

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of applications by Meridian Energy Limited for resource consents to establish, operate and maintain a wind farm on the Lammermoor Range to the west of Old Dunstan Road (Project Hayes)

**OPENING SUBMISSIONS OF COUNSEL FOR
MERIDIAN ENERGY LIMITED**

Introduction and Overview

1. Meridian Energy Ltd (**Meridian**) has applied to the Central Otago District Council (**CODC**) and the Otago Regional Council (**ORC**) for resource consents to establish and operate a wind energy facility using up to 176 wind turbines, known as Project Hayes.
2. Project Hayes is planned to utilise the exceptional scale and quality of wind resource which exists at the application site. This energy resource has been extensively investigated over a number of years and has been found to be outstanding in its combination of wind speed, duration and scale. The project as advanced will maximise the capture and use of this valuable renewable energy resource, after appropriate avoidance, remediation and mitigation of effects.

Meridian

3. Meridian is a major New Zealand energy company, owned by the public, with a staff and consultant base that includes many of New Zealand's leading experts in their disciplines. Meridian has a proven track record in the development and operation of energy projects both in New Zealand and overseas. It also has a proven record in the development of projects within sensitive areas (such as the second Manapouri Tailrace in Deep Cove, Doubtful Sound,

Fiordland), and an exemplary record of environmental compliance in new projects such as the Te Apiti and White Hill wind farms.

4. Meridian is New Zealand's leading provider of renewable energy. In late 2004 Meridian made a commitment that all of its new generation would be developed from renewable resources. Due to the scale and quality of the wind resource at the site, Project Hayes is of very considerable significance to Meridian's renewable energy development programme.

New Zealand needs more renewable energy

5. In today's society electricity is critical to every day life. It meets our basic needs, such as heat and light, and is also the foundation upon which communications, transport, industry, commerce and many domestic functions are based. Electricity is integral to the well-being of individuals as well as to the local, regional and national economy.
6. Just as the importance of electricity to modern society has grown, so too has demand for it. In New Zealand and internationally, the demand for energy (in all its forms) continues to increase. The South Island is no exception to this trend, with demand for electricity steadily growing and predicted to continue. In absolute terms, load growth in the South Island has in fact been higher than that in the North Island. Last winter, the South Island was a net importer of electricity from the north. However, no major new generation facilities have been built in the South Island since the 1980's.
7. In its most recent statement on the issue, the Government has identified that two significant long-term energy challenges face New Zealand – one of these is the delivery of secure, clean energy at affordable prices in an environmentally responsible manner¹. Ensuring security of supply involves building enough generation capacity to meet peak demands and ensuring there is

¹ *Draft New Zealand Energy Strategy to 2050: Powering Our Future - Towards a Sustainable Low Emissions Energy System*, Ministry of Economic Development, December 2006, Section 1.1.

enough fuel (eg, water and wind) to generate sufficient electricity at any given time.

8. Latest Government predictions are that there is enough generation planned to meet New Zealand's immediate electricity needs². However, not all of the planned projects considered by the Government will proceed, as some are subject to Environment Court appeals and some may become uneconomic prior to construction. Accordingly, there remains an urgent need for the planning and approval of additional generation to ensure that enough viable options are available to meet demand growth 5-10 years from now.
9. However, not only does New Zealand need more electricity generation, it also needs the right kind of generation. The right kind of generation should assist New Zealand to meet the second major long-term energy challenge identified – that is, responding to climate change and curbing carbon emissions from our energy production and use³.
10. These two major challenges combine to create a strong, urgent and recognised need for new generation to be from renewable resources.
11. Of the renewable options available, wind energy is an obvious choice for New Zealand given our world-class wind resource and the ability of wind generation to strongly complement hydro energy, from which approximately 60% of our electricity is presently generated. Due to our consistently strong wind conditions, wind energy is far more efficient and reliable here than in other countries. In addition, during periods when wind is generating power, water can be stored in our hydro lakes, resulting in a renewable energy system that is without peer in terms of capacity and flexibility.

² Ibid, page 41.

³ *Draft New Zealand Energy Strategy to 2050: Powering Our Future - Towards a Sustainable Low Emissions Energy System*, Ministry of Economic Development, December 2006, Section 1.1.

12. In addition to its technical merits, several independent public surveys show that the majority of New Zealanders support wind generation and in fact favour it over other generation options. Reasons for this include the renewable nature of the resource; increasing awareness of the threat of climate change, contributed to in part by thermal electricity generation; and the development of modern turbines that can generate substantial amounts of electricity using known, tested and proven technology.
13. Project Hayes represents the development of an exceptional renewable energy resource in the South Island, thereby helping to meet security of supply, diversity of source and climate change imperatives. In this way it has the potential to play a key part in New Zealand's response to the electricity supply and climate change challenges.

The Project Hayes Site

14. Project Hayes will build on the tradition of innovation established in Central Otago by people such as Eben Ernest Hayes.
15. An engineering and wind power pioneer, Mr Hayes was one of the first New Zealanders to recognise and harness the commercial application of wind power in Central Otago. He built and used a wind mill to power his engineering works from 1910 until about 1927. The wind mill was erected on a 12-metre tower with sails 6.7 metres in diameter. Mr Hayes is also credited with inventing the Hayes Farm wind mill for pumping water, the parallel wire fence strainer, cattle stops and a device for lifting fence standards.
16. Clearly, Mr Hayes took an enterprising approach to the challenges that confronted rural New Zealand at that time. Meridian believes that Project Hayes is a similarly progressive response to New Zealand's and the South Island's need for proven, environmentally responsible and economically viable means of generating renewable energy.

17. The project is located approximately 69km to the north west of Dunedin City, approximately 40km to the south of Ranfurly and 15km west of Middlemarch. The land involved is relatively remote farmland. Extreme winter weather conditions mean that the higher portions of the site are only used in summer.
18. The potential of the site for wind farm development was first identified some 30 years ago (by the late Dr Keith Dawber of Otago University). The site wind resource was monitored along with other Central Otago sites until the late 1990s. In 1996 the project site was considered suitable for further detailed study due to a number of factors including its extensive, flat topography and its high wind speeds. Meridian's investigations have since confirmed the exceptional nature of the site's wind resource and its overall suitability on all counts for wind farm development.
19. In evidence you will hear that for wind generation high and consistent wind speeds are of paramount importance. The consistency of wind at the site means that Project Hayes will be capable of generating electricity for at least 88% of the time.
20. From Meridian's investigations throughout New Zealand, there are no sites that can match Project Hayes' combination of wind speed and scale. To put this in perspective, the combination of scale and quality of resource found at this site is only likely to be matched at a few sites world-wide.

Project Overview

21. Project Hayes will have up to 176 wind turbines with a total capacity of up to 630 megawatts (MW) depending on the final turbine type selected. If a 3.6MW turbine is selected Project Hayes will generate sufficient electricity to power up to 263,000 average homes.
22. A comprehensive description of the consents sought for Project Hayes and Meridian's design methodology is provided in the

applications for consent and accompanying AEE's. We offer the following summary.

Developing and Shaping the Project

23. In designing and implementing Project Hayes, Meridian seeks to:
- (a) Design and construct a project to the best international standards;
 - (b) Follow a construction plan which minimises the effects on the community;
 - (c) Understand and apply the best available technology;
 - (d) Achieve an appropriate balance between the interests of the public of New Zealand, as Meridian's shareholders and electricity consumers, and the interests of those persons affected by the project;
 - (e) Respond to the interests of affected persons on the basis of fair and appropriate undertakings and actions, and not on a purely legalistic basis;
 - (f) Uphold, reflect, and apply with pride New Zealand's tradition of excellence in engineering works; and
 - (g) Leave the site and surrounding area (including the local road network) in at least as good, if not better, condition than it is in prior to the project commencement.
24. The evidence will demonstrate that Meridian will achieve this in three ways. First, it has used the best available processes for the investigation and planning of the project. Next, in the most critical areas of investigation and planning, it has involved companies and persons recognised as leading experts in their fields. Finally, Meridian will offer an extensive suite of conditions of consent that address all environmental concerns and a range of other matters.

Developing a technically feasible project

25. The evidence for Meridian will provide a detailed description of the process applied to develop a technically feasible layout. In summary, this involved:
- (a) Wind modelling of the site to determine the necessary separation distance between turbines and the most appropriate location of turbines having regard to topography. In his evidence, Mr Botha will explain that turbines must be sited on ridgelines given the combination of two factors – the need to site turbines where wind speed is at its highest in order to make such proposals economic, and the fact that siting turbines in valleys subjects them to unacceptable levels of turbulence.
 - (b) A desktop review of the initial turbine positions to identify terrain constraints and any potential encumbrances on access to the proposed positions. Other criteria considered at this stage of the process included using existing tracks where practicable and high level planning and environmental considerations such as known conservation areas and mapped sites of significance in the District and Regional Plans;
 - (c) Following the desktop review, any turbines that appeared to be on or near potential constraints (such as steep slopes or wetlands) were microsited. This involved physically locating the position of the turbine on the ground and repositioning it where necessary to avoid features such as unfavourable topography, watercourses or rock outcrops.
26. This process resulted in 176 potential turbines and a core site access road network.

Project Shaping

27. Meridian's approach to developing a wind farm is to undertake a robust, effects-based screening process in order to avoid, remedy and mitigate actual and potential effects and only seek consent for those turbines which are considered by a team of independent reviewers to be appropriate. Meridian deliberately adopts this process and calls it "project shaping".
28. Meridian considers its approach is consistent with the purpose of the Resource Management Act and the requirement to avoid, remedy or mitigate adverse effects (s.5(2)(c)).
29. By way of example, the project was assessed by independent experts in terms of landscape, heritage, noise, recreational and ecological effects. Consultation with Iwi has been undertaken.
30. This process concluded that no turbines had such an adverse effect that they warranted removal. However, some of the turbines were relocated to avoid areas of archaeological or ecological significance.

Flexibility and the Consenting Envelope

31. Consent is sought for turbines of up to a maximum size defined in the application. This is because no final decision has yet been made on the specific turbines to be installed. Final design requires a detailed economic evaluation taking into account, amongst other things, the electricity-demand and transmission scenarios prevalent at the time of turbine selection and turbine availability. The flexibility to undertake this detailed economic evaluation at a later date is crucial to ensuring the long-term viability of the project.
32. The parameters of the "envelope" proposed means that no more than 176 turbines can be installed and that any turbine installed will have a total vertical height of no more than 160m. The effects of the wind farm have been assessed in terms of these

maxima. The turbine envelope applied for is for the largest size that will be available during the development period of the project.

33. Meridian offers conditions which would ensure that all turbines will be of the same size and will meet the same standards for noise, regardless of which model is finally selected.
34. In addition, Meridian has sought a limited degree of flexibility in the final siting of turbines. A tolerance of plus or minus 150m is sought. The evidence will explain that this is necessary due to the fact that the final access, layout and position of turbines will be subject to survey, detailed design and geotechnical considerations as encountered at each site during construction. In the context of the scale of both the site and project, this flexibility need not be of concern.

Site Access

35. Detailed investigations have been carried out to determine the preferred transport routes for:
 - (a) Delivery of turbine components from Leith Wharf to the site; and
 - (b) Access to the site from the local road network.
36. The evidence outlines the studies that have been carried out to assess whether the existing roading infrastructure will cope with the expected vehicle movements, including over-dimension and over-weight loads.

Substations and grid connection

37. Five 220kV substations will be required to connect the wind turbines to the transmission grid. Indicative substation locations were provided in the application.

38. The general substation locations have been carefully selected having regard to views from Old Dunstan Road, opportunities to minimise the need for earthworks, and avoidance of areas containing gullies or watercourses. The structures will be designed to fit within the surrounding landscape and re-vegetation will occur following their construction. Overhead lines will not be used where they break the skyline when viewed by persons external to the site.
39. Electricity produced by the wind farm will be fed via the Sluicings substation into the Roxburgh-Three Mile Hill transmission line that runs across the site.
40. Internal cabling between turbines, substations and the Roxburgh-Three Mile Hill line will be required. Where practicable, this will be underground to minimise visual effects. Where the use of overhead lines cannot practically be avoided, they will be either hidden from public view points or located within an identified corridor that has been designed to reduce visual effects while maintaining a safe distance from turbines.

Earthworks and Internal Roding Design

41. Earthworks are required on the site for a number of purposes including to construct internal access roads and turbine platforms and foundations.
42. Wherever possible roads have been designed to follow existing farm tracks and tops of ridges. This reduces the potential visual effects from external viewpoints by minimising the amount of excavation required.
43. The evidence will be that given the scale of the proposal the overall volume of earthworks required is relatively minor compared with other wind farm and roading projects due to the generally flat site terrain. All civil works will be designed with a cut to fill philosophy (i.e. there is no side casting or otherwise uncontrolled disposal of earthworked material). Although this

philosophy has a negative impact on the timing and commercial viability of the project, these negative aspects are outweighed by the positive environmental benefits in terms of sedimentation control and minimising the project footprint.

44. Having all the ground excavations transported to predetermined fill sites increases the ability to control sediment and ensures that the drainage and silt traps can be actively managed, minimising adverse effects on ecological values.

Consents Required

45. Various consents are required from the Central Otago District Council and Otago Regional Council as detailed in the application, evidence of Mr John Kyle (Meridian's consultant planner) and the planning officer's report.

46. Broadly, land use consent is required from CODC for the following activities:

- (a) The erection, operation and maintenance of a new power generation facility and associated works and structures (including earthworks, concrete batching, road construction and widening, traffic generation, reservoir formation, vegetation clearance or inundation, quarrying and site preparation);

- (b) On-site maintenance and operations facility;

- (c) Transmission lines and associated support structures above 15m in height;

- (d) Anemometer;

- (e) Five on-site substations and ancillary buildings.

47. Resource consents are required from the ORC for the following activities:

- (a) Discharge of stormwater to land where it may enter water;
- (b) Taking and discharging groundwater during construction;
- (c) Discharge of wastewater;
- (d) Discharge to water from bulk earthworks and disposal areas;
- (e) Construction, use and maintenance of culverts and similar structures and associated disturbance of stream beds;
- (f) Structure throughout the site to manage waterways and prevent erosion;
- (g) Stream bed realignments;
- (h) Reclamation of stream beds.

Overview of issues raised by submitters

- 48. Submissions have been made by parties both opposing and supporting the project.
- 49. Of the submissions in opposition, few (if any at all) express concern about the concept of wind energy per se. The key issues raised by submitters in opposition include:
 - (a) Location and scale of the project;
 - (b) Landscape and visual effects;
 - (c) Noise effects;
 - (d) Construction effects;
 - (e) Ecological effects;

- (f) Historical/archaeological/cultural effects;
 - (g) Traffic effects;
 - (h) Transmission issues; and
 - (a) Cumulative effects.
50. A wide range of individuals and organisations, including the Government, through its “Whole-of-Government” submission support the project. Key points raised by those in support include:
- (a) Remote location of the project;
 - (b) Use of a perpetually renewable fuel resource;
 - (c) Promotion of New Zealand’s image as clean and green;
 - (d) Project will assist in meeting security of supply objectives;
 - (e) Employment and economic benefits;
 - (f) Will encourage tourism;
 - (g) Complementary to New Zealand’s existing hydro energy;
 - (h) No CO₂ emissions.
51. The expert evidence for Meridian will address in detail the concerns raised by those in opposition and will confirm the benefits identified by those in support.

Status of Activity

52. There is no dispute that the applications are to be considered as a discretionary (unrestricted) activity. As such, the panel may grant or refuse consent under section 104B of the Act and, if consent is granted, may impose conditions under section 108 of the Act.

53. When considering the proposal, regard must be had to s.104(1) of the Act which states:

(1) *When considering an application for 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 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.*

54. Detailed submissions on Part 2 matters will follow.

Actual and Potential Effects - Positive Effects

55. The definition of “effect” in section 3 of the Act includes positive effects.

56. A number of benefits will accrue from development of the proposal, both at national and local levels.

Local benefits

57. Some appellants and witnesses have raised concerns about the extent of any local benefits flowing from the proposal, and whether or not there is a mismatch between the local burden and the national benefits. Meridian identifies local, district and regional benefits including:

(a) Construction and operation will create economic and employment benefits within the District and Region.

These benefits will contribute to the general well being of the community;

- (b) Diversification of rural land use while being compatible with existing farming activities;
- (c) Upgrading of local roads which are used by the community;
- (d) Potential (albeit presently unquantified) increase in the number of visitation days by tourists to the District;
- (e) The establishment of a community fund to provide direct benefits to the community once the wind farm is operational.

Regional Benefits

58. While the current Otago Southland area energy demand and supply balance is good, there is very little security of additional supply. This project will remove the present limit on the development of new large industry in the region, by improving the region's security of energy supply. This matter will be developed further in evidence to be called.

National Benefits

59. A considerable number of submitters have provided substantial support for the application and its national benefits. These submissions express recognition of New Zealand's growing demand for electricity, the substantial contribution this project can make to meeting that need and recognition that the Project is an environmentally responsible alternative to using fossil fuels for generation.
60. I have previously outlined the two key long-term energy challenges that face New Zealand. Project Hayes will make a significant contribution to addressing both of these challenges and achieving national renewable energy and climate change objectives. It will help ensure New Zealand's electricity supply by

minimising the risk associated with dry years and providing a substantial amount (up to 2050 GWh) of additional capacity. It will also help reduce New Zealand's dependence on non-renewable fuel sources and will avoid the emission of up to approximately 1,280,000 tonnes of CO₂ annually.

61. The positive effects reflect many of the provisions in the statutory instruments and wider policy documents that will be referred to, which promote the benefits of renewable energy. These positive effects also underpin the 2004 amendments to the Resource Management Act which introduced sections 7(i) and 7(j).

Genesis Power Limited v Franklin District Council A148/05 ("the *Awhitu* decision")

62. In the *Awhitu* decision the agreed positive effects of a wind energy project were summarised (pages 15,16 and 17) as follows:
 - (a) Electricity is a vital resource for New Zealand. There can be no sustainable management of natural and physical resources without energy, of which electricity is a major component.
 - (b) New Zealand needs a more diverse electricity generation base, to avoid for example, over-reliance on hydro which is susceptible to dry years; in any event new large hydro options are limited.
 - (c) More thermal generation will have adverse effects, including contributing to climate change and depleting fossil fuels.
 - (d) As a matter of national energy policy set in accordance with relevant legislation, New Zealand is pursuing options for renewable energy.

- (e) Wind is a source of renewable energy which is plentiful but which is best able to be utilised only in certain locations.
- (f) Benefits of renewable energy include:
 - i. Security of supply (in that case the 18 MW wind farm would produce enough electricity to supply 7,500 households per annum. In comparison, the potential output from Project Hayes is up to 630 MW which would meet the annual energy needs of up to 263,000 homes depending on the turbine type selected);
 - ii. Reduction in greenhouse gas emissions. This is achieved through meeting New Zealand's need for electricity without emitting greenhouse gases that would otherwise be emitted through coal or gas generation. A wind farm the size of Project Hayes would avoid the emission of up to 1,281,250 tonnes of CO₂ per annum if the equivalent was generated from a 50/50 mix of coal/gas power stations (as compared to 40,000 for the Awhitu wind farm). Mr Muldoon calculates that approximately 185,000 hectares of land would have to be converted into permanent forest blocks to displace 1,280,000 tonnes of CO₂ (i.e. on an annual basis to match the benefits of this proposal), or alternatively 297,000 cars would have to be permanently removed from our roads annually.
 - iii. In the *Awhitu* decision, reduction in dependence on the national grid was cited as a benefit as a result of the incorporation of this factor into an agreed statement of facts. Some wind farms may be able to be installed relatively close to the source of electricity demand, thereby minimising load on the national grid and delaying the need for transmission upgrades. In other circumstances the

location and wind resource may be such that it is desirable to connect a wind farm to the national grid. The location of Project Hayes is such that connection into the national grid can occur on site and it is located in the South Island where at least one-third of anticipated national demand growth is expected;

- iv. Reduction of transmission losses. The further the transmission distance the greater the loss of electricity through dissipation.
 - v. Reliability. Wind is a relatively reliable resource with a typical wind variation of 10% pa or less, compared to 20% pa for rain fall. Once a wind farm is built, it has no on-going fuel cost;
 - vi. Development benefits. Wind energy initiatives result in industry development, profitable business opportunities and regional development. These include research, manufacturing, installation and distribution, and maintenance of the facilities. They also provide energy to essential social services such as schools and hospitals;
 - vii. Contribution to the renewable energy target. If approved Project Hayes will contribute up to 7.4 PJ per year or almost 25% of the New Zealand renewable energy target to be achieved by 2012 (National Energy Efficiency and Conservation Strategy).
63. Further real and substantial benefits of Project Hayes will be discussed in the context of Part 2 submissions.

Adverse Effects

Landscape and visual effects

64. In relation to whether or not landscapes are outstanding the Environment Court noted in the *Wakatipu Environmental Society Inc v Queenstown Lakes DC* C180/1999 (para. 82):

The word "outstanding" means:

"Conspicuous, imminent, especially because of excellence"
"Remarkable in" [Concise Oxford Dictionary (1990) p.485]

The Court went on to note (para 99):

Usually an outstanding natural landscape should be so obvious (in general terms) there is no need for expert analysis.

65. The *Wakatipu* decision also further refined criteria for assessing the significance of a landscape, which had been earlier discussed in *Pigeon Bay Aquaculture Limited v Canterbury Regional Council* [1989] NZRMA 209. These criteria have become known as the *Pigeon Bay* criteria. As refined, they include:

- (a) The natural science factors – the geological, topographical, ecological and dynamic components of the landscape;
- (b) Its aesthetic values including memorability and naturalness;
- (c) Its expressiveness (legibility), how obviously the landscape demonstrates the formative processes leading to it;
- (d) Transient values, occasional presence of wildlife;
- (e) Its values at certain times of the day or year;
- (f) Whether the values are shared and recognized;

(g) Its value to tangata whenua;

(h) Its historical associations.

66. Each of these criteria have been assessed in detail by Mr Rough. Mr Rough concludes that the project site, when considered in terms of the *Pigeon Bay* criteria and also from a district and regional perspective, cannot properly be regarded as an outstanding landscape.

67. The evidence of Meridian's landscape and geomorphology experts is that this site is not of particular significance when viewed in its district or regional context. Without denigrating the undoubted landscape values of the site, there are many other "better" examples of Central Otago landscape. These findings are reinforced by the content of the Central Otago District Plan (which does not identify the site as an outstanding landscape) and the results of the UMR survey that demonstrate not only a significant degree of public support for Project Hayes, but also a relatively low ranking of this site against other landscapes and features in the region. Put simply, if this site is categorised as "outstanding" what superlatives are required for the considerable number of other "better" landscapes in Central Otago?

Significance of a finding that the turbines are on or near outstanding landscapes or features

68. Even if you disagree with the evidence and supporting material to be called by Meridian, in the Environment Court decisions on *Awhitu* and *Unison (Stage 1)*⁴ wind farms, the Court approved turbines on or immediately adjacent to areas found to be outstanding. While a further 36 turbines were declined in the recent *Unison (Stage 2)*⁵ decision, this is primarily as a result of the cumulative effects of Stage 2 upon the earlier approved 90 turbines, together with concerns raised by iwi about the

⁴ *Unison Networks Ltd v Hastings District Council* W058/2006

⁵ *The Outstanding Landscape Protection Soc Inc v Hastings District Council* W024/2007

considerable cultural values of the new site. The Court found that the outstanding landscape in question in Stage 2 was sufficiently distinct from the rolling broad topped massif that characterized the Stage 1 outstanding landscape.

69. By way of comparison with other wind farm applications, at Te Apiti the turbines are situated on the lower slopes of the Ruahine Range which is identified in the Regional Policy Statement as an outstanding landscape. At White Hill the turbines are being constructed on a landform that is identified as an internationally outstanding geological feature in the relevant planning instruments.
70. When addressing this issue in the *Awhitu* decision the Court noted [para 219] that all the areas with appropriate wind resources have landscape qualities. The Court accepted that:

A decision to decline this wind farm on the grounds of adverse effects on natural character would have very serious implications for the wind farm industry as a majority of wind resource sites have similar or greater character issues to address.

71. You should be cautious that your finding about this project could effectively be construed as a de facto prohibition of wind turbines anywhere in Central Otago. Given all of the factors that make this site so suitable for wind energy development and the relative landscape qualities of the site, if the proposed wind farm is not considered appropriate here, it is unlikely that a utility scale wind farm could establish anywhere in Central Otago. It is respectfully submitted that would be an extraordinary position for you to arrive at, given the benefits and quality of this wind resource.

Rural Character in the rural zone

72. Mr Rough states that despite the size of the wind farm and the size of individual turbines, the spacing of the turbines and continuation of underlying landform and rural activity will be such that the site will remain fundamentally rural in character.

73. If wind energy facilities were deemed to be an illegitimate activity in the rural area because they are visible to, and considered unacceptable by some observers, the logical result (if the approach is consistently applied) would then have to be that wind farms are precluded from development in the rural area. Both as a matter of law and as a matter of commonsense, such an outcome would be irrational.

Visual amenity

74. A number of objectors complain about the visual effect of turbines. Most (if not all) of the opponents do not appear to object to wind generation of electricity, but instead object to any turbines being erected in this area, generally because they assert it (or indeed all of Central Otago) is "iconic", or may be visible from their places of recreation, or simply because they do not like the "idea" of wind turbines being sited anywhere in Central Otago.
75. Again, you should be cautious that your finding about this project would effectively amount to a finding that wind turbines would not be appropriate anywhere in Central Otago.
76. As Mr Rough's evidence will discuss, most modern turbines have a functional elegance which gives them a sculptural quality and their clustering on a site can provide a feature that has a striking appearance. Wind farms undoubtedly cause change to a landscape and while some people are averse to the changes in character a wind farm brings, others consider a landscape's character to be enriched by wind turbines visibly generating energy from the natural element of wind.
77. In other words, while some people assert that they do not like the look of these turbines, others assert that they will add a dynamic and interesting element to the landscape.
78. As Mr Rough will explain in his evidence:

Studies have shown that while people may object to local wind farm projects, usually because of anticipated noise and visual impacts, local public support often increases once the turbines are installed and operational.

79. From most viewpoints topography provides screening of large parts of the wind farm. Only limited numbers of turbines are seen from any particular residence. The areas from where more expansive views of the site are obtained are generally very distant.
80. Even if you were to determine that there are significant adverse landscape/amenity effects arising from this proposal, that does not in itself mean that the proposal should be declined, or that any particular turbines should be removed.
81. While it is accepted that the proposal will result in a significant land use change and will cause adverse effects to aspects of natural character and landscape, these effects have to be considered in the context of the very substantial benefits of the proposal, and the unique quality and scale of this site.

Shadow flicker

82. The shadow flicker calculations were based on assumptions that all hours between sunrise and sunset were in sunlight (no allowance for rainy days or cloud cover) and that all turbines are orientated towards receptors all of the time. The result of the analysis is outlined in Mr Botha's evidence and shows that shadow flicker will not be a significant effect.

Archaeological/Heritage

83. All archaeological sites have been avoided. Some interference with the current fabric of Old Dunstan Road is required, although this is already regularly occurring with periodic roadworks and other activities at present. Following construction Old Dunstan Road will be remediated so that its appearance is much as it is at present.

84. There will be some change to the setting or context of some archaeological and heritage sites, although this will not be so significant that it warrants a decline of consent.

Noise

NZS6808 – Turbine Noise

85. The applicant has proceeded on the basis that the New Zealand Noise Standard 6808 is the most appropriate method of assessing wind farm noise and that it sets appropriate levels for wind farm noise.
86. You will have the benefit of detailed evidence from Mr Malcolm Hunt, a noise consultant experienced in assessing the acoustic impacts of wind farms.
87. He clearly articulates the methodology for his predictions and explains why the district plan noise limits cannot be appropriately applied to wind turbines.
88. Mr Hunt's conclusion is that few residential locations will be affected by noise from the wind farm at all. One of the benefits of such a remote location is that where noise effects may be experienced, it is Mr Hunt's conclusion that they will be no more than minor and will comply in all respects with the noise limits recommended for dwellings in NZS6808.

Noise effects at Paerau School

89. In his evidence, Mr Hunt addresses the potential noise effects at Paerau School having regard to NZS6808 in respect of outdoor activities and NZS2107 in respect of indoor sound levels for schools. Mr Hunt concludes that outdoor sound levels would not detract from school activities in any way and that if wind farm noise is detectable indoors at all, it will be well below both the "satisfactory" and "maximum" levels specified in NZS2107.

Vibration and infrasound

90. Some parties have raised concerns about infrasound and ground vibrations. Mr Hunt addresses these concerns in his evidence and concludes that any such effects will be imperceptible and would not pose a risk to human health.

Construction Noise

91. Meridian has offered to comply with NZS6803 for construction noise. Mr Hunt considers this to be appropriate and adequate to avoid any potentially significant construction noise effects.

Relevance of Compliance with New Zealand Standards

92. You are entitled to and in my submission should rely on the New Zealand Standards Mr Hunt will outline as establishing the appropriate compliance level for noise from the wind farm.
93. In *McIntyre v Christchurch City Council* [1996] NZRMA, 289 the Environment Court noted (page 295):

A party to resource consent proceedings is entitled to rely on compliance with a relevant New Zealand standard as tending to show that effects on the environment of a proposed activity should be acceptable because emissions would not exceed levels set in that document. Absent challenge by another party, the consent authority may treat the standards as setting an appropriate level of emissions that would not have unacceptable effects on the environment.

94. The noise predictions in Mr Hunt's evidence are based on the Vestas V90 model turbine but he confirms that his assessment would remain valid for any turbine that could demonstrate compliance with NZS6808.
95. While turbine noise has been a contentious issue in some previous wind farm hearings, it is submitted that the issue need

not trouble the Panel greatly in respect of Project Hayes. The surrounding area is sparsely populated and there is considerable separation between the wind farm and nearby dwellings. Meridian will accept conditions to ensure that, regardless of which turbine is finally selected, compliance with the relevant noise standards is achieved.

Transmission

96. It is proposed to connect Project Hayes into the national grid. Mr. Waipara will give evidence explaining the transmission network and importantly will also explain the nature of a "constraint" and how further investment in the grid is assessed.
97. As noted earlier, at present demand and generation is relatively well matched in the Southland and Otago power system "island". There is a constraint in the Southland transfer from the Waitaki Valley to Otago-Southland due to thermal transmission limitations. In fact, this creates a security of supply risk to significant new loads in the Otago-Southland area. Due to the position of Hayes on the south side of this transmission constraint, the improved access to electricity supply may encourage new industry in the Otago-Southland regions.
98. Putting aside the visual effects of internal transmission lines, submitters and others have alleged that two further transmission-related effects require assessment:
 - (a) The potential effects of any new transmission line that might be constructed between Roxburgh and Twizel to carry additional electricity generated south of the Waitaki Valley;
 - (b) Adverse effects on the operation/operator of the Clyde and Roxburgh power stations.
99. Dealing with the first of these concerns - it is submitted that the effects of an external transmission line that Transpower may or

may not decide to construct in the future are not actual or potential effects arising from Project Hayes.

100. Meridian notes that with some minor upgrading there is sufficient capacity in the existing Roxburgh-Three Mile Hill transmission line to enable all of the electricity that could be generated by Project Hayes to be transported through the national grid most, if not all of the time.
101. In contrast to earlier indications by Transpower, recent detailed assessment, including by the Transmission Advisory Group, has indicated that a new transmission line may only be needed if generation in excess of 625MW is developed south of the Waitaki Valley. Thus this application cannot be said to trigger a requirement for a new transmission line.
102. Several further matters arise in the event that a new transmission line is required - either as a result of this or any other proposal, or a combination thereof.
103. Firstly, there is no undertaking by Transpower to construct a new line. There has been some recognition of the existing line's finite capacity, which is not a matter specific to Project Hayes. If Transpower decides to pursue a new line it will have to go through its own consenting process which will entail detailed consideration of the associated environmental effects. Transpower will also need to put forward a number of transmission options to the Electricity Commission in order for the Electricity Commission to approve one of those options (if any).
104. A new line may or may not be approved at either Electricity Commission or subsequently at local authority/environment court level (based on RMA considerations). Recent experience in the Waikato indicates that new national grid lines or any single option cannot be considered a certainty, regardless of perceived need, and are quite rightly stand-alone activities that call for assessment in their own right.

105. Secondly, consideration of the effects that might arise from a new line is simply not necessary or possible at this time. Any application for a new or upgraded national grid line would be made by Transpower, not Meridian. At this time Meridian cannot be sure that consent will be sought for a new line, let alone what form that line might take.
106. In addition to the practical limitations and available transmission capacity I have discussed, it is also possible that Hayes may not be developed up to the full capacity sought. There are a number of variables that will influence the final size of turbines and capacity of the wind farm.
107. With regard to the Act's definition of "effect", a new line cannot therefore be described as a consequential effect of this proposal.
108. Contact Energy has lodged a submission on Project Hayes stating that it supports the proposal to the extent that it does not affect the output from other renewable generation in the area.
109. Specifically Contact has concerns that Project Hayes could result in significant spill of water from its Clyde and Roxburgh Power Stations.
110. Contact notes that its Clutha River scheme provides "run of river" electricity generation, with limited ability to store water. Contact notes any constraints in the region's transmission system limiting the output from either Clyde or Roxburgh could result in the spilling of water over the Clyde and Roxburgh dams. Contact is concerned that without significant transmission upgrades, new wind energy in the system will lead to greater transmission constraints and further prevent Contact's hydro plant from generating electricity.
111. Putting aside the merits of Contact's position, and more particularly the duration and the extent of any such constraints and the ecological effects of such constraints (all of which are

assessed as negligible), Contact's submission is precluded from consideration by virtue of Section 104(3)(a) of the RMA. This provides that a consent authority must not have regard to trade competition when considering an application for resource consent.

112. The leading authority in relation to this issue is the High Court decision of Baragwanath J. in the *Montessori Pre-School Charitable Trust v Waikato DC*⁶. In this case the High Court took a particularly broad approach when considering whether or not an activity fell within the definition of trade competition.
113. The appellant Trust expressed concern about the potential loss of pupils from its existing Montessori school facility to a proposed new Montessori school.
114. The Court noted at the outset there can be no doubt that the Trust and the applicant were in competition, defined as "the action of seeking to gain what another attempts to gain at the same time."
115. Likewise, in the present situation there would appear to be little or no doubt that Contact is concerned that Meridian may seek to gain access to transmission capacity in competition with Contact's attempts to gain access at the same time.
116. The High Court then considered what amounts to "*trade competition*".
117. The Court noted that:

[15] "Trade" can bear the narrow meaning of exchange of goods for goods or money or the slightly wider sense of business carried on with a view to profit; *words and phrases legally defined* (the 3rd Ed) Vol 4 p312."

118. According to the Shorter Oxford it can also mean:

⁶ 31/5/06, Hamilton CIV-2006-419-91

- (a) The practice of some occupation, business or profession habitually carried on, esp. when practise is a means of livelihood or gain; a calling; now usu. applied to a mercantile occupation and to a skilled handicraft, as distinct from a profession, and *spec.* restricted to a skilled handicraft, as distinct from a professional or mercantile occupation on the one hand, and from unskilled labour on the other;
- (b) Anything practised for a livelihood.

119. The Court concluded:

[19] In characterising the respective activities as of “trade competition” or not I have concluded that what matters is that there be a competitive activity having a commercial element; not the status of the body carrying on that activity.

120. In the present instance the Contact submission makes it clear that Contact considers there is potential for both Meridian and Contact to be competing for access to the same resource at the same time (ie access to transmission capacity). It is equally clear that both Meridian and Contact are carrying out their activities as part of a commercial activity or enterprise.

121. This is a trade competition matter and Contact’s concern must therefore be excluded from consideration.

122. Perhaps as a result of these concerns, Mr Whitney proposes a condition 63:

Transmission circuits adequate to take the additional output from the proposed windfarm shall be operational before the windfarm is commissioned.

123. Meridian notes that connection to the national grid is a matter for Transpower. In addition, the proposed condition is likely to facilitate improper trade competition, crosses into the area of

Meridian's and electricity generation companies economic risk assessment and profile, is unnecessary, and is considered to be *ultra vires*. You should not attempt to regulate in this area. If Meridian's proposal would result in unacceptable effects on the national grid, you can be confident that Transpower would not approve such a connection.

124. In addition, any constraints that may arise need to be assessed in the context of the substantial benefits (net GWh gains) of this proposal. Others will expand upon these matters during the course of this hearing.

Ecology

Aquatic Ecology

125. The key to avoiding aquatic ecological effects is effective erosion control and prevention of sediment entering waterways. The applicant is committed to complying with best practice in relation to erosion and sediment control. Meridian has considerable experience and success in this regard. An example is the second tail race tunnel at Manapouri, which discharges into a world heritage park area with very sensitive beds of black coral. The success of this work has been internationally recognised. Construction at Te Apiti wind farm occurred during a 1 in 100 year flood – yet no breaches of sedimentation control measures were recorded. Other examples can be provided.
126. You can be satisfied that Meridian is committed to, and will achieve, best practise in relation to sediment and erosion control. Any effects can be appropriately avoided, remedied or mitigated through the conditions offered by Meridian, including the requirement for a number of Environmental Management Plans.

Terrestrial Ecology

127. In terms of terrestrial ecology, the evidence for Meridian is that effects can be appropriately remedied or mitigated through the

conditions proposed. Revegetation of disturbed sites is a priority in ensuring appropriate ecological outcomes. It is noted that clearance of tussock and subsequent planting of pasture grasses can and does occur on the land as of right.

128. The construction footprint of Project Hayes will only disturb or modify approximately 2.46% of the Hayes landform area and 3.61% of the core project site. Vegetation and fauna across more than 96% of the core site will therefore remain unaffected.
129. The evidence will also address avifauna concerns and particularly potential effects on New Zealand falcon.

Cumulative Effects

130. A number of submitters have suggested that Project Hayes will have an unacceptable cumulative effect when combined with the effects of other potential wind farms in the wider area. It is clear that submitters have in mind Trustpower's proposal for a wind farm near Lake Mahinerangi, on the Lammerlaw Range.
131. A cumulative effect is one that will occur, rather than something that may occur⁷. As such, it is concerned with the build up of consequences that will result from a proposed activity in combination with the existing environment overlain by permitted or consented activities (including, where appropriate, unimplemented consents).
132. There are no consented wind farms in the broad vicinity of Project Hayes. Whilst Trustpower's proposal will be heard around the same time as Hayes, it is clear that Meridian has been first in time at each procedural step to date. Meridian's application was lodged first, completed first (ie, all section 92 requests required for notification were responded to) and notified first. This means that you need to consider this application as if the Mahinerangi

⁷ *Dye v Auckland Regional Council*, [2001] NZRMA 513 (CA)

proposal did not exist⁸. The CODC officer's report accepts cumulative effects are not at issue here.

Traffic

133. The wind farm will produce a minimal amount of traffic once operational therefore ongoing traffic effects are not an issue.
134. During the construction period Meridian has recognised the potential for adverse effects and has proposed the adoption of a comprehensive Construction Traffic Management Plan to avoid, remedy or mitigate effects so that they will be no more than minor. It should be remembered that construction is unlikely to occur for approximately 3-5 months of each year.
135. Mr Penny's evidence conservatively analyses the potential number of vehicle trips within each District and carefully identifies preferred routes for each.
136. In deciding upon the preferred transport routes, Meridian's experts have taken into account the roading hierarchy, the standard of the roads considered, road safety records, requirements of the district and regional plans and the need to minimise disruption to other road users.
137. The evidence for Meridian demonstrates that from a traffic efficiency and road safety perspective all of the routes proposed are readily able to accommodate the increases in traffic flow, subject to the matters to be addressed by the proposed Management Plan.
138. In terms of amenity effects, for the most part the traffic movements represent only a small proportional increase over existing levels and are therefore not expected to have any more than minor effects. On certain roads they may represent a larger proportional increase to overall vehicle movements. However, it is noted that these effects will be for a finite period. These factors

⁸ *Unison Networks Ltd v Hastings District Council*, W058/06 at para 10

combined with the other management conditions proposed will ensure that traffic effects over the construction period are acceptable.

Recreation

139. The key conclusions arrived at by Meridian's expert tourism and recreation consultant are that:

- (a) The wind farm would have no more than minor effects on recreation and tourism activities during construction and once operational;
- (b) Total recreation days may increase as a result of the wind farm;
- (c) A negative effect will be registered by a proportion of visitors to the area due to the change in the visual amenity qualities of the site;
- (d) Given the low or moderate level of use of the setting, and the fact that all current recreational activities will remain possible and retain almost all of their setting and characteristics, the net effect of the proposal on current recreation and tourism activities will be only minor;
- (e) Displacement of biking and horse trekking on Old Dunstan Road during construction is possible, but the setting is not significant for these activities, the effect is temporary, and alternative locations can readily be identified;
- (f) Only minor effects could be ascribed to equestrian based activities.

Planning instruments

Regional Policy Statement

140. The RPS contains a wide range of objectives, policies and methods that are relevant to these proceedings. Mr Kyle has assessed these in some detail. Key aspects are:

- (a) Matters of significance to iwi;
- (b) Objectives and policies in relation to productive capacity of Otago land resources and character;
- (c) Wetland protection;
- (d) Discharges to air;
- (e) Bi-ota; and
- (f) Energy.

141. In particular objectives within the RPS seek to encourage the use of renewable energy resources to produce electricity, including wind power which is accepted as a long term energy source.

142. Mr Kyle has assessed these provisions in detail and will present his conclusions in evidence. One of the key messages arising from the RPS is that renewable energy, including wind, is envisaged within the Otago region. Mr Kyle observes that in particular the *Inland Otago* Rocklands area is specifically noted as being a potential wind farm site in the RPS.

Regional Water Plan

143. Mr Kyle assesses this planning instrument and concludes the proposal is entirely consistent with the outcomes sought by the Otago Water Plan. Detailed evidence will be produced addressing these matters.

District Plan Matters

144. Section 13 of the PCODP specifically provides a complete code for assessment of infrastructure, energy and utility proposals.
145. Given that section 104(1)(b) requires a consent authority to have regard to any *relevant provisions* of a plan or proposed plan, you are required to make a determination as to what provisions are relevant. To circumvent the Plan's stated intention that section 13 amounts to a complete code, and to seek to read in all of the "wider" District Plan provisions, for example those found in sections 3, 4, 12 and 14 of the proposed District Plan (as the reporting planner has done), would be an error.
146. In addition, it is noted that the objectives and policies in section 13 are wide ranging, and essentially address all relevant matters.
147. Having correctly applied the plan, Mr Kyle's evidence concludes that overall the proposal is consistent with achieving the relevant objectives and policies of the PCODP.

Summary – statutory instruments

148. There is an inherent conflict between aspects of the statutory instruments that is also reflected in the tension between various Part 2 matters that are applicable to this proposal. It is inevitable that there will be tension between provisions seeking to maintain and enhance existing character and values and those seeking to enable and allow efficient use of resources and appropriate development, and renewable energy development in particular.
149. In many ways, the status of the activity (discretionary) coupled with the content of the statutory instruments is such that your task of assessing the proposal in light of those instruments effectively mirrors your task in assessing the effects of the proposal against Part 2 of the Act.

Other matters

Energy policy documents

150. There are a number of other policy documents and initiatives that are relevant to this proposal. These include the National Energy Efficiency and Conservation Strategy, the Government's Energy Policy Framework, the Renewable Energy Target, New Zealand's ratification of the Kyoto Protocol and the Government's draft New Zealand Energy Strategy.
151. These policy directives confirm New Zealand's need for and commitment to the development of renewable energy wherever appropriate. These policy directives are also reflected in the recent amendments to the Act - s7(i) and 7(j).

Renewable energy target

152. The Environment Court, in the *Awhitu* decision, in the context of a relatively small wind farm (18MW), found that the *de-minimis* principle does not apply and that every contribution of renewable energy, however small, helps the final outcome.
153. By way of contrast to the *Awhitu* project, Project Hayes (up to 630 MW) has the potential to supply almost 25% of the New Zealand renewable energy target (the contribution from *Awhitu* was 0.8%).
154. Meridian notes:
- (a) wind generation is already a significant and potentially a major contributor to New Zealand's renewable energy target;
 - (b) to be able to meet that target (and more importantly, to meet the community's needs for an essential service) New Zealand must take each and every reasonable opportunity when it arises.

155. This report and the concepts contained in it have been raised by a number of submitters, and indeed small extracts from it are relied upon quite extensively by the reporting planner. Meridian notes this report has not been through a public submission and analysis process. The assertion that smaller windfarms in dispersed locations are more desirable than large scale projects is superficial and is rejected. In addition, the report is considered to have stepped into areas well beyond its author's expertise – particularly in relation to transmission, landscape and social matters. In summary, it is submitted that little (if any) weight should be given to this report.

Precedent Effect

156. Several submitters have raised the issue of precedent effect. The CODC planner has suggested that granting consent for Hayes will set a precedent for other wind farm applications within the District.

157. Whether the issue of precedent is relevant on any application is determined by the objectives, policies and other provisions of the relevant plan. The essential question is whether the provisions contemplate the activity as being generally appropriate, although not at every location. If so, there is little room for precedent arguments⁹.

158. As I have discussed, the CODC plan provides a complete code in respect of energy generation activities. These provisions recognise the importance of energy and in doing so provide for the use and development of it as generally appropriate throughout the District, subject to appropriate avoidance, remediation or mitigation of adverse effects. In light of the

⁹ *Campbell v Napier CC*, W067/05, see discussion at paragraphs [62] and [63].

relevant provisions, it is submitted that precedent concerns do not arise.

159. In any event, this is a unique proposal (including an extensive suite of proposed conditions) that is unlikely to be replicated so as to raise “like for like” concerns.

Development impact levy

160. A development impact levy (DIL) can be imposed under the District Plan if a proposal generates significant adverse effects (effectively a demand on council infrastructure), for the purpose of avoiding, remedying or mitigating those effects.

161. In the present instance, Meridian will ensure that its effects are appropriately avoided, remedied or mitigated through extensive conditions of consent such that a DIL is not required.

162. In reality, the only matter that could potentially justify a DIL is the visual amenity impacts of the proposal. Meridian notes that a viewers response to these effects is subjective and that a development impact levy would be a blunt and inadequate instrument for remedying any perceived adverse effects.

163. However, Meridian has entered into arrangements with other local communities near its wind farms to establish and administer community funds for the benefit of nearby communities.

164. In the present instance, despite the difficulties outlined, Meridian is proposing to enter into a community funding regime as discussed by Mr. Muldoon in his evidence.

OFFICERS REPORT - CODC

Planning Report

165. Our analysis is that the Planners Report essentially narrows down the fields of concern to landscape/visual, transmission issues and

heritage/tourism. Other matters can be addressed by conditions. Putting aside transmission and tourism/recreation - which have already been discussed - Meridian would generally agree that Heritage and Landscape/Visual effects (and the very substantial positive effects of the proposal) are the key issues raised by the application.

166. Meridian is concerned that the planners report is deficient in a considerable number of areas including:

- (a) The planning consultant steps outside his area of expertise repeatedly, including into the fields of heritage, tourism, site re-vegetation, transmission issues, and landscape;
- (b) The planning consultant relies heavily upon a landscape report identifying the site as an outstanding landscape, despite the fact that it is not identified in the District Plan as an area of outstanding landscape value. Interestingly, no comments were made by Mr. Whitney regarding Mr Espie's laboured interpretation of the District Plan;
- (c) The report writer consistently adopts the most unfavorable description of the planning regime, the proposal, or its effects - for example:
 - i. There is a conclusion that parts of the site are subject to "protection" through District Plan Rules, which is clearly an overstatement;
 - ii. The report pays little regard to the fact that the application is in a working farm environment, with a relatively relaxed planning regime;
 - iii. Concerns about aviation lighting are amplified, although this matter is not referred to in the landscape report at all;

- iv. Concerns are raised about views of the wind farm from up to 13.8 kilometres away, where these were not mentioned by the landscape consultant;
- v. He concludes the proposal will have a significant adverse effect in terms of tourism values, despite various concessions elsewhere in the report that the proposal is likely to have positive tourism benefits;
- vi. There are assertions that the proposal is likely to require a new external transmission line, without any proper evidential foundation or adequate analysis of this complex issue;
- vii. Potential interference with some microlight aircraft activities that were raised by an individual submitter as a matter of concern have been assessed as being of "high potential impact";
- viii. There is a recommendation of a financial contribution condition requiring payment of a \$10 million levy without any analysis of the development impact levy regime or the proposal in that context.

167. In addition, the planners report ascribes "iconic" status to the site primarily in reliance upon submissions and extraneous comments made by the Parliamentary Commissioner for the Environment (who has not assessed the site in any appropriate manner). This is despite the fact the site was not ascribed iconic status by Council's landscape consultant, or even listed as an outstanding landscape in Council's own District Plan.

168. I note that the Court in the *Unison 2* decision has observed that the phrase "iconic" is becoming overused. The references in the planners report to the iconic nature of the site are transparently as a result of the *Unison 1* decision where the Court referred to

iconic landscapes as perhaps being in a different category to the outstanding landscape under consideration in that case. The planners report includes that extract, and then seeks to obtain leverage off it by describing the site as iconic. Meridian concurs with the comments in the *Unison 2* decision, and agrees that the word “iconic” is in serious danger of becoming overused.

169. The planners report assesses the fact that electricity is to be supplied into the national grid as a significant adverse effect of the proposal, including because of transmission losses. This highly unusual statement is presumably based upon the agreed statement of facts presented in the *Awhitu* decision.

170. At page 37 the planner’s report notes:

We consider that transmission effects, including increased load on the national grid, transmission losses and the requirement for additional new transmission line external to the site are significant adverse affects associated with the proposed activity.

171. If this position is accepted by you, any grid connection of generation would be assessed as “significantly adverse” and presumably therefore struggle to find approval. This is, frankly, an irrational finding that pays no heed whatsoever to the pivotal importance of the national grid in terms of New Zealand’s social, cultural and economic wellbeing. The planner appears to have confused the absence of a particular positive effect with the existence of an adverse effect. This is simply incorrect.

172. The consultant planner also concludes that a series of small wind farms would be preferable to this proposal, without any analysis of the potential effects of such an outcome. Meridian notes that such a “series” of windfarms would, assuming each were the size of the *Awhitu* proposal, (18MW) require:

(a) Up to 33 separate resource consent applications with all of the preliminary design, consultation and public time that involves;

- (b) Disruption to up to 33 different communities;
- (c) 33 separate electricity substations;
- (d) 33 separate connections into the electricity grid or local network;
- (e) 33 separate general locations from which turbines can be seen.

173. From Meridian's perspective, the scale of this proposal is a significant positive aspect. As an example, if approved, it is likely to mean a plethora of small wind farms will not otherwise need to be pursued both here and elsewhere. This matter will be developed during evidence to be called.

174. The planning consultant concludes the potential benefits of this proposal could be achieved at other locations – without any recognition that the combination of site factors that make this proposal so important to New Zealand are unique, certainly to this country.

Landscape Report

175. Mr Espie essentially confirms Mr Rough's report with two key exceptions:

- (a) He considers the site is an "outstanding landscape"; and
- (b) He also asserts that Mr Rough has understated the effects of the proposal from certain viewpoints.

176. At the outset Mr Espie attempts to assert that the outstanding landscapes identified in the plan (refer part 2.3.1) are actually "areas" of landscape not "landscapes".

177. Mr Espie then concludes that because of this supposed flaw in the District Plan, he is able to conduct his own exercise or

assessment as to whether or not the project area is outstanding. The fact is that this site is not listed as an outstanding landscape in the district plan. Mr. Kyle will discuss the Council's own decision report outlining the methodology adopted to identify all of the district's outstanding landscapes, and its rejection of an approach based on the "subjective" assessment of one individual.

178. Mr Espie summarily assesses all of the *Pigeon Bay* criteria in one paragraph (4.12), and makes various assertions that appear to overstate the situation (for example he describes the site watercourses and lakes as "remarkable", despite the fact that Logan Burn is an artificial lake and the watercourses are essentially typical). He describes the site as eminent on a district wide and national scale, despite the fact that when it is viewed from either a Central Otago or Otago Regional perspective, it is clearly of lesser landscape value than many other sites (refer to the District Plan for examples). Light and weather conditions are also described as "remarkable", although they are essentially common to the entire Otago region.
179. In short, this section of Mr Espie's evidence is emotive, superficial, and lacks proper perspective.
180. Mr Espie then draws support from the Dunedin City Plan which he states categorizes all of the Rock and Pillar Lammermoor/Lammerlaw Ranges that are within the bounds of the Dunedin City district as being "outstanding landscape areas". While Mr Espie is here prepared to accept the use of the term "area" (compared to his rejection of it in the Central Otago District Plan context), what Mr Espie fails to grasp is that this is one of the very few landscapes of this type in the Dunedin City context. By comparison, it is relatively common or typical in the Central Otago context and even from an Otago Region perspective. In addition, we understand the Central Otago and Dunedin provisions were arrived at in part on the basis of a Boffa Miskell study categorizing landscapes from a regional perspective. That report identified the areas in the Dunedin Plan as outstanding, but not the subject site.

181. It is further accepted that from a Dunedin district perspective the Rock and Pillar Lammermoor/Lammerlaw area could be important or even outstanding. It does not follow that the project area is especially important or outstanding from a Central Otago or Otago Region perspective. Mr Espie seems to confuse the importance of this site to Dunedin with its significance from a regional, or even national perspective (refer to his paragraph 4.13). Messrs. Rough and Brown will address this aspect in some detail.
182. Mr Espie correctly notes that even if the site is assessed as an "outstanding landscape" it does not mean that this proposal is inappropriate *per se*. There are many examples (including in the wind farm context) where proposals have been approved despite the fact they are sited on or adjacent to an outstanding landscape.
183. It is accepted that the proposal will undoubtedly change the visual experience and landscape experience of viewers, including those observing the site or travelling the Old Dunstan Road. The question for you is whether or not, given the remoteness of the site, the very few numbers of visitors to the area, the extensive areas with similar or better characteristics in the wider area, and the very substantial benefits of the proposal from the national energy supply and security perspective, those effects are justified in achieving the purpose of the Act.

Further information requested

184. The CODC planner's report has identified a number of matters where further information is considered desirable.
185. Meridian and its consultants have reviewed these matters and, where appropriate, will provide the information that is sought during the course of this hearing.

Conditions recommended by CODC and ORC

186. The Officer's have recommended a large number of conditions to be imposed should consent be granted. For the most part, Meridian is content to accept the conditions recommended by the ORC reporting officer.
187. However, Meridian's witnesses will address a number of conditions recommended by the CODC planner that are not considered appropriate or necessary.
188. Mr Kyle will produce an amended set of conditions, which are acceptable to Meridian, in his evidence.

Part 2 Assessment

189. As the Environment Court noted in the *Awhitu* decision - the cardinal and pivotal matter to bear in mind in weighing and evaluating evidence and exercising your discretion is the Act's single purpose as set out in section 5.
190. The proper application of section 5 involves an overall broad judgment of whether or not a proposal promotes the sustainable management of natural and physical resources. Such a judgment allows for a comparison of conflicting considerations, the scale or degree of them, and their relative significance in the final outcome (*NZ Rail Limited v Marlborough District Council* [1994] NZRMA 70 HC at 72).
191. The remaining sections in Part 2 (subsequent to section 5), inform and assist the purpose of the Act. You may accord such weight as you think fit to any competing consideration under Part 2, bearing in mind the purpose of the Act. These subsequent sections must not obscure the sustainable management purpose of the Act. They are simply factors in the overall decision that is to be made by you.

192. Therefore the protection of historic heritage, outstanding landscapes, or amenity values (for example) are not to be achieved at all costs. The objective is sustainable management.
193. Matters not listed in the Act as matters of national importance may be taken into consideration if a particular activity assumes national importance in particular circumstances. While such an activity cannot override the purpose of the Act or take priority over matters listed in s.6, the matters in Part 2 can be assessed against a specific activity that is proved to be of national importance: *Marlborough DC v NZ Rail Ltd* W40/95 (PT), partially reported at [1995] NZRMA 357.
194. This is a project of national significance for the following reasons:
- (a) Because of its scale;
 - (b) The fact that it is utilising renewable energy, which assists NZ to meet its commitments in relation to greenhouse gas emissions;
 - (c) The synergies that exist between wind energy and hydro will assist NZ to maximise the efficient use of our lynchpin of renewable power - hydro;
 - (d) There is at present a concentration of wind energy generation in Manawatu. Diversity in wind generation location provides a considerable advantage, both in terms of grid security, and as a buffer against wind energy fluctuation at specific locations;
 - (e) Wind energy is an indigenous resource that is not subject to the same vagaries of price fluctuations and international supply and demand issues as other energy alternatives (such as coal and gas for example);

- (f) The whole of government submission lodged in support of the proposal recognises Project Hayes is of national importance.

Section 6

- 195. As the Court noted in the *Awhitu* decision (paras [221] and [222]), what constitutes protection and what constitutes inappropriate development is a judgment to be carried out by evaluating the findings of fact guided by section 5. The directions contained in section 6, 7 and 8 are an elaboration of the single purpose of the Act. When considering what is “appropriate” development you must also have regard to section 7 matters.
- 196. *Section 6(b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development*
- 197. The applicant is confident the evidence will satisfy you that there are no outstanding natural features and landscapes that are directly impacted upon by this proposal. It is accepted that turbines will be seen in the context of, and from, recognised outstanding features. The question of whether or not the proposal is inappropriate is again to be guided by all of the factors listed previously.
- 198. In *Pigeon Bay Aquaculture Ltd v Canterbury RC* EnvC C179/03, the Environment Court re-iterated (para. [47]) that the RMA has a single broad purpose under s 5, and that s. 6(a) and (b), either separately or combined, cannot create a veto over an application considered under s 5.

Section 6(c) Protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna

- 199. Areas of significant indigenous vegetation on the site have been avoided by the applicant. The proposal will have no significant impacts on indigenous fauna.

Section 6(d) – The maintenance and enhancement of public access to and along [...] lakes and rivers

200. The proposal will not have any significant adverse impacts in relation to public access in these areas.

Section 6(e) - The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other toanga

201. You will hear evidence from the tangata whenua about their views of this proposal.

Section 6(f) The protection of historic heritage from inappropriate subdivision, use and development

202. The proposal will have some impact on historic heritage sites. From an archaeological and heritage perspective the evidence will be that these impacts are acceptable. Any such effects must also be considered in light of the strong positive benefits that arise from the proposal.

Section 7

Section 7(b) – The efficient use and development of natural and physical resources

203. The proposal represents the efficient use and development of natural and physical resources. Wind technology is advancing at a rapid rate. The proposal is state-of-the-art in terms of the efficient use of the exceptional wind resource at the site.

204. As the Environment Court noted in *Awhitu* – [para 222] (citing *IRG Investments Limited v Christchurch City Council* C064/98, 20) the proposal in this instance is a discretionary activity. This raises an inference that the activity is an efficient use of resources.

205. The proposal represents both “allocative” efficiency (resources being allocated to production society values the most) and “dynamic” or “innovative” efficiency (where technological changes encourage productivity gains).
206. The proposal is also efficient in that while maximising the use of the wind resource on the site, it will only have a minimal and in some cases on enhancing impact on the underlying use of the site for other purposes.

Paragraph 7(c) – maintenance and enhancement of amenity values

207. “Amenity values” are 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.
208. In *Telecom NZ Limited v Christchurch City Council* W161/96, the Environment Court determined that the landscape and amenity effects of a proposed cell phone tower could not be said to be adverse merely because the proposal would have an appearance or scale which some people would find distasteful. Others will have a positive response.
209. The essential aim of some objectors is to remove any turbines from their view, others seek to remove them from all places they visit or observe to preserve statically all of Central Otago’s current amenity.
210. It is trite resource management law that an individual has no “right” as such to a view or outlook (eg *Foot v Wellington City Council* ENV W73/98).

Paragraph 7(f) – maintenance and enhancement of the quality of the environment

211. This proposal will provide for generation of substantial quantities of sustainable and renewable energy. It will therefore enable

New Zealanders to maintain the quality of the environment by facilitating a move towards renewable energy and the reduction of greenhouse gas emissions. In addition, careful construction and appropriate mitigation measures will ensure that the proposal will maintain the quality of the environment.

Paragraphs 7(i) and (j) – the effects of climate change and the benefits to be derived from the use and development of renewable energy

212. The introduction of these paragraphs is a clear recognition by Parliament of both the importance of the use and development of renewable energy and the need to address climate change (both of which are key elements of the proposed wind farm). These matters are particularly weighty at present given increasing demand for electricity supply and New Zealand's obligations in respect of greenhouse gas emissions.

213. "Climate change" is defined in the Resource Management Act (RMA) as:

A change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

214. Climate change is a silent but insidious threat, that scientists tell us threatens to improperly deprive future generations of their ability to meet their needs.

215. The greenhouse gas effect and climate change are matters of serious concern. This proposal will make a substantial contribution to reducing or avoiding greenhouse gas emissions.

216. "Renewable Energy" is defined in s.2 RMA as:

energy produced from solar, wind, hydro, geothermal, biomass, tidal, wave, and ocean current sources

217. If opportunities are not taken to build renewable power stations at an appropriate rate, increasing electricity demand will force New Zealand to build large scale thermal generation plants. This will then potentially crowd out new renewable generation projects from the electricity market for years to come. Consequently, New Zealand's economy will incur the cost of greenhouse gas emissions for the lifetime of these thermal generation plants that could have been avoided with appropriately staged building of renewable generation plant.

218. Project Hayes is important *because* of its scale. New Zealand needs this large scale renewable project to *ensure* demand growth can be met.

Section 8

219. This site is not generally recognised as being of special or particular cultural significance to tangata whenua, and all of the archaeological sites in the proposed wind farm site will be avoided.

Section 5

220. There is wide support for this project which has been expressed, in submissions and in response to independent surveys of both Otago residents, and New Zealanders more generally, carried out by UMR. When the final decision comes to be made, the whole of this community, and their interests and needs, as well as those of the Nation as a whole, must be considered.

221. There are effectively a number of layers of "people and community" focus for the purposes of your Section 5 consideration - there are the interests of the landowners themselves, the local communities, Central Otago, Otago Region, the South Island and New Zealand as a whole.

222. Section 5 encompasses all of these layers as a result of the phrase "people and communities".

Avoid, remedy or mitigate

223. A number of characteristics of this proposal avoid, remedy or mitigate its effects. Key mitigation measures include the design and layout of the windfarm, and the utilisation of best practice during construction. Overall the adverse effects of the proposal will either be internalised, will be minor in nature or extent, or will be acceptable. In addition, proposed conditions contain many measures designed to achieve this end.

Consistency with purpose

224. The generation of energy from renewable sources accords with the requirement of the Act to promote the sustainable management of natural and physical resources. It reduces the need for energy consumers to draw upon oil, gas and coal reserves and thereby avoids the greenhouse gas producing consequences of the consumption of these resources. The abundant renewable nature of the energy source is such that its use does not impact on its ongoing availability as a natural and physical resource.

225. The electricity that would be generated by this proposal will enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety. Electricity generation and consumption are an integral part of society. The diversification of electricity generation sources is a key part of ensuring people and communities are able to provide for their overall wellbeing and their health and safety.

226. The proposal has a number of additional characteristics that bring it into line with the overall purpose of the Act. The turbines and other aspects of the proposal have a relatively small footprint in terms of the land area upon which they are sited. If at some future time the turbines have outlived their usefulness they can then be removed and the environment would then largely be restored to its pre-application state.

227. As noted, the proposal represents a substantial reduction in reliance upon greenhouse gas producing fossil fuels. It will also provide a buffer in years of low water supply to the country's hydro generation plants. Accordingly this proposal represents an additional safeguard of the life supporting capacity of air, water, soil and ecosystems.
228. Overall, it is clear that this proposal is strongly in accordance with all aspects of section 5 of the RMA. The very substantial benefits of the proposal, when seen in the national context, outweigh the site specific effects and the effects on the immediately surrounding area.

Assessment of evidence

229. There is an evidential burden on any party to present evidence to support the allegations they make.
230. Where submitters raise concerns that are subjective in nature a decision maker needs to be able to consider a specific proposal in light of all the evidence presented (and particularly any relevant expert evidence) and make their own assessment in light of any relevant case law.
231. A perusal of objections indicates that some objectors do not understand the key issues and have raised wide ranging issues, often fallacious or exaggerated. Equally, it is accepted that some objectors have properly raised relevant issues, which have been discussed in this opening and are responded to in the evidence. Each such concern will need to be scrutinised very carefully, and in light of the views of experts being called to assess the proposal, to determine whether it in fact exists, and if so then whether Meridian has answered it.

Witnesses to be called

232. Meridian proposes to call the following witnesses:

- (a) Keith Turner (CEO Meridian Energy) – Overview
- (b) Adam Muldoon (Meridian Energy) - NZ Energy Scene
- (c) Paul Botha (Meridian Energy) - Wind Technical
- (d) Alan McKinney (Meridian Energy) – Project description
- (e) Guy Waipara (Meridian Energy) - Transmission
- (f) Tony Coulman (Opus) – Construction
- (g) Ray O'Callaghan (Truebridge Callendar Beach) - Erosion/Sediment Control
- (h) Rob Jessop (Golder and Associates) – Terrestrial Ecology
- (i) Richard Allibone (Golder and Associates) - Freshwater Ecology
- (j) Malcolm Hunt (Hayes McKenzie) – Noise
- (k) Tony Coggan (Truescape) - Visual Simulations
- (l) Stephen Brown – Landscape – strategic overview
- (m) Peter Rough (Peter Rough Landscape Architects) – Landscape assessment
- (n) Tony Penny (Traffic Design Group) – Traffic
- (o) Mark Mabin (URS) – Geomorphology
- (p) Peter Petchey – Heritage
- (q) Robert Greenaway (Tourism Resource Consultants) - Tourism/Recreation
- (r) John Kyle (Mitchell Partnerships) - Planning

Conclusions

233. New Zealand's decisions as to new electricity generation options (and therefore arguably its most significant response to climate change) are presently left to the market and decided on by the RMA consenting processes. Despite the clear need, renewable generation will only happen when it is economically viable and when it is given the necessary regulatory approvals. Alone,

policies do not make change happen. It is up to businesses and decision makers to ensure that the uptake of new renewable energy becomes a reality.

234. This project represents a very significant potential advance in New Zealand's response to the pressing needs to harness electricity in a cost effective manner, while addressing the significant challenge presented by climate change and affording the many benefits of responsible utilisation of renewable energy. We are confident that Project Hayes is in all respects worthy of consent.
235. We welcome this important hearing and undertake to you, on behalf of Meridian, that you will at all times have our co-operation and open assistance in the days and weeks which lie ahead.

AJL Beatson/AC Limmer
Counsel for Meridian Energy Limited

Dated 30 April 2007