overlay area may have as a landscape feature.

[226] We do not find the site to be part of a significant amenity landscape area. In any event, that concept is introduced through the Proposed RPS whose provisions are under appeal and should be given little weight.

[227] RMA defines amenity values to mean:  
*those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.*

While all the landscape witnesses agreed that the landscape of the Mill Creek site and surrounds has amenity value, we would have been surprised if that had not been the case. Rural landscapes commonly have amenity values for residents and others



who experience them. We did not receive any satisfactory explanation of the concept of an amenity landscape advanced by Mr Webb although we assumed it generally to be a landscape high in amenity values.

[228] To the extent that it might be suggested that this particular landscape deserves a higher weighting in our considerations than an *ordinary* rural landscape we disagree, given our preceding findings. The Mill Creek site is, by and large, a typical rural landscape. (We deal with effects on visual amenity values in a later section of this decision).

[229] Clearly the proposed wind farm would not maintain the *existing* landscape and rural character of Ohariu and Makara Valleys as the addition of the turbines by themselves will result in a major change. However, that is not determinative of the issue. There is no requirement in the RMA or the planning documents to freeze the landscape at a point in time.

[230] We note that the rural character of the West Wind site and surrounding areas remains, notwithstanding the presence of those turbines which have changed but not removed the rural character of that site, the Makara Valley and surrounding areas. We agree with the landscape witnesses that the rural character of the Mill Creek site would similarly remain albeit in a changed form, even if the proposed wind farm is built. We accept that rural landscapes can adapt to change and still maintain rural character.

[231] Accordingly, we find that the proposal would not be contrary to the District Plan provisions on rural character.

### *Public Viewpoints*

[232] There are many public vantage points from within which the proposed wind farm will be seen, including walking and cycling tracks. These include Makara Beach, the only part of the coast accessible by road between Porirua and Owhiro Bay, the route along the coast between Titahi Bay and Ohariu Bay or from Owhiro Bay to Makara and the Makara Walkway (a 6 km circuit track). One West Wind turbine is around 550m away from the gun emplacements area on the Makara Walkway. The tops of the Colonial Knob Walkway (a 7.5km loop through a scenic



reserve adjoining Spicer Forest), Mt Kaukau and along the Skyline Walkway (including parts of tracks doubling as part of Te Araroa the Long Pathway) and the Old Coach Road have views out to the site. The latter are part of the Outer Town Belt of Wellington.

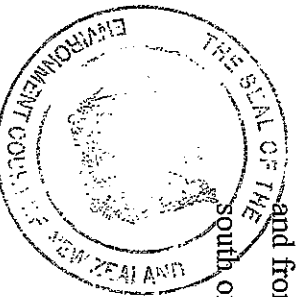
[233] Ms Steven had a concern that the effect of the West Wind and Mill Creek wind farms would be to turn the south-west coast of Wellington into an energy production landscape, thereby significantly adversely affecting visual amenity. Messrs Rough, Mansergh and Brown did not agree with her assessment. Mr Brown also said that while the Mill Creek proposal would be viewed in conjunction with the West Wind turbines from a wide range of public and private vantage points, most effects would be incremental and not transform the south-west coast of Wellington into an energy production landscape.

#### *Coastal Amenity Effects*

[234] Firstly, we consider the effect on the amenity of the users of the coastline, including the beach and the Makara walkway, recognising that there is a *crossover* with the coastal environment section of this decision. We acknowledge that the West Wind turbines are already in view (and hearing) from parts of the Makara coastal walkway and we heard them from the gun emplacements, a place we went to on our site visit.

[235] From the coast itself, between Makara Beach and Fisherman's Point, the F series turbines of Mill Creek would be visible. As walkers move south towards Wharehou Bay most of the Mill Creek turbines would be visible. From near the gun emplacements on the Makara coastal walkway, the whole of the wind farm would be seen. The West Wind turbines to the south along the coastline are also visible from here.

[236] Turbines F07 and F11 will be visible from the coast north of Makara Beach and from Smiths Bay. More turbines would be visible from the rocky headland to the south of Smiths Bay.



[237] Several residents gave evidence of their concern about a further significant detraction from their experience of the coastline and waters around Makara Beach. They consider that the Mill Creek turbines would compound the effect of the West Wind turbines with the coastal walkway up to the gun emplacements already dominated by views of turbines when walking south. Some said the turbines would detract from their experience of the beach to the point they would go there less often, based on their experience of the West Wind turbines.

[238] Mr R Jarratt (a witness for OPS) said he regularly walks the Makara foreshore tracks to the south or north, and goes snorkelling and picnicking. He also considered unspoilt landscapes on the foreshore at Makara Beach and Smiths Bay would be severely affected. He said the view across Ohariu Bay from Fisherman's Point to Smiths Bay would be dominated by the Mill Creek turbines. He considered the proposal would not harmonise the two landscapes of Makara and Mill Creek.

[239] Ms J Jorgensen (a witness for OPS) said that the view from the Makara Walkway would look straight at Mill Creek turbines to north. She said that is the only expansive view to land from the walkway not currently affected by West Wind turbines, and referred to a view from this walkway used for the front cover of DOC's Walkways of NZ booklet.

[240] Mr Rough considered that the wind farm would have substantial effects from Fisherman's Point and from coastal waters such as those off Ohariu Bay, up to approximately 3 km from the turbines. He said that the Makara Walkway affords an opportunity to experience sections of Wellington's *wild coast* with its open space values of a *spectacular coastline and wild coastal environment that can be bleak and windswept and being ruggedly beautiful, with coastal views and vistas*.<sup>53</sup> He considered that from the walkway, while the turbines would be prominent features in views towards the wind farm, the sea and landforms would continue to be the most prominent feature. However, he considered that as Fisherman's Point is approached, the effect of the wind farm on visual amenity values would increase to being substantial because large structures in an area would be seen in relation to simple, bold, landforms. There would also be cumulative effects of a sequential nature.



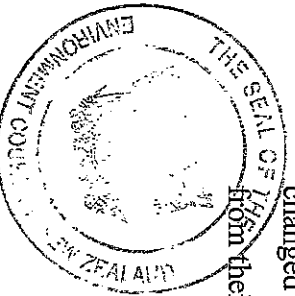
[241] Mr Mansergh said that where only a few turbines are visible they do not notably affect the perceptions of the coast as a natural and rugged place.

[242] Mr Brown considered the proposal would have a more significant, moderate to moderate/high impact on the southern shoreline of Ohariu Bay, but a slightly reduced level of impact on the rest of the coastline on the outer edge of the Bay as well as north and south of it, including Smiths Bay and the gun emplacement. He said it would have less of an impact on Makara Beach because intervening ridges and vegetation would screen most of the proposed turbines.

[243] Ms Steven considered the adverse effects on recreational users of the wild coast to be significant from many locations, including from the gun emplacements. She said that the Environment Court found West Wind to have a substantial effect on visual amenity from coastal waters and in her opinion Mill Creek would exacerbate this by repeating the effect further along the coastline. Ms Steven also considered that the aspect of remoteness which is associated with wildness, found to be significantly reduced by West Wind, would be further significantly reduced by Mill Creek turbines. She referred to the Court's finding that there would be a substantial effect on amenity from the gun emplacements and considered that would be greater with Mill Creek turbines.

[244] We find that Mill Creek would have significant adverse visual effects for some recreational users of this coastline. Makara is the only point along the coastline between Owhiro Bay to the south and Tirihi Bay to the north where people can drive their cars to obtain access. There is also the popular Fisherman's Point and beach beyond it as well as the Makara Walkway with views from the gun emplacements.

[245] Visual effects of Mill Creek in this vicinity would be cumulative on those of West Wind as people using the walkway already have turbines to the south and a prominent turbine at the gun emplacements. We accept some people might find the changed view of interest while others would find that the Mill creek turbines detract from their view northwards.



*Effects on the Skyline Walkway/Northern Walkway/Te Araroa Trail*

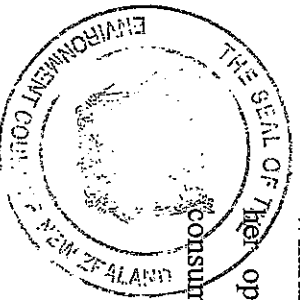
[246] From Mt Kaukau and Colonial Knob and along the 12 km ridgeline Skyline Walkway/Northern Walkway/Te Araroa Trail which links these features there are views (sometimes intermittent) of Mill Creek in its entirety as well as most of West Wind. The ridgeline is considerably higher than the Mill Creek site and views look down on it and beyond to the sea.

[247] Mr Brown considered the proposed turbines would read as a patina of white posts on scattered distant ridges and from some locations the turbines of Mill Creek and West Wind would visually overlap. Although the wind farm would be visible it would have a low impact on the qualities of a highly modified wider landscape. That landscape includes the Tasman Sea, farmland and rural-residential development, with some views through the transmission lines running down the eastern side of Ohariu Valley, the Mt Kaukau broadcast communication station, the Airways Corporation site at Colonial Knob and the Spicer Landfill.

[248] Mr Rough stated that Mill Creek would be central to the view from these viewpoints and a focus of attention, a prominent and very distinctive feature causing disruption of the land/sea/sky junction and having a reasonably substantial effect. He maintained the wind farm would not dominate because of generous spacing and ridge location and the rural character would prevail.

[249] Mr Mansergh assessed the visual effects as moderate although he also said (as did Ms Stevens) that all 31 turbines would be prominent and the effect from the Skyline Track would be substantial. Mr Rough repeated his conclusion that rural character would still prevail even where the turbines would be prominent and distinctive.

[250] Ms Steven gave evidence that the two wind farms would be seen to spread over a distance of at least 15km, or about 75% of the total distance between Mt Misery and Colonial Knob. She considered that from points at the north end of Te Wharangi ridge the two wind farms would appear as one continuous wind farm. In her opinion, the lasting impression would be of a large wind energy facility consuming the landscape. She did not agree with Mr Rough that West Wind is only



a minor feature, primarily because of what she described as its incongruity and its movement. From the summit knolls she said that all of the Mill Creek and all but three of the West Wind turbines would be seen together. However, she agreed that from Colonial Knob that the effect on amenity would be likely to be moderate. None of the other witnesses considered that the view and impression would be of an energy production landscape.

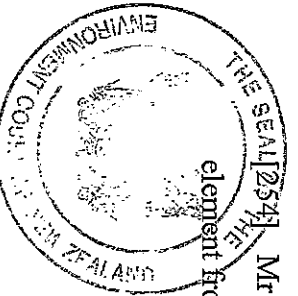
[251] We accept the evidence of Messrs Rough, Mansergh and Brown. We consider that the distance and angle of view of the turbines over an already modified landscape would not result in a major change to the experience of users of the Skyline Walkway/Northern Walkway/Te Araroa Trail. We reach that conclusion notwithstanding that Mill Creek may appear as a continuation of West Wind in places.

#### *Old Coach Road*

[252] The Old Coach Road runs off the Skyline Walkway, traversing the hillside and dropping down into Rifle Range Road, and is part of Te Araroa. Mr P Stothart (a witness for OPS) raised concerns about the view of turbines from Old Coach Road, a horse riding, cycling, walking and running track.

[253] Mr Rough considered that existing visual amenity values from Old Coach Road Track are based on extensive panoramas of Ohariu Valley with its rural character and glimpses of the Tasman Sea. The West Wind turbines are a minor feature in the wider landscape with a minor effect on visual amenity values. He said that existing power pylons and overhead lines, including pairs of overhead lines interfering with distant views of the horizon, have a substantial effect on visual amenity. He considered that overall the Mill Creek wind farm would have a moderate effect on visual amenity values from the track, even with a modest cumulative effect resulting from both wind farms being visible at once, particularly from the upper sections of the track.

[254] Mr Mansergh remarked that the pylons and lines form a strong foreground element from the top half of the track and compromise the values associated with the





rural environment. He considered the effects of the Mill Creek turbines would be moderate, but not result in the loss of the essential characteristics of views.

[255] Ms Steven said that from those parts of Old Coach Road that traverse west facing slopes or point the traveller west, Mill Creek would be seen in its entirety over the layers of hill ridges that form the western horizon with turbines silhouetted against the distant hills of the Marlborough Sounds or the sky. Mill Creek would be seen to overlap West Wind so that one continuous wind farm would be seen over 30-50% of the visible western skyline.

[256] We prefer the evidence of Messrs Rough and Mansergh that the addition of the Mill Creek turbines to the transmission lines would not detract in a major way from the experience of users of the Old Coach Road. We accept that Mill Creek turbines will be seen in conjunction with West Wind turbines from many viewpoints on Old Coach Road, but consider that the factor of distance means that the turbines will be a minor (albeit visible) component of this wide landscape.

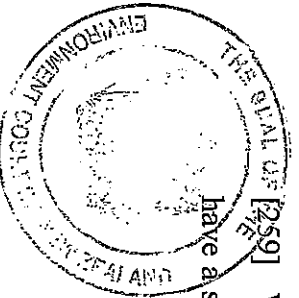
#### *Effects from Other Locations*

[257] Mr Brown considered the proposed turbines would have limited visual impacts on the Takarau Gorge. The notable exception to that assessment was Turbine G04 which he described as occupying a commanding position. He noted the highly modified and working nature of the landscape in that area and identified that although there were a number of places along Takarau Gorge Road where turbines will be visible to varying degrees their impact was limited due to the modified nature of the landscape.

[258] Messrs Rough, Mansergh and Brown considered the potential visual effect of turbines to be low from places such as Makara Hill, but Ms Steven was of the opinion that the Mill Creek wind farm would fill in the remaining open skyline to the north, resulting in a strong cumulative effect.

#### *Overall Evaluation*

[259] We agree with the evidence that the proposed Mill Creek wind farm would have a significant effect on views north from parts of the Makara Walkway and the



beach around Fisherman's Point. That would detract from the coastal experience for some people, notwithstanding the presence of the West Wind turbines and their associated noise. We note the evidence of lay witnesses describing how the addition of West Wind turbines already detracts from their experience and enjoyment of the coast around Makara Beach and to the south.

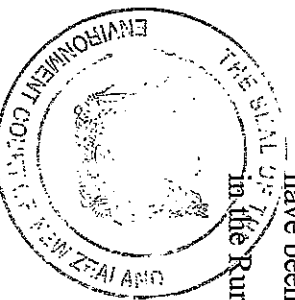
[260] We accept the evidence of Messrs Rough, Mansergh and Brown that the effect on visual amenity from other public places and walking tracks would not be significant. West Wind turbines are already in many of the views received from these places and the addition of Mill Creek would not result in a major change to the views that people experience. The considerable distance of the turbines from the viewer is a significant factor in assessing their effects on these views. We note that even Ms Steven saw the effects as moderate from many of these locations.

### *Visual Amenity and Residents*

[261] Mr Webb submitted that we should use the approach to the assessment of visual amenity effects of turbines on residents adopted by the Court in *West Wind and Motorimu*. That involves consideration of the following factors:

- Whether there is a landscape backdrop or skyline behind the turbines;
- The complexity of the landform and vegetation within view;
- Whether the turbine is elevated above the viewer;
- The expanse of the vista;
- Screening;
- Proximity; and
- House design.

[262] Mrs Foster gave evidence that District Plan Objective 14.2.3 and its related policies seek to maintain and enhance amenity values (and rural character) by avoiding, remedying or mitigating adverse effects and controlling noise. She said that the factors and qualities that contribute to amenity values and rural character have been clearly articulated in the Ohariu Valley and Makara Community Plans and in the Rural Area Design Guide.



[263] Mrs Foster said that unavoidable effects of turbines on the visual amenity values of some properties would not maintain and enhance existing amenity values as envisaged by Objective 14.2.3. She said that these effects have to be acknowledged as being inconsistent with the amenity values currently enjoyed in parts of these valleys, in the terms those are described in the Rural Area Design Guide and other documents referred to. She said these effects are therefore not consistent with Objective 14.2.3.

[264] We begin this section of our decision by looking at the more general assessment of effects on visual amenity undertaken by the landscape architects and planners. Then we move to considering the effects on visual amenity identified by the experts and the residents, grouping these by area. We then look at the visual amenity effects on specific properties.

#### *Visual Amenity Evidence*

[265] Mr Rough considered that where turbines appear as a distant cluster and a minor feature in the wider landscape, their effects are negligible. Moderate effects would occur where turbines are prominent and distinctive features in the landscape, even if not necessarily a focus in the view. Substantial effects result where turbines tend to dominate the landscape or are highly prominent, with several turbines generally in the range of 1 to 3 km away and highly prominent.

[266] In his Evidence-in-Chief Mr Rough identified 10 properties where effects on visual amenities are likely to be moderate and 18 properties where effects would be substantial. There was some change to his opinion on the effect on particular properties, including consideration from other parts of the property than shown in the photopoints, in his rebuttal evidence and in response to the evidence of the residents as well as in cross-examination. We deal with his property specific analysis under the heading of private amenity.

[267] Mr Mansergh observed that effects vary, depending on the distance to turbines, number of turbines in the view, screening provided by intervening



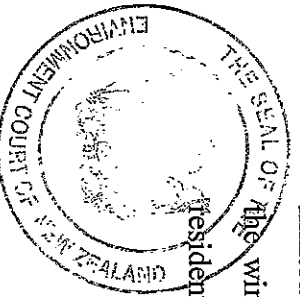
topography or vegetation and the elevation of the viewing point. He produced a summary table of potential effects on visual amenity values, as follows:

<b>General Dwelling Cluster Location</b>	<b>Comparative Level of Effect</b>
Ohariu Valley Floor (Ohariu Valley Road between Ohariu Village and Spicer Forest)	Low
Upper Eastern slopes of the Ohariu Valley (Ohariu Valley Road between Ohariu Village and Johnsonville)	Low to Moderate
Ohariu Village (Valley floor)	Low
Ohariu Village (Lower valley slopes along Rifle Range Road)	Moderate to High
Takarau Gorge Road (North of the gorge)	High to Very High
Takarau Gorge Road (South of the gorge)	High to Very High
Smiths Bay	Moderate to High
Makara Beach (Beach)	No Effect
Makara Beach (Estuary/Inland)	High to Very High
Makara Valley (Between Makara Beach residential area and Opau road)	High to Very High
Makara Village	Low
South Makara (Between Makara Village and Makara Golf Course)	Low to Moderate

[268] Mr Mansergh concluded the effect of the proposed wind farm on the landscape and visual amenity of private properties at the northern end of Ohariu Valley and along Makara Road, would generally be lower than for those other areas within the visual catchment to the south of the intersection with Takarau Gorge Road. Levels of effect would be higher for houses in and around Takarau Gorge and between the intersection of Makara Road/Takarau Gorge Road, and Makara Beach.

[269] Both Messrs Rough and Mansergh said that the actual impact experienced by residents would depend on their attitude and sensitivity to wind farms. Accordingly, they were not prepared to assess the effects as adverse.

[270] Overall, Mr Brown considered the proposal would have a low to moderate impact on visual amenity values, particularly those enjoyed by local rural-residential and residential inhabitants largely because of the highly variable and typically quite limited exposure from Ohariu Valley and the northern Makara Valley. He said that the wind farm would generally fit in with the existing pattern of rural and rural-residential activities and landscapes and the turbines could in general be absorbed or



visually accommodated by these landscapes. He made an exception in respect of turbines F11 and G04.

[271] Mr Brown assessed a number areas in terms of different viewing points and audiences, and the table following summarises his conclusions for these areas.

Area (and viewing audiences)	Summary of Conclusions
Ohariu Valley – rural-residential inhabitants and road users	Low to low/moderate effects
Southern Takarau Gorge - rural-residential inhabitants and road users	With G04 removed, turbines lack sufficient presence to adversely affect the residential amenity of local residents or the experience of entering and driving through the Gorge. Visual confluence of Mill Creek and West Wind turbines would not generate a significant level of actual effect and adverse change.
Northern Makara Valley and Makara Beach – rural-residential inhabitants and road users	Overall effects would be low
Outer Ohariu Bay and Smiths Bay – rural-residential inhabitants, visitors and boaters	Moderate effect on views in general, rising to moderate/high impact on the southern shoreline of Ohariu Bay
	F11 would have a significant and adverse amenity effect to the consented bach site above Smiths Bay on the Bowen property

[272] Mr Brown considered that it is Ohariu Valley that would primarily be exposed to the Mill Creek turbines. He said that most Ohariu Valley residents would view the turbines as rising above and beyond the foreground ridge that separates the course of Mill Creek stream from Ohariu Valley. For the greater bulk of residents living near the valley floor (e.g. Plummer), on its western side (e.g. Callaghan) and/or surrounded by trees, shelter belts and amenity planting (e.g. Horton, Small, Pennington, Ellingham and Morris), he considered the western hills are more of a peripheral backdrop to the dwellings, domestic gardens, horse paddocks etc that are the main focus for family activity. He said that some residents look from more open and slightly elevated farm and lifestyle blocks on the eastern side of the valley (e.g. above the Niven house and from the McKone/Ellis, Stothard and Mexted properties) over the western skyline. However, he considered that none of the turbines would be visually dominant in any of the views used for Mr Rough's assessment. In terms of cumulative effects, Mr Brown considered that overall the Mill Creek turbines would



be viewed from the far side of Ohariu Valley and the West Wind turbines as a distant white stippling.

[273] In questioning, Mr Brown commented on visual amenity effects of turbines, referring to intrusion and nuisance effects. He said that for adverse effects to be high, the turbines have to do two things. One is to be prominent to the point of being virtually dominant. The other is that the proposal has to substantially change the nature of the environment that residents and others are exposed to. He mentioned issues of proximity and height above the houses and number of wind turbines in certain view shafts as contributing to a dominating effect. He considered that their degree of visibility and visual prominence distinguished turbines F11 and G04 from the remaining turbines. Mr Brown said he had looked at the nature of the landscape in which the turbines are set, how much of it would change and what those qualitative changes would be.

[274] Ms Steven focused on factors relating to people's enjoyment of a place or landscape particularly, attractive or pleasing surrounds, peace, natural quiet and serenity, natural dark, spaciousness and, in this landscape, openness. She considered that the existing level of amenity is high to moderate because of the presence of pylons and the West Wind turbines (although she said some residents may now consider it low).

[275] To analyse the visual impact of the Mill creek turbines, Ms Steven described the existing amenity (what views there are and what they are like) illustrated with photos. She used the following factors in her analysis and evaluation of effects:

- *The location (whether and how much it occupies a prime view, or is in a framed view;*
- *Context – the nature of the viewpoint (relates to viewer expectations);*
- *The degree of visibility of the wind farm facility;*
- *The visual appearance;*
- *Its relationship to West Wind (cumulative effect);*  
*Degree of presence of other utility infrastructure (power pylons, masts);*  
*The degree and nature of vegetative screening.*

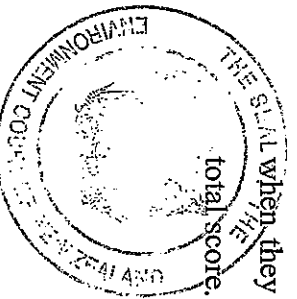


[276] As part of her analysis Ms Steven recorded which turbines, and how much of each, would be visible from various view points. Ms Steven then scored the visual impact of individual turbines by deducing a value for the extent of the turbine visible, distance (on the assumption that there is a reduction in effect beyond 3km) and context. Her analysis included consideration of where a turbine was seen with turbines present in main views receiving a higher score. The purpose of what she described as rather crude scoring was to establish an overall visual prominence score for the proposal. She then used the scores to ascertain the relative visual prominence of individual turbines and ranked them from lowest to highest score. In addition she recorded (not scored) whether West Wind was visible from the same viewpoint, noting that its presence affects the impact of Mill Creek as a cumulative effect.

[277] We accept that it is a crude scoring method, particularly given that she does not differentiate in scoring between turbines under 3km in distance from view points, as even within that radius turbines further away potentially have a reduced effect compared to closer turbines. However, the scoring method assists in assessing the potential effect of the proposed turbines on residents. (It also aligns with Mr Rough's assessment and the weight he put on a 3 km distance.)

[278] Ms Steven gave evidence that her analysis of visibility from 57 viewpoints shows that for residents, the most prominent turbines from Ohariu Valley (in order) are G01, J02, G02, G03, G04, J01 and E04. For Makara the most prominent are F13, K01, F14, K03, K02, F11, F10 and F09. In terms of least prominence overall F05 and F15 scored well followed by F06, F04, F07, F03 and F09, with F05, F15, E07 and E06 for Makara residents and F05, F15, E06, F13, F04, F11, F14 and F07 for Ohariu residents.

[279] Overall Ms Steven found the most prominent turbines in order to be G02, G04, G03, J02, K01, G01, E04 and E05. The F turbines and J01 and E04 drop off in score because they are seen by fewer people, although F13 and F14 score highly when they are seen. Ms Steven considered it useful to consider both the area and total score.

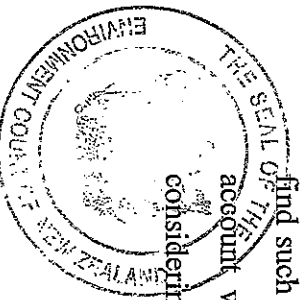


[280] Ms Steven said it was problematic to draw a line between turbines that would be *acceptable* and those not because each resident affected would have their own level of acceptability. However, she considered that the scoring exercise showed the proposal would have widespread visual effect, with most turbines having a visual impact on residents and (by extension) visitors to the area.

[281] Ms Steven arrived at an overall conclusion as to the visual effects of the turbines, summarised in the following table:

Area	Overall Conclusion
Makara Stream Valley (Samuelson, Kessel-Haak, Easter, Fenaughty, Christensen, Bowen, Cudby, Webber, Poehls, Thomas)	Significant adverse effect on amenity
Takarau Gorge Residents (Joseph, Cooper, Hawkins, Wallis)	Significant adverse effect on amenity
South Ohariu Valley Residents – Takarau Gorge Road (Morris, Phillips, Third, Horrobin, Hume, Burdan, Mexted)	Significant adverse effects on amenity
Central Ohariu Valley Residents (Baker, Johnson, Callaghan, Small, Conder, Pennington, Stothart, Harley, Horton)	Significant adverse effects on amenity assuming views of the western ridge are desired to be maintained or created
Northern Ohariu Valley Residents	Significant adverse effects on amenity Primarily due to cumulative effects
Other Residents Crestini Ells Bowen Cottage Robbers Hoehn	Moderate adverse effect Significant effect on amenity (or potentially substantial) Substantial effect Significant cumulative effects

[282] We note that the cases for the residents of Makara and Ohariu Valleys emphasised a 2 km distance from turbines as an important line, probably drawing on the *West Wind* and *Motorinu* Environment Court decisions. Mr Rough attempted to identify the number of properties in particular locations that would be within 2 km of a turbine in a supplementary response to pre-circulated questions put to him by Makara Guardians. However, we are not confident about the accuracy of the numbers that were discussed during the course of the hearing. In any case we do not find such a blanket approach helpful as distance is only one factor to be taken into account when assessing the impact of turbines. We do bear it in mind when considering the effects of turbines on private amenity.





*In summary:*

[283] There was some concurrence about the degree of effects on individuals and groups of private residents between Messrs Rough and Mansergh and Ms Steven, although Ms Steven determined these effects to be adverse and the other two witnesses were only prepared to state that people's reactions to seeing wind turbines would differ. However, we heard from a number of residents that such effects as described by Messrs Rough and Mansergh would be adverse. Mr Brown's assessment was undertaken at a more general level.

[284] The witnesses agreed that generally the visual effect of the turbines on properties on the valley floor may be low, slight or moderate, frequently due to screening by trees. They agreed that the effects would be generally greater from properties on valley slopes with an elevated view of the wind turbines.

[285] Messrs Rough and Mansergh and Ms Steven agreed that there were properties on which effects would be substantial, significant or high to very high, including consideration of the cumulative effects with West Wind turbines. Those properties are mainly in or close to Takarau Gorge Road in Ohariu Valley and in the Makara Stream valley along the length of Makara Road between the Takarau Gorge Road intersection and Makara Beach. There was agreement that further screening of turbines by vegetation would be hard to achieve from some locations, and where it exists it may not be maintained or its maintenance is outside the control of the landowner (on the road reserve, under power lines or on neighbouring property).

[286] Ms Steven considered that many more properties would be adversely affected by the turbines to a significant extent than did Messrs Rough and Mansergh. To some extent that disagreement arose because of differing views as to the cumulative effect of Mill Creek with the West Wind turbines.

[287] Messrs Rough, Mansergh and Brown largely agreed that the visual amenity effects of the turbines were not be of such a magnitude that consent to the proposal should be declined. Mr Brown did not concur for turbines F11 and G04. (The Commissioners at first instance removed F11 and G04.) We return to issues around



F11 and G04 and potential mitigation suggested by Messrs Rough and Mansergh in the succeeding sections of this decision.

#### *Private Viewpoints and Visual Amenity*

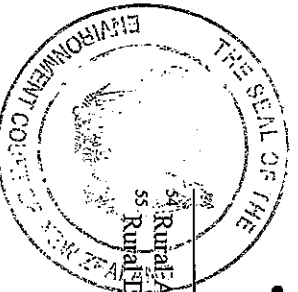
[288] We heard from a large number of residents of Ohariu Valley and Makara as to what was important to them in terms of their amenity. Ms S Lilley (the President of OPS) suggested that the presence of turbines in the density proposed would be incompatible with planning guidelines the community had agreed with the Council.

[289] The Rural Area Design Guide records the following Qualities valued by the Ohariu Valley community<sup>54</sup>:

- *Clear skylines.*
- *Quiet and serene.*
- *A quiet peaceful place where people can do their own thing without disturbing others.*
- *A farming area.*
- *Natural surroundings.*
- *Low levels of population and development.*
- *Housing in moderation (not on show but tastefully hidden behind trees).*
- *Rolling hills, peaceful sounds, farming, horses.*
- *Beautiful, calm, serene, green.*
- *Horses, sheep, cattle and birds.*
- *Fresh air, calm, green, ridgelines, hills and mountains, water and streams, trees.*
- *Mainly open rural landscape uncluttered by large houses on smaller subdivided blocks now common in other areas.*

[290] The Rural Design Guide also contains Qualities valued by the Makara community<sup>55</sup>:

- *Quiet and peaceful atmosphere.*
- *The ridges – sense of place.*



<sup>54</sup> Rural Area Design Guide, page 21  
<sup>55</sup> Rural Design Guide, page 20.

- *The gorse plus bush – personality.*
- *The roughness – natural, unaffected.*
- *The views from hill/road – escape.*
- *Rural and recreational.*
- *Farming/lifestyle community.*
- *Rural, bush, sea, horses, ruggedness, escape.*
- *Rural atmosphere, peaceful outlook and views, unspoilt hills and ridgelines.*
- *The mixture of landscapes.*
- *Open space, lack of people and structures.*
- *Birds, animals, sound of stream running through the valley.*
- *The coastal escarpments, the beach, the views from the tops of the hill.*
- *Sense of isolation in contrast to the city.*

[291] We accept the Qualities described in the Rural Area Design Guide are a statement of what the Ohariu Valley and Makara communities value. We also note that the environment of those areas now includes the West Wind turbines.

[292] We now consider site specific effects of the Mill Creek turbines on residents of Ohariu Valley and Makara. We have divided the area affected into several parts, informed by the evidence of the landscape witnesses. We received evidence from a number of residents of these areas. Not all of these witnesses were required to be sworn in and cross examined. Their evidence is still relevant and we have considered it in this decision.

[293] Our considerations in this section do not address noise impacts on residents (we have addressed that elsewhere in this decision) but we acknowledge that noise is an aspect of amenity which was at the forefront of much of the evidence given by residents. The mere fact of hearing a wind turbine was of concern to many residents.

Section 100 was the sight and sound of a wind turbine when working in, and enjoying, the outdoors not just close to but also distant from houses.



*Northern Ohariu Valley*

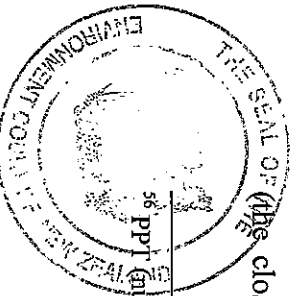
[294] We heard from Ms P Searle 614 Ohariu Valley Rd (the closest visible turbine J02 at 2802m on PPT<sup>56</sup> 108a, and 2840m on 108b and 108c) and Ms M Livingston, 918 Ohariu Valley Road. Their concern was for the loss of rural outlook if the proposal went ahead, with the Mill Creek turbines added to the West Wind turbines visible along the skyline. Ms Searle complained of light pollution of night sky already (9 red aviation lights visible in what used to be a clear sky) with a further 6 lights to be added.

[295] The residents in this area raised concerns about construction effects, the formation of the road as well as its use for construction traffic. Besides pedestrian safety, some had a concern about horses in horse arenas and the ability to walk horses along the road. Some residents raised concerns about the loss of amenity value of the trees along the roadside with the road widening. We deal with these effects as traffic effects, but note their implications for the amenity currently enjoyed by the residents of what some described as a rural cul-de-sac.

[296] Mr Brown said that while it would be possible to see the proposed turbines from the northern end of Ohariu Valley, he considered the direct level of effect in relation to properties to be quite limited. He said they typically look toward towards the Mill Creek site from the far side, or end, of Ohariu Valley with limited exposure to the proposed turbines and the northern tail of the West Wind turbines, a distant white stippling. He said there is a clear change in scale as seen between the turbines of both wind farms, with both remaining subservient components of the visible landscape.

[297] Mr Rough considered that the turbines would have moderate effects on the visual amenity of five of the properties in this area (including the Searle property), with Mr Mansergh also considering some properties (unspecified) on the upper eastern slopes would experience moderate effects.

[298] Ms Steven gave evidence that the Searle, Niven at 626 Ohariu Valley Road



<sup>56</sup> PPT (number) is a Photopoint referred to in the Graphic Attachment of R Maunder 30 July 2010.

Valley Road (E07 at 4099m on PPT 155) and Ells at 289 Ohariu Valley Road (G01 at 3565m on PPT 101) properties have views west along the hillside facing and down the Ohariu valley, framed by the ridges to the west and the Bests Ridge and Te Wharangi ridge to the east, with its pastoral farmland character. She said that the distant Makara hills are the visual focus because they are the most distant part and occupy the low point on the horizon, with the West Wind turbines visible.

[299] Ms Steven considered turbines would be seen in two groups spread out along the top of the enclosing ridge to the right of the view, adding to the effect of West Wind so that turbines would become a significant component of the view rather than natural open skylines. She said the G series turbines would be the most prominent. She accepted that at the Plummer and Boyd properties, trees prevent views out from the immediate house areas and also that the Plummers have existing pylons crossing their view.

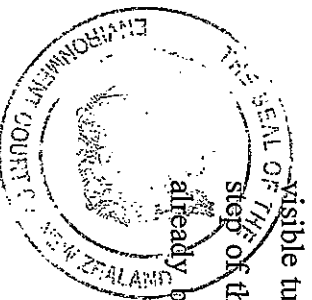
[300] Mr Mansergh considered the potential effects on visual amenity to be low to moderate for some of the properties on the upper eastern slopes between Ohariu Village and Johnsonville.

[301] We conclude that for Northern Ohariu Valley, the potential adverse visual effects on private amenity overall would be low to at most moderate from some properties, even with the West Wind turbines visible in the distance.

*Central Ohariu Valley Residents (includes Rifle Range Road area)*

[302] We heard from Mr A MacKenzie who lives with his wife on 3 hectares at 830 Ohariu Valley Road, that the turbines (the closest visible turbine E07 at 3846m on PPT 110) would disturb the visual amenity and the peace and tranquillity of their lives and they would not be able to continue to live the lifestyle for which they moved to the Valley.

[303] Ms A Conder of 20 Rifle Range Road (a property with a house and a cottage on it), had a concern about the addition of Mill Creek turbines (with the closest visible turbine from the cottage deck G01 at 2415m on PPT 125a and from the top step of the house E08 at 2545m on PPT 125b) to the West Wind turbines that can already be seen from her property. She considered that turbines G03, 04 and J1



would be dominant and turbines E04, 05, 06, 07, 08 and G01, 02 and J02 are partly obscured by trees on neighbours' properties which are beyond the Condors' control. She also had concerns about views from upstairs in the main house.

[304] Mr P Stothart has lived at 60 Rifle Range Rd for over 11 years. He runs a horse training and agistment business on 25 hectares and has a view looking west. Mr Rough considered visual amenity effects of the turbines on the Stothart property to be moderate, an assessment with which the Stotharts took issue, considering the cumulative effects to be substantial due to further loss of visual amenity to the southwest and northwest. (The closest visible turbine to the house would be E07 at 3854m on PPT 151). A concern for the Stotharts was the effect on views from a potential retirement cottage site further west, although there is no detailed design or resource consent for this.

[305] Mr J Baker and Ms L Jenkin, 51 Takarau Gorge Road, live on a 13 acre lifestyle block. Ms Jenkin gave evidence that they live in the valley because of peace and quiet, natural rural outlook and views, access to Makara Beach and coastline and opportunity to run a lifestyle farming block and be within 20km of family in Wellington. She said that turbines would be an unwanted and unwelcome intrusion. A large number of West Wind turbines are visible from her property and Mill Creek turbines would be too. (The closest visible turbine G01 is 2014m from near the house on PPT 152.)

[306] In his evidence in chief, Mr Rough acknowledged that there would be both substantial and moderate effects from the turbines on the visual amenity values of some properties. Those properties with substantial effects were the Horton and Conder properties. He added the Baker/Jenkin property to that in cross-examination. He said that for the Stothart property, if the trees that presently screen view of the wind farm site were removed, then the visual effects from the house and adjacent areas would be substantial, as indeed it would be from locations away from the house where there would be uninterrupted views of the turbines.

[307] Mr Mansergh gave evidence there would be moderate to high potential effects on visual amenity at Ohariu Village (lower valley slopes along Rifle Range Road).



[308] Ms Steven considered that the Baker/Jenkin, Johnson and Harley properties have similar general outlooks with an expansive, slightly elevated view of the Ohariu valley looking south, framed by the Te Wharangi ridge to the east and the ridge to the west. She said that the hills at Makara fill the valley at the far end, with West Wind turbines seen on the skyline. This is the main and sunset view for the Harley residence and she considered it a very attractive view (notwithstanding West Wind). She also said the same view is enjoyed from the Johnson house, with the Baker/Jenkin's view lower and obscured by trees although they can still glimpse West Wind turbines. Ms Steven opined that the ridge to the west forms an open pastoral to wooded backdrop and long natural skyline, along which Mill Creek would be seen spread, with the G series turbines appearing to be on it.

[309] Ms Steven said that the Callaghan property at 20 Takaranu Gorge Road (the closest visible turbine is J02 at 2219m on PPT 112 AS) similarly looks out down the valley, with a view of West Wind at the end. A few turbines would be seen in a small cluster, visible from the drive to the house, with a hedge at the house blocking views of the skyline and the proposed turbines on it.

[310] Ms Steven gave evidence that the Small (at 10 Rifle Range Road with the closest visible turbine G01 at 2379m on PPT 144), Pennington (at 11 Rifle Range Road with J02 at 2636m on PPT 150a) and Horton (at 415 Ohariu Valley Road with J02 at 3139m on PPT 102) properties close to the valley floor, and to a lesser degree the Conder property, are in more enclosed landscapes with limited views out typically framed by trees. However, she said that views of the ridge are possible and at first storey level, West Wind turbines are seen from the Conder property. Ms Steven considered that the Mill Creek turbines would be visible along the ridge as large spiky skyline elements and the G series would appear oddly over the south ridge as if they were sitting on it.

[311] The Stotharts have a view southwest across the Ohariu valley as well as west and north, with West Wind turbines on the Makara Hills visible at the end of the valley. Ms Steven considered the Mill Creek turbines along the ridge would seem like an extension of West Wind. She said that a significant part (about half) of the



skyline to the southwest and west would have turbines visible, detracting significantly from its open and natural character, with the removal and thinning of trees planned by the Stotharts. Ms Steven did not agree with Mr Rough that for the Callaghan property the impact would be mitigated by the hedge and the presence of West Wind.

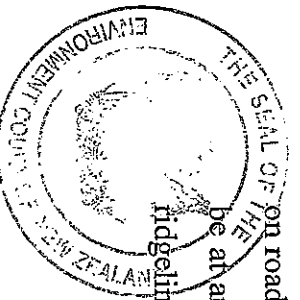
[312] We conclude that the proposed Mill Creek turbines would cause a loss of visual amenity for views to the western ridge from elevated properties for some Central Ohariu Valley residents, and particularly those in the Rifle Range Road area. That would add to the visual effects of the West Wind turbines.

*South Ohariu Valley (Takarau Gorge Road)*

[313] Mr R Jarratt purchased his property at 231 Takarau Gorge Rd in 1999. He described a quiet tranquil valley with views from the valley floor to the north, south and west that is largely dominated by rounded ridge tops containing, pasture land, scattered pockets of bush, farm implement yards and sheds, water storage tanks, dwellings, power lines, pylons and shelter belts that typify NZ's rural amenity. He said that there are no other pockets of rural settings remaining this close to Wellington City. He also referred to the use of the Gorge road as a recreation loop for cycling training and as a keep fit circuit, as well as a scenic drive.

[314] Mr Jarratt said that turbines would be located on exposed ridges to the north and west of the community and that the majority of the community lives in the valley floor or on rising slopes across the valley floor where the best sun and views are available. Living areas within houses, predominantly facing north and west to maximise light and warmth, open valley and ridgeline views and sunsets, would be dominated by turbines. He had a concern that the eye would be drawn to blade movement. He said that some properties already have views impacted by West Wind turbines.

[315] Mr Jarratt had a concern that the screening vegetation (on adjoining land and on road reserve, growing under 11 kVA power lines) would be removed, as it could be at any time. In that event, he would see a large number of turbines on distant ridgelines directly in front of his lounge. He said the closest turbines are in the G





series, although these are screened by vegetation. PPT 140 shows the closest visible turbine as J02 at 2985m.

[316] Mr C Phillips. has a home business on his property at 335 Takarau Gorge Road. He said that he moved to the 6.5 acre property in 2005 for a quiet relaxed lifestyle. The property faces northwest, with the main living and kitchen area looking on to the Mill Creek site. There is a fertiliser bin and power pylon in his view. Mr Phillips said that part of living in Ohariu Valley is to experience the expansive rural views and feel of the area. From his house, he would see a large number of Mill Creek turbines, with the closest existing West Wind turbines at 4.4 km already a major detraction. The nearest visible turbine G04 at 1524m is shown on PPT 119.

[317] In his Evidence-in-Chief, Mr Rough said that several properties would experience substantial effects on visual amenity values from several highly prominent turbines, generally in the range of 1 to 3 km away. Some other properties would experience moderate effects. Those properties with substantial effects were:

- 209 Takarau Gorge Road (Burdan) – 2284m to the nearest visible turbine E08 on PPT 116;
- 252 Takarau Gorge Road (Third) – 1491m to G01 on PPT 118;
- 335 Takarau Gorge Road (Phillips) – 1524m to G01 on PPT 119;
- 91 Takarau Gorge Road (Mexed) – 1875m to G01 on PPT 138; and
- 183 Takarau Gorge Road (Horrobin) – 1117 m to J01 on PPT139.

Mr Rough said that if the trees which had grown since the base photograph for the Phillips property was taken were not topped or removed the effect would be negligible from PPT 119 taken from close to the house and its surroundings.

[318] Mr Mansergh's evidence was that Mill Creek turbines would potentially have high to very high effects on visual amenity values in this area.

[319] Ms Steven gave evidence that the elevated Phillips and Morris properties directly in front of their houses. This was the main outlook for these properties with their outdoor spaces oriented to the west and north. Ms Steven said that two pylons



on the skyline would have visually overlapping turbines added to them. The turbines were of variable spacing with unsynchronised rotation action and that would be distracting and discordant.

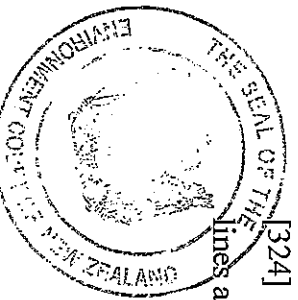
[320] Ms Steven said that at the Third property at 252 Takarau Gorge Road a group of turbines would appear close over a tree covered part of the ridge to the west which was part of their main outlook. (The closest visible turbine is G01 at 1491m on PPT 118b). The trees obscuring parts of some turbines are mostly on a neighbour's property, with screening of more turbines to the northwest dependent on the neighbour retaining the trees.

[321] The Horrobin building site (139 - 183 Takarau Gorge Road) faces directly at the western ridgeline looking at an open pastoral view. Turbines are to be placed along the ridge with the closest (G01), 1117m away (on PPT 139). Ms Steven said that the turbines would be seen continuing across a distant ridge at the back of a deeper view up a valley to the west. She described the western ridge as a main panoramic outlook from the proposed building site, with a long skyline punctuated by knobs and indented gullies, merging with long even ridgelines.

[322] Ms Steven said that for the Hume/Ellingham property at 213 Takarau Gorge Road one turbine (G01) appears very close (1621m on PPT 117). She said that a large number of other turbines would be visible if it were not for vegetation, much of which is on the road reserve.

[323] Ms Steven gave evidence that the Burdans at 209 Takarau Gorge Road have a view primarily to the north because of existing tree planting but there is also a view of the natural skyline to the west, where a cluster of turbines will be seen on the skyline on the left side of the view. Vegetation on and off site obscures views to the west but some trees are scheduled for removal because they interfere with a power line. (The closest visible turbine is E08 at 2284m, PPT 116.)

[324] Ms Steven acknowledged that for some of the properties described, pylon lines across Te Wharangi ridge are part of the existing landscape.



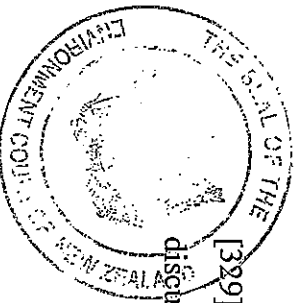
[325] Ms Steven identified that from the Mexted property at 91 Takaranu Gorge Road, the outdoor patio and living areas are oriented to the ridgeline to the west and north. The skyline draws the eye to the low point on the horizon to the north and the sunset corner. She said that a number of Mill Creek turbines, including the prominent G series, would be seen along the lower southern half of the ridge and would appear closely connected to West Wind. (The closest visible turbine is G01 at 1875m on PPT 138.) From viewpoints higher on the farm, more wind farm turbines would be visible as is the case with West Wind turbines at the end of the valley. She said that the pylon lines are a notable element on the flanks of Te Wharangi ridge at the top of the property, and two pylon lines of the HVDC line are visible crossing the western ridge.

[326] Ms Steven took issue with Mr Rough's reliance on screening from trees for the Hume/Ellingham and Morris (341 Takaranu Gorge Road with the closest visible turbine G04 at 1432m on PPT 120) properties.

[327] Mr Brown gave evidence that although clearly discernible in views from a number of properties, specifically referring to the Callaghan, Burdan, Third and Phillips properties, turbines would not be sufficiently prominent nor have sufficient visual presence to generate a sense of intrusion or nuisance. He said that this opinion also applied to the Mexted property with its more wide open view to the western ridges.

[328] Ms Steven considered that Mr Brown had significantly underestimated the likely impact on residents' views in this part of Ohariu Valley. She said that Mr Brown, whilst acknowledging that the hills were central to the perceived character and amenity and the value of the sunset ridge, assessed them to be a recessive backdrop. She said this did not take into account the expansive views of the western ridge from more open and elevated viewpoints on various properties. She did not agree that the turbines do not intrude or dominate, nor that they register as a small scale element commensurate with existing elements such as trees or a fine filigree floating on top of the ridge (as they were described by Mr Brown).

[329] We conclude that the visual amenity of many the residents of the area we are discussing would be adversely affected by the Mill Creek turbines to a significant



extent, notwithstanding their properties already have views of West Wind turbines. The G series of turbines would make a major contribution to that significant adverse effect and would have a dominating effect on many residences in this area.

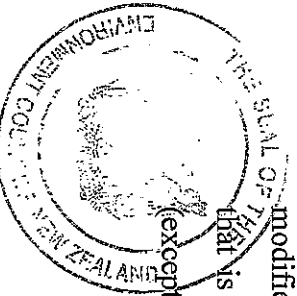
#### *Lower Takarau Gorge*

[330] Mr P and Mrs S Hawkins currently live at 731 Takarau Gorge Road, but have also subdivided two further sections to the north (now 569 and 591 Takarau Gorge Road). Their home is on a 63 ha block which was purchased about 12 years ago. In 2006 they bought an additional 155 ha adjoining their original block. Mr Hawkins said that they wanted to build further up Takarau Gorge Road, mainly to get away from West Wind.

[331] Mr and Mrs Hawkins gave evidence that their existing house has partial or full views of 17 West Wind turbines (2.2km from the closest turbine) with Mill Creek introducing further 7 partial or full views of turbines with the closest at 2.2 km. They would see even more turbines from higher up on their property. They spoke of their experience with sunflicker from West Wind. Mr Hawkins described noise vibration elsewhere on the property where they can see turbines. While there is no visible turbine shown on PPT 141 which is the view of Mill Creek from the house, trees on the land opposite have now been removed. Mr Hawkins had a particular concern about turbine G04, which will be prominent.

[332] The nearest visible turbine from 569 or 591 Takarau Gorge Road is G04 at 1158m on PPT 129. Meridian witnesses suggested that strategic positioning of new buildings and screen planting of vegetation on 569 and 591 Takarau Gorge Road would reduce the effect of the turbines on these two sections. The Hawkins reasonably asked why they should have to do that and whether screening would work given the height and proximity of the turbines, particularly G04. Mr Hawkins wanted to know why anyone would want to plant trees on the sunny side of a house.

[333] Mr Brown considered that because the existing landscape is obviously modified, the turbines are distant, and there is a section of ridgeline left in the middle that is free of turbines, the Mill Creek turbines would not be visually intrusive (except G04). However, he concluded that there would be a significant cumulative



effect from some locations where views to the west would embrace two different sequences of turbines north and south of Makara, potentially greater than for any other residential location. Ms Steven considered it is the cumulative effect that is the most significant here.

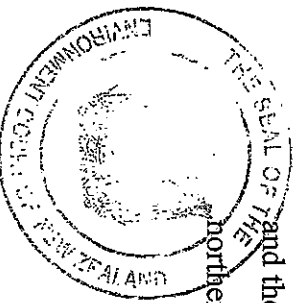
[334] Mr Rough assessed several properties as receiving substantial effect on visual amenity values:

- 569 and 591 Takarau Gorge Road (the new subdivision on the Hawkins' properties) – the nearest visible turbine is 828m to G04 on PPT 127 and 1158m to G04 on PPT 129, respectively;
- 669 B Takarau Gorge Road (the Joseph property) – 1868m to the nearest visible turbine-F13 on PPT 142b; and
- 755 Takarau Gorge Road (the Cardno property) – 2149m to G04 on PPT 122 (although Mr Rough's EIC Schedule 6 table refers to the nearest turbine as at 2857m).

[335] Mr Mansergh's assessment for Takarau Gorge Road (South) was that Mill Creek turbines would have high to very high effects on amenity values on a number of properties.

[336] Mr Rough assessed only turbine G04 to be prominent from the Hawkins' sections but turbine G03 appears right behind it and Ms Steven considered the two together to be prominent. She also considered the view up Ohariu valley to Mt Kaukau to be important, with Mr Rough considering it to be peripheral. Ms Steven noted that the view to the south is already compromised by West Wind turbines.

[337] Ms Steven gave evidence that from properties in the lower Takarau Gorge with an elevated position, a cluster of turbines and parts of turbines would be seen crowning the skyline at the high end of Ohariu Stream valley, the preferred view, focussing on the high points at the north where the G series turbines are situated. She said that from the new Hawkins' sections, the natural outlook ranges from southwest to the northeast in a wide sweep, taking in the lower Ohariu Stream valley and the Takarau Gorge. G04 and G03 would appear very close and prominent on the northern section.



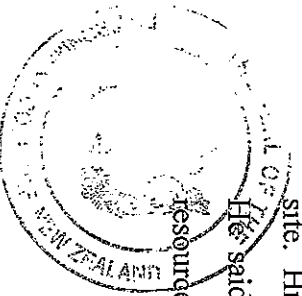
[338] Ms Steven said that the Hawkins (existing house) and Wallis properties see a number of West Wind turbines along a ridge only about 2.5km to the south, with West Wind turbine B02 noticeably out on its own to the right. The Wallis house is in a valley and does not see either wind farm, except from the driveway and the ridge to the north. To the north of the house West Wind turbines are seen on the skyline to the southwest and much of the Mill Creek wind farm would be seen across the higher ground to the north, with a gap between the two wind farms on what she described as a less distinctive ridgeline. She considered the visually overlapping nature of the turbines and their unsynchronised rotor actions would be distracting and discordant. She said that while the HVDC line is partly visible on the skyline it is insignificant compared to the turbines.

[339] We agree with Ms Steven that the G series contribute to a significant adverse visual impact for private residences, the building sites (one of which is now built on, we found on our most recent site visit) and from other parts of the properties.

#### *Makara Valley*

[340] Most of the Makara residents we heard from gave evidence about the impact of West Wind turbine noise on their enjoyment of their properties. Many expressed a concern that the assessment of the landscape architects did not take into account the fact that they move around their properties and do not stay inside or directly outside their houses. Several said they no longer enjoyed gardening because they could hear the turbines. Many of the residents would not directly experience any adverse effects on their use of their properties from Mill Creek but said they did not want residents in Ohariu Valley and elsewhere to experience what they had experienced from West Wind.

[341] Mr J Easther is located between West Wind and Mill Creek at 910 Makara Road. There is a house by the road and paddocks extending across river flats with the river at the centre of his property. Mr Easther wants consent to 13 turbines declined on the basis that adverse effects cannot be contained within the wind farm site. His concern was that his property rights would be taken without compensation. He said his existing house and plans for other houses on the site (although no resource consents for other houses have been granted) would be adversely affected



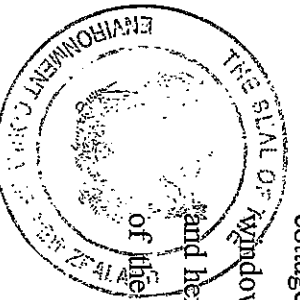
by turbines F08-11, F13-14, L01-02, K01-03 and G01-04 and that he was already affected by a similar number of West Wind turbines.

[342] Mr Easter said that the nearest turbine to his house would be approximately 1.8 km away but we had no photosimulations of his property to verify that. He considered the skyline to the north of his property would be dominated by the Mill Creek turbines. In his view the wind farm would be inappropriately located within a peri-urban area used extensively for recreational purposes by city dwellers. He said this was not a development in a remote area affecting a few farmers.

[343] Mr J and Mrs K Bowen (s274 parties) have lived at 1000 Makara Rd for 19 years. Mrs Bowen gave evidence that they see West Wind turbines from the top of their farm. She said that their 145 ha farm, makes up most of the *gap* between the nearest turbines of West Wind and Mill Creek. She said that the Mill Creek wind farm would share approximately 2.4 km of their northern/eastern boundary. Her concern was that Meridian is using their farm as a buffer around their turbines, particularly with a turbine F11 being only 175m from the farm boundary. She said that from their current house turbines F13 and F14 would be seen virtually in their entire height, a dominant feature of the main view to the north.

[344] Mrs Bowen gave evidence of a consented house site with approved building plans located at the top of the barren, windswept escarpment above Smiths Bay. This was approved on a non notified basis in 28 March 2008 after Meridian's intentions for Mill Creek were public knowledge but before the resource consent application was made. The AEE forming part of the Bowen application stated that it was not proposed to occupy the cottage on a permanent basis. It was also noted that the land to the north east of the site was characterised by high voltage transmission lines which detract from the sense of isolation and wilderness of this area.

[345] Mrs Bowen said that the house site would be totally dominated by turbines in views to the north and east. Turbine F11 would be situated only 540m from the cottage site. It was planned that large doors would open to the north and the kitchen and her husband would look to the east towards the turbines. Mrs Bowen advised that she and her husband enjoyed the openness of the site and that planting to mitigate views of the turbines would result in the loss of sun and views. Meridian suggested



screening possibilities but Mrs Bowen would have none of it. Some of the landscape witnesses referred to the challenges in growing screening vegetation in such an inhospitable location in any event and we agree with those observations. It was suggested that the primary view from any cottage would be more likely out to sea away from the turbines and we think that is correct also.

[346] Mrs Bowen said the 10 beaches at Smiths Bay on their property date from pre-1940 and would be adversely affected by views of the turbines.

[347] Mr Brown concluded that the visible turbines would appear to float as insubstantial elements above the substantial landforms in the wider landscape which form the backdrop to this area. He made the point as he had done elsewhere in his evidence that this modified backdrop was dominated by pastureland and that the landscape would retain its underlying form patterns and textures. Although Mr Brown considered that on a macro level the effects of the turbines from this quarter were not unacceptable, that was not the case for turbine F11 which would have significant adverse effects on the Bowen cottage site, even accepting that the site and the cottage would be orientated towards the sea. He stated that the factors of proximity and scale meant that F11 would create a very real perception of intrusion and nuisance.

[348] Mr Rough considered that the turbines would have a substantial effect on the visual amenity of several properties:

- 879 Makara Road (the Samuelson-Sandvind property)–2548m to F13 on PPT 153;
- 952 Makara Road (the Christensen property) – 1803m to F13 on PPT 123;
- 1011 Makara Road (the Webber property) – 1370m to F13 on PPT 143;
- 1000 Makara Road (the Bowen house) – 1414m to F13 on PPT 146 and also the Bowen cottage site – 543m to F11 on PPT 168;
- 1012 Makara Road (the Phoenix property) – 1316m to F13 on PPT 157;
- 910 Makara Road (the Easter property).



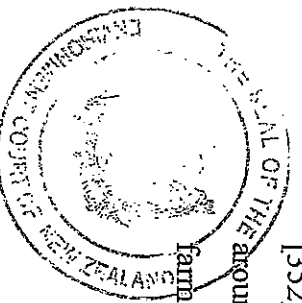


[349] Mr Mansergh's assessment of potential effects on visual amenity was, moderate to high for Smiths Bay, high to very high for Makara Beach (estuary/inland) and between Makara Beach residential area and Opau road and low to moderate for South Makara (between Makara Village and Makara Golf Course).

[350] Mr Mansergh gave evidence that for a number of houses, turbines would appear clustered on, or just behind, the skyline saddle at the head of the Mill Creek valley. From the houses in and around 1000 Makara Road, he considered that views of the K, L, E and F series would have a moderate to high degree of impact on views of the undeveloped rural landscape to the north. He said that while the upper portions of the F series turbines can be seen at the head of Smiths Gully and from some of the more seaward baches in Smiths Bay, generally these buildings are oriented towards the coast. He considered visual amenity effects would be predominantly drawn from views of the coastal edge and across the water. Mr Rough gave supplementary evidence in response to questions from Makara Guardians, demonstrating that visual amenity effects would not be major.

[351] Ms Steven said that turbines would be seen clustered in the centre of the main and only view towards the turbines for all but two of the residents whose properties she assessed. She said that those at the western end of Makara Valley can also look out to sea with the view framed by the Makara hills on one side and the nearer hill spurs of Makara Stream valley on the other. In her opinion in these views, the turbines would appear as a reasonably tight spiky cluster occupying the centre of prime views, be varied in height and scale and have unsynchronised rotation action with distracting and discordant effect. She considered the southern-most F series would appear close (1-2 km away) as would the K series in some views (2-3km away). The turbines would occupy the part of the skyline which was the focus of view. Ms Steven said that blade tips would disrupt skyline views of the residents closest to Makara Beach. She referred to a sense of being sandwiched between two wind farms, from viewpoints on the north side of the valley from some properties.

[352] While there are a number of properties in this vicinity (such as the cluster around 1000 Makara Road) which would see the southern most turbines of the wind farm, we accept the views of Messrs Brown and Rough that the topography of this



area is such that the turbines would not have an unacceptable impact on the residents. The enclosed nature of the topography largely restricts views of the turbines which are not prominent to the point of being visually dominant. Nor do we find there is a sense of being sandwiched between the two wind farms, with those residences most affected by Mill Creek not generally being significantly affected by West Wind.

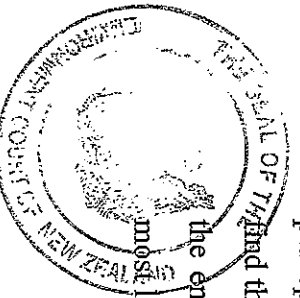
#### *Overall Evaluation*

[353] We have looked in some detail at the evidence on the potential effect on the private amenity of residents. We accept that many of the residents would prefer not to have a view of turbines, to maintain Ohariu Valley as it is and not to add further turbines to the West Wind turbines.

[354] We consider that Mr Rough made a highly pertinent point in his rebuttal evidence in commenting on his assessments of visual effects as being in a range of nil to substantial. A substantial effect is not necessarily a substantial adverse effect but rather an assessment of the degree of change to amenity. It is inevitable that introduction of wind turbines will bring change to peoples' amenity. That is an outcome of their size, numbers and positioning on exposed sites in order to harvest the wind. Turbines are always going to be an obvious presence in their environment.

[355] There will be situations where the nature, quality or significance of the the amenity in question is such that it ought not be subject to the change which turbines will bring. However, we do not find that the amenity of this typical rural landscape falls into that category.

[356] In determining the amenity impact of the Mill Creek turbines it is necessary to have regard to the factors which the Court has previously identified in cases such as *West Wind* and *Motorimu*. For Mill Creek that will relevantly include issues of proximity, elevation, position and screening and the extent to which they combine to dominate the amenity of any particular residents. We consider that the concept of dominance was neatly described by Mr Brown as a turbine creating a very real perception of intrusion and nuisance. Based on the evidence which we heard, we find that although the Mill Creek turbines will become a highly visible component of the environment, they would not have a dominating effect on private amenity for most locations. There are however obvious exceptions to that.



[357] The Council Hearings Commissioners declined consent to turbine G04 because of its adverse effects on the recently approved Hawkins' lots and building platforms. (We noted that between our two site visits a house was placed on one of these building platforms.)

[358] Mr Rough assessed some or all of those turbines as having substantial effects on several properties in the Takarau Gorge area and moderate effects on many other properties throughout the valley. (We have noted that his reference was to the significance of change.)

[359] Mr Mansergh recognised that the G series turbines would be highly prominent referring to the clusters of turbines and close proximity of views.

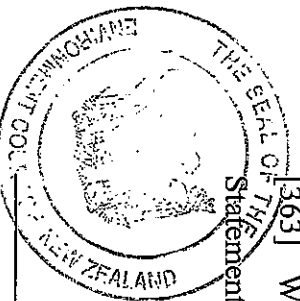
[360] Mr Brown noted the dominance of turbine G04 from a Hawkins' site with only 820 m of separation. He described this turbine as being...*very prominent in relation to no. 591 and almost loom over no.569*<sup>57</sup>.

[361] Ms Steven specifically singled out the adverse effects of these turbines, not just in her visibility analysis, but in her analysis of effects on individual properties in the various parts of and throughout Ohariu Valley. This is not surprising given the proximity of the ridge on which these turbines are situated to houses and properties in this vicinity. She identified the prominence of all four of these turbines, the combined effect of turbines G03 and G04 when viewed from the Hawkins' lots and the apparent closeness of the turbines to the Third property.

[362] We conclude that turbines G01, 02 and 03, as well as G04 would have major adverse effects on a number of private properties in their vicinity.

### *Planning Documents*

[363] We have already alluded to the provisions of the New Zealand Coastal Policy Statement 1994, the operative and proposed Regional Policy Statements, the regional



plans and the District Plan all contain relevant provisions. We have already referred to most of those that are at issue.

[364] The District Plan provisions which have to be considered in evaluating the application include: Chapter 14 (Rural Area), Chapter 16 (Open Space) and Chapter 25 (Renewable Energy) as well as the assessment criteria of Chapter 26 (applying to wind energy facilities). There are objectives and policies in Chapters 14 and 25 which seek to encourage the use and development of wind energy in the Rural Area, although none of these are unqualified and recognise there are matters other than the potential benefits of wind energy which need to be considered and weighed.

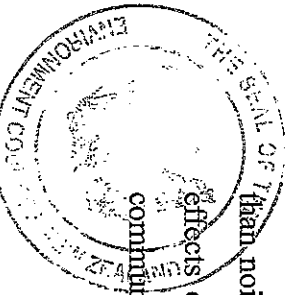
[365] The District Plan's assessment criteria for wind farm applications include:

*26.3.1.3 The visual effects of the proposal, including:*

- *The extent to which the proposal will impact on rural character;*
- *The extent to which the proposal will be visible from residences, key public places including roads, and recreation areas;*
- *The relationship of the proposal to the Ridgelines and Hilltop overlay;*
- *The visibility of the proposed development;*
- *The extent to which the proposal will impact on the natural character of the coastal environment, including on cliffs and coastal escarpments;*
- *The extent to which any aspects of the proposal can be sited underground;*
- *The scale of any proposed development, including the number of turbines, their height and the cumulative visual effects of the proposal as a whole.*

[366] Other matters which are to be taken into account include:

- The actual or potential noise effects of the proposal (26.3.1);
- The extent to which the proposal will affect the amenity values (other than noise) of the surrounding environment with particular regard to the effects on residential locations including potential nuisance effects on communities (26.3.1.2);



- Effects of traffic and vehicle movements and the extent that traffic or site management plans can be implemented to mitigate effects (26.3.1.5);
- Extent to which the proposal will impact on landscape features and the surrounding land use (26.3.1.7);
- the extent to which the proposal is consistent with any relevant aspects if (sic) the Rural Design Guide (26.3.1.10); and
- the benefits to be derived from the proposal, including its contribution to Central Government energy objectives and renewable energy targets (26.3.1.13).

We have already addressed these matters in the course of our decision.

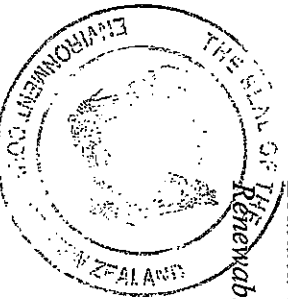
[367] We have considered the relevant provisions of these documents in arriving at our decision. We find there is nothing in any of the planning documents that is determinative of the proposal one way or the other.

#### *Other Matters*

[368] We have already referred to the New Zealand Standard NZS6808:2010 – *Acoustics – Wind farm noise*.

[369] We had regard to the *Makara* and *Ohariu Community Plans, Capital Spaces* and other Wellington City Council documents. We recognise that not all the provisions of the community plans and documents were carried through into the recent District Plan changes, affecting the weight we should place on them.

[370] We have also considered New Zealand's obligations under the *Kyoto Protocol*, the *New Zealand Energy Efficiency and Conservation Strategy*, *New Zealand Energy Strategy to 2050* and the proposed *National Policy Statement for Renewable Energy Generation* (giving the latter little weight because of its status.<sup>58</sup>)



<sup>58</sup> The now operative National Policy Statement for Renewable Electricity Generation was not before us.

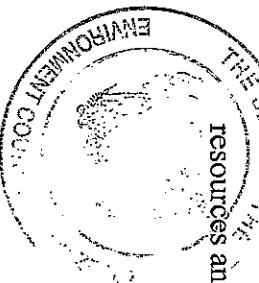
## *Part 2 Matters*

[371] In the light of our findings in the preceding sections of this decision, we now consider whether consent should be granted for the wind farm in whole or in part. That requires us to determine whether or not granting consent achieves the purpose of the Act, namely the promotion of the sustainable management of natural and physical resources. Sustainable management is defined in the RMA in these terms<sup>59</sup>:

*In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –*

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

[372] The wind which will drive Mill Creek's turbines is a natural and physical resource<sup>60</sup> as is the land on which Meridian wishes to construct the wind farm, the land surrounding the wind farm site and the residences and other improvements which Mill Creek's neighbours have constructed on their land. In reaching our decision we must seek to manage the use, development and protection of all of these resources and in doing so must consider the provisions of s6, 7 and 8 RMA.



<sup>59</sup> Section 5(2) RMA

<sup>60</sup> 'Natural and physical resources' are defined in s2 RMA as including ... 'land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or not) and all structures'.

[373] Section 6 identifies various matters of national importance which we are required to recognise and provide for, with the following matters of relevance to Mill Creek:

*(a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate ... use and development:*

[374] With reference to s6(a), we have found that there would be significant adverse effects on the natural character of the coastal environment in some locations, but that in itself would not make the development of a wind farm an inappropriate use and development or one that cannot be approved.

*(b) The protection of outstanding natural features and landscapes from inappropriate ... use and development:*

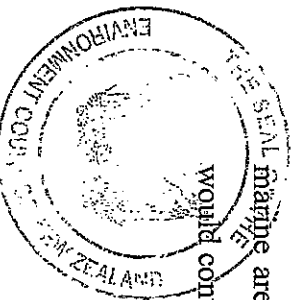
[375] With reference to s6(b), we have concluded that while the coastal escarpment may be a candidate for outstanding natural feature identification, the rural character of the site and its surroundings are similar to many rural areas and their protection is not a matter of national importance.

*(c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*

[376] With reference to s6(c), there was no dispute that the proposal would ensure the protection of significant indigenous vegetation and indigenous fauna provided it was subject to appropriate conditions.

*(d) The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers: and*

[377] In terms of s6(d) there would be still be public access to and along the coastal marine area. Although in some locations the wind farm would be visible, people would continue to visit the Makara Beach and nearby coastline.



*(e) The protection of the relationship of Maori and their culture and traditions with their ancestral lands ...*

[378] With reference to s6(e), the opening submission for Meridian contended that tangata whenua are supportive of the project. The submission noted that all of the cultural and environmental concerns outlined in the Ngati Wai O Ngati Tama Trust appeal against the Council decision had been resolved, conditions of consent agreed and the appeal withdrawn.<sup>61</sup>

[379] Section 7 requires us to have particular regard to a number of matters in reaching our decision. We consider that the following s7 matters are relevant to our considerations:

*(aa) The ethic of stewardship*

[380] In the *West Wind* decision the Court discussed the concept of stewardship, firstly in the context of preserving the landscape unaltered, and secondly, allowing some compromise of amenity to take advantage of non-polluting and renewable sources of energy. The Court in that case favoured the second alternative, as long as compromises...do not impose unreasonable burdens on communities, individuals or the receiving environment.<sup>62</sup> We concur with that approach for Mill Creek.

*(b) The efficient use and development of natural and physical resources*

[381] The development of a wind farm at Mill Creek will allow the capture of a currently unused high quality energy source for the generation of electricity. The small footprint of the turbine bases will allow the land on which they are sited to continue to be used for rural activities which should result in the overall more efficient use of this land. The fact that Mill Creek can be managed jointly with West Wind adds to the efficiency of the proposal.

*(d) The maintenance and enhancement of amenity values*

[382] There will be significant effects on the amenity values of some residents of Ohariu Valley and Makara. They would lose the attributes which they value in the current rural character of the area, even for those who already live with the presence





of the West Wind turbines. For many people there will be the direct and unwanted sight and sound of wind turbines.

[383] All of the noise witnesses (except for Professor Dickinson) agree that the predicted night time noise levels inside residences in the vicinity of the wind farm should not exceed the WHO guideline for sleep disturbance. Nonetheless, we note as stated in Section 1.2 of NZS 6808:2010 that: *The noise limits recommended in this Standard provide a reasonable rather than an absolute level of protection of health and amenity.*

[384] We have noted that wind farm induced sleep disturbance and feelings of ill health are still being suffered by some Makara residents. This situation was exacerbated by the unanticipated noise problems which occurred at the time of the commissioning of West Wind. We have concluded that provided there is full compliance with the consented noise limits of Mill Creek from the outset, turbine noise should not pose an unacceptable level of health risk. There may be some loss of amenity for residents who would prefer not to hear any turbine noise.

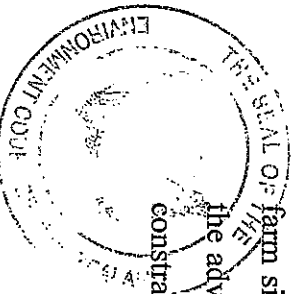
[385] Residents who live on Ohariu Valley Road face the loss of road reserve land required for the widening and realignment of this road, land on which some have developed gardens and horse training facilities. But this was only ever borrowed land. We also accept that Meridian's proposed traffic management plan should limit to the maximum extent possible, the impact of construction traffic on this road.

*(f) Maintenance and enhancement of the quality of the environment*

[386] The design and construction details of the wind farm should ensure there is minimal effect on the quality of the environment. For some residents, the visual and noise amenity they currently enjoy will change, but the quality of the environment will be maintained.

*(g) Any finite characteristics of natural and physical resources*

[387] Mill Creek's wind is a finite resource, in the sense that many potential wind farm sites throughout New Zealand face a range of environmental constraints from the adverse effects of wind farm development on landscape and amenity, with these constraints often limiting the scale and scope of potential developments.



*(i) The benefits to be derived from the use and development of renewable energy.*

[388] Mill Creek will use wind as a renewable energy source. It will assist in countering the effects of climate change compared to energy generation by non-renewable sources. The benefits to be derived from the use and development of its renewable wind energy will assist in a limited way towards meeting New Zealand's obligations to the Kyoto protocol as well as to the 2025 target of the New Zealand Energy Efficiency and Conservation Strategy for 90% of generation to be from renewable sources.

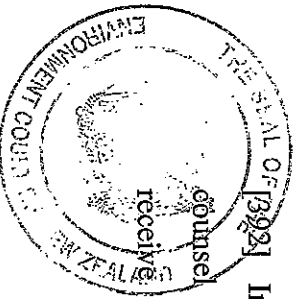
[389] Section 8 RMA requires us to take into account the principles of the Treaty of Waitangi in the decision making process. We were advised that matters affecting iwi had been resolved prior to the hearing.

#### ***First Instance Decision***

[390] Under s290A RMA the Court must have regard to the decision which is subject to appeal which in this case is the first instance decision of the Joint Hearing Commissioners for the three councils dated 16 February, 2009. We have done that in our consideration of the matters before us. We come to a slightly different decision to the Commissioners for reasons which we will explain.

#### ***Overall Evaluation***

[391] We have identified a range of benefits which we consider would accrue from the development of a wind farm at Mill Creek. These include the capture of a currently unused and finite wind resource of particularly high quality for the generation of electricity. The proximity of the wind farm to Wellington and correspondingly low transmission costs mean an efficient use of this electricity. Mill Creek will assist in meeting New Zealand's obligations under the Kyoto protocol and the 2025 target of the New Zealand Energy Efficiency and Conservation Strategy for 90% of generation to be from renewable sources.



[392] In his closing submission, under the heading *Local Community Benefits* counsel for Meridian lists a number of benefits which the local community will receive from the development of a wind farm at Mill Creek. These include

electricity supply and its cost and reliability, expenditure on local goods and services and employment over the 18 month construction period and beyond. From the perspective of the local community, we are doubtful if the community representatives we heard from at the hearing would consider that most of these benefits could be classified as being particularly *local*, if they are real benefits at all.

[393] The local community points to potential adverse effects of Mill Creek on the natural character of the coastal environment and access to it, landscape and rural character, visual and noise amenity and (for Ohariu Valley Road residents) the widening and use of the road for construction access.

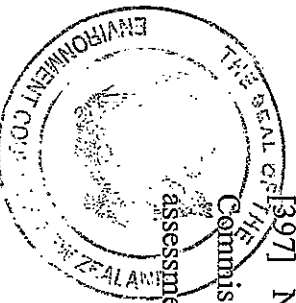
[394] The concerns of the local community are well founded in a number of respects but not all. However we consider that when broadly assessed having regard to all of the matters we are obliged to take into account, the benefits of the proposal outweigh its adverse effects. The quality of the wind resource at Mill Creek and the benefits arising from renewable energy generation are significant factors in reaching that conclusion. We determine that the promotion of sustainable management is best achieved by granting consent to Meridians application albeit not in the form requested.

[395] We consider that there are five turbines in the proposed wind farm which will impose unacceptable adverse effects on their neighbours to such an extent that consent ought be denied to them, notwithstanding the overall benefits of Mill Creek. Those are turbines F11 and G01-04.

#### *Turbine F11*

[396] The Hearings Commissioners deleted this turbine for both visual amenity and noise related adverse effects on the recently approved, but unbuilt, Bowen cottage. None of the noise witnesses recommended the removal of this turbine for noise related reasons as there are very high background noise levels at this site. We accept their evidence on this matter.

[397] Notwithstanding removal of the noise ground we concur with the Commissioners' decision on visual amenity grounds alone. We refer to Mr Brown's assessment of the dominating (we would say overwhelming) effects that this turbine



would have on the proposed cottage, just over 500m away. Even accepting that the principal view from the cottage would be to sea, we accept Mr Brown's opinion that the turbine is simply too close to the house site and is not appropriate.

#### *Turbines G01-G04*

[398] We have concluded that turbines G01 to G04 should be deleted because of the unacceptable adverse effects these turbines would have on the visual amenity of many residents who live in the central area of Ohariu Valley and along Takarau Gorge Road. Whilst we have concluded that the proposed noise conditions would result in acceptable noise levels at all residences, the removal of the G01 to G04 turbines may also provide further noise amenity bonus for these same residents although we do not base our decision on that ground.

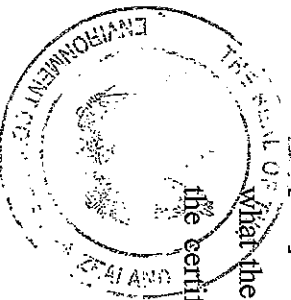
[399] Again we note that our finding in respect of turbine G04 is consistent with that made by the Council. We have gone further than the Council in declining consent for the remaining three turbines in this series however we concur with the views expressed by Ms Steven as to the significant adverse impact of these turbines. We appreciate that their removal reduces the amount of energy which will be generated by Mill Creek but we consider that the neighbours of the site are being asked to pay an unacceptably high price for that energy, in terms of their amenity.

#### ***Result***

[400] Meridian's application for the construction of a 31 turbine wind farm at Mill Creek is approved on the basis that turbines F11 and G01 to G04 are deleted.

[401] At the end of the hearing we were provided with a set of conditions titled *Resource Consent Conditions – Council's Marked Up Version Post All Caucusing - 23 November 2010*. We have directed changes to these conditions in the course of this decision and there may be need for changes as a result of undertakings given by Meridian.

[402] It is essential that there is no uncertainty about the approved proposal and what the consent conditions require, including the details to be approved as part of the certification process in the future. The conditions referred to the process for



approval of management plans which were intended to provide environmental protections. Meridian sought that if it did not hear back from the Council as to approval of a management plan within a specified time period then the management plan was deemed to be approved. This approach is not sound environmental management (or we suspect good project management), and we do not accept Meridian's approach.


[403] We direct that Meridian and the Councils confer about any changes which may need to be made to the conditions to reflect this decision. A revised, final set of conditions is to be lodged with the Court and circulated to all parties for comment within 20 working days of issue. These conditions should be accompanied by a memorandum explaining the reasons for any changes or additions to the 23 November 2010 version of the conditions.

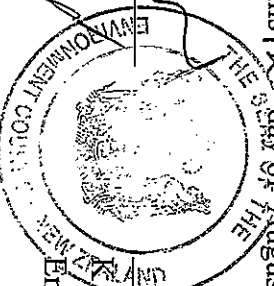
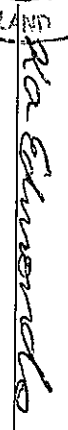
[404] Interested parties shall have 20 working days from the receipt of the revised final set of conditions in which to file and serve and submissions which they might have regarding them. Meridian and Councils may reply within 15 working days of receipt of same. We anticipate determining final conditions on papers. If any party seeks a hearing on conditions they should advise accordingly.


#### *Costs*

[405] Costs are to lie where they fall. No party has been entirely successful in these proceedings. We do not consider that any party conducted their case in such a manner that costs should be awarded.

DATED at Wellington this 1<sup>st</sup> day of August 2011.

  
B P Dwyer  
Environment Judge

   
K A Edmonds  
Environment Commissioner

  
D J Bunting  
Environment Judge

