

BEFORE THE BOARD OF INQUIRY

IN THE MATTER of the Resource Management Act
1991

AND

IN THE MATTER of a Board of Inquiry appointed
under section 146 of the Resource
Management Act 1991 to consider
an application by Mighty River
Power Limited for resource
consents to construct, operate,
and maintain a wind farm at
Turitea.

**OUTLINE OF OPENING LEGAL SUBMISSIONS OF COUNSEL FOR
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1. INTRODUCTION

- 1.1 New Zealand has a vital need for more electricity. It is a critical component of life, allowing businesses to function and grow, houses to remain warm and healthy, hospitals to continue to operate, the lights in this hotel to remain on. It is essential for economic growth – there cannot be significant growth without additional generation.
- 1.2 The New Zealand Government has determined that additional electricity generation is necessary. By the year 2025, 90% of all electricity generation must come from renewable sources, such as wind farms.
- 1.3 To achieve this, and to avoid the need for the development of non-renewable electricity generation sources, resource consents for renewable electricity generation projects need to be granted. In the past few months, numerous resource consent applications for the development of wind farms have been heard by various Courts, Boards of Inquiry, and Councils. Despite the Government's drive toward renewable energy, the economic benefits associated with additional secure and reliable electricity, the community's desire for sustainability, and the basic need to keep the lights on, it has proved to be a difficult ask. Several wind farm developments have recently been declined resource consent, and many of those that have been granted consent remain subject to appeal.¹ That background is an important part of the context for the proposal before this Board.
- 1.4 Continuing to ensure that electricity supply is sufficient to meet electricity demand, and that generation is as environmentally sustainable as possible, is a *national issue*. More than that, it is a *national challenge*. In *Upland Landscape Protection Society Incorporated v Central Otago District Council*;¹ the High Court recognised:

“the notorious fact that there is an ongoing risk of the demand for electricity not being matched for supply... The Court also takes cognisance of the notorious fact that where supply cannot match

¹ These include the Mt Cass, Waitahora, and Te Waka wind farms, all of which have been declined consent this year. In addition to Mt Cass and Waitahora, the Project Hayes, Taharoa C, Central Wind, and Mill Creek wind farms are all also currently under appeal.

*demand in electrical systems there has to be a partial shutdown of the distribution networks. For these reasons it is in the public interests for power supply companies to increase generating capacity. The question is not whether generating capacity should be increased but rather by what means and where.*²

- 1.5 Local effects must have all proper emphasis but they must not present an impassable or unduly weighted barrier to the development.. That consideration is especially pertinent in these proceedings, which have been called in and referred to this Board as a matter of national significance. The national effects of this proposal should be kept firmly in mind when measuring the local effects. Mighty River Power Limited (*Mighty River Power*) has rightly recognised these local effects, and has concentrated its attention on minimising them, and ameliorating their impact, at the same time as it seeks to champion a major contribution to the country's sustainable energy needs.

2. SCOPE OF SUBMISSIONS

- 2.1 The applications made are by Mighty River Power to the Palmerston North City Council (*PNCC*), Tararua District Council (*TDC*) and Manawatu-Wanganui Regional Council (*Horizons*) for resource consents required to authorise the construction, operation and maintenance of a wind farm at Turitea in the Tararua Ranges (*the Turitea Wind Farm*).
- 2.2 The principal consents required for the Turitea Wind Farm relate to:
- (a) vegetation clearance;
 - (b) the discharge of dust, wastewater, cleanfill, and stormwater;
 - (c) the establishment and operation of a wind farm;
 - (d) the storage of diesel;
 - (e) earthworks;
 - (f) land disturbance;

² High Court, Dunedin, CIV-2008-412-302, 16 September 2008 Fogarty J.

- (g) road upgrades;
- (h) exceeding noise standards in certain locations;
- (i) exceeding height requirements;
- (j) modification of a Significant Natural Feature; and
- (k) construction of a 220 kV electricity transmission line and substations.

2.3 Accordingly, it is proposed to:

- (a) briefly introduce Mighty River Power, the Turitea Wind Farm and the resource consents applied for;
- (b) introduce the experts that will be called to present evidence in support of the applications;
- (c) address the statutory context and relevant legal issues, including discussion of those issues circumscribing the physical environmental effects of the construction, establishment and operation of the Turitea Wind Farm;
- (d) comment on aspects of submitter concerns in respect of the applications;
- (e) address issues relevant to the reports commissioned by the Board pursuant to section 42A of the Resource Management Act 1991 (*RMA*), and recommended consent conditions; and
- (f) set out the principal submission in support of Mighty River Power's applications.

2.4 That principal submission is that the applications satisfy the relevant provisions of the RMA, including those in Part 2 and sections 104 and 141B(2).

2.5 The case for grant in the present circumstances is compelling, given the commitment to renewable energy that has been endorsed in Central Government's New Zealand Energy Strategy to 2050 (*NZES*), released

in October 2007 (the implications of which will be expanded on later in these submissions, and focused on in the evidence of Drs Heffernan and Layton in particular).

- 2.6 Mighty River Power's case is that on overall balance, the sustainable management purpose of the Act will best be promoted by granting the present applications. That submission is founded on the rigorous assessment, verification, and re-assessment undertaken by its experts, together with the comprehensive mitigation measures that have already been incorporated in the Turitea Wind Farm design and/or can be imposed by way of consent conditions. The evidence to follow will demonstrate that the adverse effects of the Turitea Wind Farm will be appropriately avoided, remedied and/or mitigated to a level that is consistent with the purpose of the Act, particularly when balanced against the project's substantial benefits and positive effects.
- 2.7 It is submitted that the evidence will show, and that the Board can justifiably conclude, that the applications should be granted in their entirety, subject to appropriate conditions.

3. MIGHTY RIVER POWER LIMITED

- 3.1 Mighty River Power is a state-owned electricity retailer and generator, formed following the reorganisation of the New Zealand electricity sector and disbandment of the Electricity Corporation of New Zealand in 1999. Its generation assets account for up to 22% of New Zealand's peak energy demand. In accordance with clear direction from the Government's energy objectives, Mighty River Power is seeking to diversify and increase its renewable generation portfolio through the development of the Turitea Wind Farm. It considers that Turitea represents a significant element in its wind development programme and a significant step towards achieving its goal of developing 500MW of wind generation by 2015. Mindful of the potential for effects on the environment, and of its responsibility to enhance New Zealand's sustainable energy resource, Mighty River Power has invested much time, money, and resources in developing the Turitea Wind Farm, which will be its *flagship* wind farm development.

- 3.2 As Dr Heffernan will describe, as a State Owned Enterprise, Mighty River Power's principal objective is to be a successful business; that is, an entity that is as profitable and efficient as comparable private companies. The State Owned Enterprises Act 1986 also requires Mighty River Power to be a good employer, an organisation that is economically focused, and one which demonstrates social responsibility to its communities. It aims to be a leader in the achievement of sustainable management through world-class management and utilisation of natural resources.
- 3.3 It is committed to wisely and sustainably managing the resources on which it depends to help meet New Zealand's energy needs. It is committed to sustainable business practices and environmentally responsible operations, and is a member of the New Zealand Business Council for Sustainable Development.
- 3.4 As Mr Williamson will describe in his evidence, Mighty River Power is a market leader in using renewable resources, and utilising them in an environmentally sustainable way for the efficient generation of electricity. It has a proven record in constructing, operating, and maintaining a range of renewable generation assets.
- 3.5 Mighty River Power's development of wind farms complements its hydro heritage and recent geothermal developments, and adds necessary diversity to New Zealand's generation portfolio, and its own electricity supply.

4. THE TURITEA WIND FARM

Contract with Palmerston North City Council

- 4.1 In 2005, Mighty River Power was selected through a competitive tender process by PNCC as its development partner for a wind farm to be built on council-owned land at the Turitea Reserve, with the potential (as indicated in the relevant tender documents attached to Mr Christopher Shaw's evidence) for this to be expanded onto neighbouring private land. The development agreement gives Mighty River Power a licence for the construction and operation of a wind farm, a lease of the relevant area and easements over the land for services associated with the wind farm.

4.2 The agreement required PNCC to undertake the necessary consultation and statutory processes to change the purpose of the Turitea Reserve under the Reserves Act 1977, to allow for electricity generation from renewable sources. This process was completed in October 2006, and was subsequently the subject of an unsuccessful judicial review application filed by the Friends of Turitea Reserve Society. The High Court decision dismissing that application³ confirmed the legality of the reserve purpose change, and noted that there was a sufficient link between the generation of the energy from the wind farm and the revenue stream from the wind farm (which was required to be utilised for reserve purposes) to warrant its characterisation as a local purpose rather than a government purpose. His Honour Justice Baragwanath further noted that the Court was satisfied that the Council could lawfully contract with Mighty River Power, **in effect fulfilling a local purpose** through the agency of a commercial (although state owned) power company, because:

- (a) the purpose of establishing the wind farm was a public purpose within its Reserves Act powers; and
- (b) the purpose of receiving revenue from Mighty River Power in order to apply that to the reserve was also lawful.

4.3 The agreement also requires PNCC, in its capacity as landowner, to *support* any application by Mighty River Power for the grant of any resource consent necessary under the agreement; provide written evidence of its support; and not to object to, oppose or impede any resource consent application made under the agreement. In anticipation of the close of submissions, and in accordance with the agreement, Mighty River Power requested that PNCC file a submission in support of the Turitea Wind Farm. Nevertheless, PNCC decided to file what it termed to be a “neutral” submission.

4.4 As Mr C. Shaw discusses in his evidence, the agreement provides the mechanism for the development of an Eco-Park within the Turitea

³ *Friends of Turitea Reserve Soc Inc v Palmerston North* [2008] 2NZLR 661

Reserve. The onus for the development of the Eco-Park under the contract falls on PNCC as landowner, rather than Mighty River Power. Mighty River Power does not rely upon it as part of its formal mitigation package, but is committed to funding its development. The payment of royalties to ensure the best possible Eco-Park proposal can be developed has been a strong motivating factor. To meet Mighty River Power's obligations to help develop that proposal for PNCC, Mr William Shaw has provided a draft Eco-Park proposal, which he discusses in his rebuttal evidence.

- 4.5 The Eco-Park is envisaged to provide Palmerston North with a world-class bird sanctuary, allowing for significant levels of pest control to be introduced, intensive re-vegetation and replanting to increase the amount and quality of the native vegetation present, and a unique amenity asset for the residents of Palmerston North.
- 4.6 PNCC's commitment to the Eco-Park, as reflected in the agreement, was confirmed in its October 2006 resolutions regarding the change of reserve purpose to allow for electricity generation.
- 4.7 These resolutions direct the Chief Executive of PNCC to work with the Department of Conservation (*DoC*) to develop a comprehensive plan to achieve the best practicable ecological enhancement of the Turitea Reserve, so that the indigenous biodiversity of the reserve is actively protected and enhanced for future generations if a wind farm is consented. They require PNCC to work with DoC to develop legal mechanisms that embed Council's responsibility to ensure revenue streams from the Turitea Wind Farm are directed in the first instance to the implementation of the Eco-Park development plan.
- 4.8 However, as Messrs William and Christopher Shaw will describe, despite Mighty River Power having provided a draft proposal for the Eco-Park to PNCC in mid-2008, to date, the Council has not substantially progressed this proposal, nor has it undertaken the necessary discussions with the DoC.

Wind Resource

- 4.9 As Mr Wong Too states in his evidence, the site at Turitea is one of the most exceptional sites that he has encountered, not just within New Zealand, but internationally. The most important factor in determining the quality of the wind resource is the mean hub height wind speed. The wind monitoring undertaken has demonstrated that the mean wind speeds at the site are consistently high, and to Mr Wong Too's knowledge exceed all existing wind farm sites in New Zealand. In addition, Mr Wong Too is only aware of two other sites in the world with higher mean wind speeds. This highlights the exceptional nature of the wind resource at Turitea.
- 4.10 Almost all of the wind monitoring programme measurements confirmed that the resource falls within the International Electrotechnical Commission's (IEC) Class 1A norms. This classification illustrates a particularly suitable, rare, and efficient site for wind turbines.
- 4.11 Wind resource is a major driver of capacity factor, which measures the energy that the wind farm produces over a year. Calculations for Turitea predict a high capacity factor – of between 43.6-46.6% – further indicating the exceptional nature of the wind resource. In addition to this high capacity factor, the Turitea Wind Farm is expected to generate electricity 90% of the time.
- 4.12 There are a number of additional factors that are important in evaluating the nature of the wind resource. One is the size of the proposed wind farm, which ensures economies of scale. One of the factors most critical to the constructability of wind farms in New Zealand is the currency exchange fluctuations, and wind farm procurement teams are constantly juggling this. The Turitea Wind Farm was designed in a holistic manner; with the placement of each turbine contributing to the predicted viability of the wind farm as a whole – having taken into account the environmental effects considerations under the RMA. Other factors that contribute to the overall suitability of the site include its proximity to the national grid and easy transport access.

4.13 Collectively, these factors combine to make plain the value and importance of the wind resource at the centre of this hearing, and which Mighty River Power has sought to harness in a way that promotes the purpose of the Act.

The Application Site and Surrounding Environment

4.14 The Turitea Wind Farm site is located approximately 10 kilometres to the south-east of Palmerston North City along ridgelines of the northern Tararua Ranges. The Wind Farm Site extends from Pahiatua-Aokautere Road in the north to the boundary with Harding's Park in the south. The turbines are to be located largely on the main ridge line, which is exposed to the prevailing north-westerly winds.

4.15 The overall site comprises 35 separate landholdings, some in private ownership and others publicly owned and administered primarily by PNCC. This includes the Turitea Reserve, Browns Flat, Tararua State Forest Park, private land holdings surrounding the Turitea Reserve on which turbines are proposed to be constructed, and private land holdings on which the external transmission line will be constructed. There are no turbines proposed for erection in the Tararua State Forest Park. The works proposed for the Forest Park are restricted to the upgrading of the existing Water Catchment Access Road where it dips into the Park at two points.

4.16 The land surrounding the Turitea Reserve mostly comprises cut-over, high country, native forest and shrubland. It is characterised by rural and rural lifestyle properties to the south, around Browns Flat and on the main foothill slopes facing Linton and Massey University's campus. Flanking the Reserve to the west, near the recent Ngahere Park subdivision, lies an area of existing semi-mature and harvested pine forest.

4.17 The wider environment includes a number of existing wind farms to the north, and the consented, but not yet constructed Motorimu Wind Farm to the south. These are as follows:

- (a) Tararua Stage 1, 2, and 3: 134 turbines (constructed);

- (b) Te Apiti: 55 turbines (constructed);
- (c) Te Rere Hau: 97 turbines (Stage 2 under construction); and
- (d) Motorimu: 80 turbines (consented but unlikely to be constructed).

4.18 Despite significant modification of the Tararua Ranges in many places, the underlying 'naturalness' of the landscape's main building blocks and related qualities represent high amenity value, the main components of which include:

- (a) The focal nature of the Tararua Ranges as a major topographic feature, especially when viewed from the wide expanse of the Manawatu Plain;
- (b) The rural nature of views and outlooks towards much of the Ranges and even from within them;
- (c) The relatively quiescent, tranquil nature of the landscape within and around Turitea Reserve; and
- (d) The presence of a broad expanse of native vegetation within the Reserve.

4.19 The Turitea Reserve is also home to one of Palmerston North's main sources of drinking water; the Turitea water supply catchment and associated water treatment plant. Uncontrolled public access to the water supply would increase the risk of micro biological contamination as well as vandalism. Access to the Turitea Reserve has therefore been limited to recreational hunting by permit, as a means of controlling that risk, and reducing the prospect of introduced animals in the Reserve. The level of public health protection provided by the existing Water Treatment Plant is in excess of that required by the Drinking-Water Standards for New Zealand.

4.20 The Turitea Wind Farm site is primarily located in the Manawatu Gorge South Ecological District. The site includes:

- (a) Tawa-dominant forest;

- (b) Shrub hardwood/tree fern forest;
- (c) Horopito forest;
- (d) Old clearings; and
- (e) Kamahi remnants.

4.21 Common species located in the area include tui, bellbird, silvereye, grey warbler, pied tit, whitehead, fantail, shining cuckoo, morepork, welcome swallow, kingfisher, paradise shelduck, New Zealand pipit, and Australasian harrier.

4.22 An in-stream assessment has identified that the habitat in the headwater catchments of the Turitea and Kahuterawa Streams is of very high quality and supports healthy aquatic communities. These areas are characterised by high gradient, hard bottomed, forested catchments.

4.23 State highways run along the base of both sides of the Tararua Ranges, with SH2 on the Tararua side (east) and SH57 on the Palmerston North side (west) of the Ranges. The state highways connect directly with other state highways serving the major ports of Napier, New Plymouth, and Wellington. Access to the site is primarily via Pahiatua-Aokautere Road. The Pahiatua-Aokautere Road connects SH2 with SH57, and provides an important alternative route when other routes, such as the Manawatu Gorge or Rimutaka Hill, are closed.

4.24 Three heritage sites are located within the site, being a stone wall and two quarry sites. None of them will be affected by the development of the Turitea Wind Farm.

The Turbine Zone Approach

4.25 To determine the ideal location for each wind turbine, Mighty River Power has utilised a 'zone approach' within the site (Mr James describes this more fully in his evidence).

4.26 The turbine zones are generally determined by the 5:3 ellipse described in Mr Henry's evidence. However, in some locations, particularly for some of the turbine zones on private land, the shape of the zone is more

oblong in nature due to topographical constraints, or other factors requiring a larger area at that specific location. In addition, turbine zone shapes and sizes vary because each zone provides one of the following:

- (a) A separate location identified for the 3MW and 2.3MW turbines. These turbine zones are typically elongated, with the nominal location of each type of turbine at the opposite end of the zone;
- (b) Both turbine variant located in the same location;
- (c) A 3MW only turbine zone; or
- (d) A 2.3MW only turbine zone.

4.27 Adopting a turbine zone approach has the benefit of:

- (a) Providing a minimum turbine separation distance (in accordance with industry best practice guidelines) to avoid turbulence effects;
- (b) Maximising the potential uninterrupted airflow; and
- (c) Allowing for flexibility in micro-siting turbines within each zone.

4.28 The turbine zone approach (or variants of this) has been adopted in a number of consented wind farm projects, including West Wind and Mahinerangi. As a result, it has become the “orthodox” approach to consenting wind farms in New Zealand (as for example, used by the court in *Meridian Energy Limited v Wellington City Council*),⁴ recognising the need to maintain design flexibility whilst providing certainty for the purpose of assessing and mitigating effects.

Modification of the Turitea Wind Farm – Reduction in Scale and Effect

4.29 The various factors that have influenced the final layout of the Turitea project, and the iterative process that was followed in this regard, are outlined in both the application documents and evidence as necessary, having regard to the possible extent of the project’s adverse effects on

⁴ W031/07.

the environment. For example, as noted in paragraphs 3.3, 3.4 and 3.6 of Mr Henry's evidence in chief, development and refinement of the current wind farm layout has included the following:

- (a) Prior to the siting of any turbine zones or access roads, certain areas were identified as "no go" areas within which no turbine zones or roads were to be located. These areas included:
 - The lower valleys of the Turitea Reserve, and areas adjacent to the water supply reservoirs;
 - Areas with steep topography and other physical features that would require significant earthworks for the formation of access roads and turbine platforms; and
 - Areas of ecologically sensitive vegetation.
- (b) Areas that fitted into any one of these criteria were eliminated from consideration as either potential turbine zone locations or areas through which roading would be placed. Wherever possible, areas within the water catchment were avoided as well.
- (c) The initial layout (as determined in particular by yield considerations and geographical constraints) was then optimised through input from a variety of experts. The initial turbine zone locations and access routes identified were reviewed through desktop surveys, aerial photographs and site visits. Where significant concerns were raised with particular turbine sites and/or access route locations, turbine locations were either moved or deleted, and access routes realigned. Through this process, the original 136 turbine zone layout was agreed upon with the AEE being prepared on the basis of that layout.

4.30 Subsequent to the applications being lodged, and as a result of on-going public consultation and engagement, Mighty River Power became aware of concerns held in the community that a number of the proposed turbine zones were too close to residential properties. Prior to the applications being formally notified, Mighty River Power therefore resolved to modify

the proposed layout to accommodate these concerns where practicable. This resulted in the deletion of 9 of the originally proposed turbine zones, 5 because of their proximity to residential properties, and 4 on the advice of Mighty River Power's ecologist (due to concerns as to potential impacts on the Browns Flat wetland).

- 4.31 Subsequent to the applications being formally notified, and having regard to the evidence presented by Mr Taylor and Mr Male on behalf of PNCC, Mighty River Power has also refined its proposal to place all soil disposal areas outside of the water supply catchment. In addition, road alignments have been changed to avoid native vegetation, and minimise vegetation clearance. These revisions are shown in the suite of engineering drawings provided to the Board on 22 June 2009, in response to queries from Mr Nigel Mark-Brown in the course of preparing his section 42A report.
- 4.32 Further, a Memorandum of Understanding has now been reached with Tanenuiarangi Manawatu Incorporated (*TMI*),⁵ resulting in the deletion of turbine zone 55 from the proposal.
- 4.33 As a result of these refinements, the Turitea Wind Farm is reduced in area and environmental impact. This review process has involved consideration of concerns raised by local landowners, key stakeholders and Mighty River Power's own expert advisors, and carefully developed responses to those concerns.
- 4.34 With respect to Mighty River Power's ability to make such modifications, it is noted that in *Wakatipu Environmental Society v Queenstown Lakes District Council*,⁶ the Court observed that it was inevitable that applications undergo refinement before they are heard. At paragraph [9] of its decision the Court stated, "*this is to be expected and encouraged by the Court to obtain the best possible outcome in environmental terms.*"

⁵ TMI is the mandated iwi authority for Rangitaane o Manawatu, the beneficiaries of which are the natural descendents of all the hapu of Rangitaane o Manawatu.

⁶ C164/04

4.35 Several other cases have discussed the Court’s jurisdiction in assessing an amended proposal. In *Darroch v Whangarei District Council*⁷ the Environment Court stated:

“...where it is consistent with fairness, amendments to design and other details of an application may be made up to the close of a hearing. However they are only permissible if they are within the scope defined by the original application. If they go beyond that scope by increasing the scale or intensity of the activity... or by significantly altering the character or effects of the proposal, they cannot be permitted as an amendment to the original application.”

4.36 In *Shell NZ Ltd v Porirua City Council & Ors*⁸ the Court of Appeal stated:

“...that jurisdiction to consider an amendment to an application is reasonably constrained by the ambit of an application in the sense that there will be permissible amendments to detail which are reasonably and fairly contemplatable as being within the ambit, but there may be proposed amendments which go beyond such scope. Whether details of an amendment fall within the ambit or outside it will depend on the facts of any particular case, including such environmental impacts as may be rationally perceived by an authority.”

4.37 In *Atkins v Napier City Council*⁹, Justice Wild analysed several cases¹⁰ to determine the correct application of the test as to whether modification to a consent application might remove jurisdiction to grant consent. He then outlined the test as follows:

“I consider the test, as developed by the Environment Court and Court of Appeal through a series of cases, is whether the activity for which resource consent is sought, and ultimately proposed to

⁷ A018/93

⁸ CA 57/05

⁹ CIV 2008-441-000564, 18 December 2008, Justice Wild, High Court Napier

¹⁰ *Wanaka Marina Ltd v Queenstown Lakes District Council* C 98/98; *Pope and Hitchings v Wellington City Council* [1980] 8 NZTPA3 (PT); *Frasers Papamoa Ltd v Tauranga City Council* W90/2007; *Shell NZ Ltd v Porirua City Council & Ors* CA 57/05.

the consent authority, is significantly different in its scope or ambit from that originally applied for and notified (if notification was required) in terms of:

The scale or intensity of the proposed activity, or

the altered character or effects/impacts of the proposal.

Whether there might have been other submitters, had the activity as ultimately proposed to the consent authority been that applied for and notified, is a means of applying or answering the test.”¹¹

4.38 It is submitted that the removal of the soil disposal sites, roading re-alignments, and removal of turbine 55 all fall squarely within the scope of Mighty River Power’s original applications, and therefore can be made without the need for the project to be re-notified, given that the revised proposal:

- (a) has not increased the scale or intensity of the activity. In fact, the revisions reduced the number of turbine zones from 136 to 126, and the number of turbines from 131 to 121;
- (b) represents further measures to mitigate perceived adverse effects resulting from the project, following consultation with members of the public; and
- (c) reduces the area affected by the wind farm. As such, it is considered highly unlikely that there would be any further parties who would have submitted on the revised proposal, who have not already done so (particularly having regard to the number of submissions received on the original applications).

4.39 It therefore formally seeks to amend its application to include each of those three modifications.

¹¹ Supra note 9 para [20] – [21].

Key Components of Current Proposal

4.40 Mr Henry's evidence outlines the key components of the applications. Mr James' evidence then details their technical engineering aspects. With reference to the amended proposal, the central aspects now include:

- (a) a maximum of 126 possible turbine zones, within which a maximum of 121 turbines will be constructed (reflecting the deletion of 10 turbines from the original application documents, as noted above), with up to 61 turbine zones to be located within the Turitea Reserve, and up to 65 turbine zones to be located on adjacent private land. The turbines will be three-bladed, with a maximum turbine hub height of 80m, and a maximum blade length of 45m;
- (b) a maximum installed capacity of 333MW (dependent on final turbine selection);
- (c) individual transformers placed at each turbine, which may be either located within the turbine or placed adjacent to the turbine on a purpose built foundation, dependent on final turbine selection. Transformer size varies, depending on the size of the turbine, but is nominally up to 2.5m wide by 2.5m high by 4m long;
- (d) construction of two internal substations within the Turitea Reserve, one located within the Browns Flat area, and the other in an area of pine plantation;
- (e) construction of on-site workshops and control rooms as part of the substation complexes;
- (f) three permanent monitoring masts of up to 80m in height;
- (g) the erection of two overhead 220kV transmission lines. One will be 6.1km long and will link the two internal substations, and the other will extend 5.2km from the Browns Flat substation within Turitea Reserve to the existing Linton Substation;
- (h) construction of an internal access road network, including 33km of new roads, the upgrading of 24km of roads within the Wind Farm

site, the upgrade of 0.7km of Greens Road, and the upgrade of 1.7km of the existing Love Farm Drive;

- (i) the construction of four stream crossings. The previously required fifth stream crossing (located near turbine zones 0115 and 0117) is no longer necessary due to the realignment of the access road;
- (j) an internal reticulation network of 33kV underground cables and overhead lines (where undergrounding is not possible), generally along internal access tracks connecting turbines and internal substations;
- (k) the establishment and operation of two temporary concrete batching facilities for use during construction;
- (l) the removal of up to 25ha of indigenous vegetation (excluding grassland and pasture clearance) within the Turitea Reserve and the removal of a further 3ha of indigenous vegetation outside the Reserve;
- (m) the disposal of up to 940,000m³ of excess excavation material at identified disposal areas within the site, over an area of 40 ha;
- (n) on-going maintenance activities including the monitoring, repair and replacement of turbine components, substation equipment, reticulation network, transmission lines and structures, monitoring masts and roading; and
- (o) site reinstatement, re-vegetation and new areas of planting within the site.

Resource Consents Required and Activity Status

4.41 Mighty River Power requires a number of consents from PNCC, TDC, and Horizons. The consents required for the project are identified in Mr Pollock's evidence in chief, and the consents required from each authority have been agreed to by the relevant planning expert for that authority.

- 4.42 Mr Pollock has concluded that the consent status of the Turitea Wind Farm is that of a 'discretionary' activity. While individual aspects of the proposal are *permitted* activities, and the proposal also involves a number of *controlled* and *restricted discretionary* activities, as a bundle, the applications need to be assessed as for discretionary activities (see *King v Auckland City Council*).¹²
- 4.43 Under section 104B of the RMA, the Board has jurisdiction to grant or refuse consent to discretionary applications and, if consent is granted, to impose any conditions it "*considers appropriate*" (section 108). Mighty River Power has, with its independent experts, and as amended through caucusing that has taken place between the experts, prepared a suite of proposed consent conditions that will sufficiently avoid, remedy or mitigate actual and potential effects arising from the Turitea Wind Farm. That caucusing remains ongoing as a result of the recent section 42A reports, as is the development of relevant conditions.

Supporting documentation

- 4.44 In August 2008, Mighty River Power lodged a comprehensive AEE in support of its resource consent applications. This was later supplemented with responses to section 92 requests for further information made by PNCC, TDC, and Horizons.
- 4.45 In January 2009, prior to notification of its applications, Mighty River Power amended its proposal by deleting 9 turbine zones from its original layout. As part of the modification process, Mighty River Power circulated statements from relevant expert witnesses regarding the effect of the deletion of those turbine zones, as well as a proposed layout document.
- 4.46 By letter dated 9 June 2009, the Board issued an informal request for further information regarding various aspects of the project to Mighty River Power. Mighty River Power responded to that request by way of a letter dated 18 June 2009, which has been circulated to all parties. Further requests for information have also been received from the

¹² [2000] NZRMA 145

section 42A report authors, which Mighty River Power has also responded to, via the Turitea Project Coordinator.

5. EVIDENCE TO BE CALLED

- 5.1 The evidence for Mighty River Power is the culmination of several years of detailed and extensive assessment by a range of highly experienced experts and Mighty River Power technical personnel, all of whom have significant practical experience in the assessment and management of large-scale energy infrastructure projects.

Mighty River Power's witnesses

- 5.2 You will hear from 29 witnesses during the presentation of Mighty River Power's case, whose evidence, qualifications and experience encompasses the following:

5.3 Introduction to Mighty River Power

- (a) **Dr Martin Douglas Heffernan** is the Chief Executive of Mighty River Power, a position he has held since the formation of the company in 1998. He has overall responsibility for Mighty River Power's operations. Dr Heffernan holds a Bachelors degree, a Masters degree in Electrical Engineering, and a Doctor of Philosophy, from the University of Canterbury. He is also a Fellow of the Institute of Professional Engineers of New Zealand, and has been involved in the development of market systems and pricing models commensurate with the government policy changes of the past 20 years. The purpose of Dr Heffernan's evidence is to outline Mighty River Power's responsibilities and commercial and environmental objectives. He also comments on the significance of the proposed Turitea Wind Farm for the Manawatu region and the New Zealand electricity sector generally.

5.4 Environmental Compliance

- (a) **Gavin Williamson** is the Hydro Generation Manager at Mighty River Power. Mr Williamson holds a Master of Science (with First Class Honours) from Massey University. Mr Williamson is

responsible for compliance with relevant health and safety, environmental and quality standards and relevant legislation, local government planning documentation, and all resource consents that relate to the operation of Mighty River Power's hydro-generation assets. Mr Williamson's evidence describes Mighty River Power's extensive environmental policies and its impressive compliance record in respect of its existing assets.

5.5 Contractual Relationship with PNCC

- (a) **Christopher Shaw** is the Commercial Manager, Generation Development (Projects) at Mighty River Power, a role he has held since April 2004. In this position he is responsible for all commercial arrangements and outcomes associated with securing, consenting and constructing new power station developments. He has been involved in all commercial negotiations that have occurred and agreements that have been reached with landowners regarding the wind farm. His evidence addresses the issues relating to development of turbines on private land, and the provisions of the contract with PNCC relating to water quality effects and development of the Eco-Park.

5.6 Project Description and Consultation

- (a) **Mark Henry** is the Project Manager for the Turitea Wind Farm. He holds a Master of Science with honours from Waikato University. Mr Henry has worked at Mighty River Power since 2000, initially as an Environmental Advisor specialising in resource management processes relevant to the company's wider business interests and, since 2007, as a Project Manager within the generation development business unit. The purpose of Mr Henry's evidence is two-fold: first, he describes the key aspects of the project, and how the Turitea Wind Farm was developed. Second, he discusses the extensive consultation process that has been undertaken, and the agreements that have been reached with various parties.

5.7 Wind Resource at Turitea

- (a) **Philip Wong Too** is a Senior Engineer at Garrad Hassan, an international consultancy established in 1984 to provide independent expert advice on wind energy projects and engineering. Mr Wong Too is a Chartered Professional Engineer, holding a Bachelor of Engineering in Natural Resource Engineering with 1st Class Honours (1995) from the University of Canterbury and a Bachelor of Science in Physics (1993) from Victoria University of Wellington. He has over twelve years' experience in the wind energy industry, covering prospecting for wind farm sites, developing wind monitoring programmes and energy projections, as well as the layout, design, construction and operation of wind farms. Mr Wong Too's evidence will describe the quality of wind resource available at the Turitea Wind Farm site, and the significance of that wind resource.

5.8 Economic Effects

- (a) **Dr Thomas Brent Layton** is a senior fellow, and former Chief Executive of the New Zealand Institute of Economic Research (*NZIER*). He graduated from Victoria University of Wellington with a Bachelor of Commerce and Administration in Economics, a Bachelor of Arts with First Class Honours in Economic History and Econometrics and a Doctor of Philosophy in Economic History. He has specialised expertise in the electricity market, and was recently appointed as the chair for the Ministerial review panel charged with reviewing the electricity sector. Dr Layton is also the principal author of a report for Business New Zealand on international experience with greenhouse gas emissions trading and a framework for emissions trading in New Zealand. Accordingly, his evidence addresses the economic effects of the Turitea Wind Farm, the potential sources of value to the community of the Turitea Wind Farm arising from generation of electricity, reduced use of other generation with greenhouse gas emissions, contribution to the resilience and security of the wider electricity system, and expenditure impacts in the local economy.

5.9 Climate Change

- (a) **Professor Ralph Sims** is Professor of Sustainable Energy and Director of the Centre for Energy Research at Massey University, Palmerston North, and is currently based with the Renewable Energy Unit of the International Energy Agency, Paris as a Senior Energy Analyst. Professor Sims has more than 30 years experience in renewable energy systems and climate change analysis. He was a Lead Author on renewable energy for the Intergovernmental Panel on Climate Change (*IPCC*) Third Assessment Report – Mitigation (2001) and the Co-ordinating Lead Author for the Energy Supply chapter of the IPCC Fourth Assessment Report published in May 2007. Professor Sims' evidence rebuts the evidence in chief of Jeffrey Alan Baker and Marian Whitney Melhuish, by addressing the benefits of renewable energy in mitigating the effects of climate change.

5.10 Electricity Transmission

- (a) **Paul Baker's** evidence addresses electricity transmission matters, in rebuttal of the evidence in chief of Ms Melhuish and Bryan Leyland. Mr Baker is the Managing Director of Energy Link, which provides forecasting, modelling, consulting and professional training services to the electricity market. He has also previously worked at the Crown Company Monitoring Advisory Unit (*CCMAU*), within Treasury. Mr Baker holds a Master of Commerce with Honours in Operations Research.

5.11 Design and Engineering

- (a) **Christopher James** is the lead wind farm civil designer for Beca Carter Hollings and Ferner Limited. He has more than 40 years' practical experience in civil design. His evidence includes a description of the key construction works and construction period for the project. Mr James also discusses the vegetation removal requirements, key land disturbance activities, potential sources of discharge, and other construction considerations, for the Turitea Wind Farm. Various aspects of Mr James' evidence have been

peer reviewed in order to give the Board added certainty regarding construction activities and effects.

- (b) **Graham Levy** is a Technical Director of Water Resources Engineering, with Beca Infrastructure Limited. He has 33 years' professional experience in the development and management of water resources, and a Master of Civil Engineering from the University of Canterbury, specialising in hydrology and hydraulics. Mr Levy has a particular background in infrastructure development, and the effects of infrastructure on the aquatic environment, with an emphasis on hydrological, morphological and water quality effects. His evidence includes a technical discussion of the issues, potential effects and proposed mitigation (where required), in respect of the construction environmental management, erosion and sediment control measures, and water quality within the water supply and adjacent catchments. His evidence discusses the environmental management and sediment and erosion techniques designed to provide a robust mitigation programme, good environmental outcomes and acceptable overall effects.
- (c) **Andrew Watson** is the Technical Director – Water Supply, with Beca Infrastructure Limited. He holds a Bachelor of Engineering (Civil) from the University of Auckland, and a Master of Engineering Science (Water Engineering) from the University of New South Wales. He is also a member of the American Water Works Association, Water New Zealand, the Australian Water Association, and the New Zealand Hydrological Society. Mr Watson was previously the project manager for the upgrading of the Turitea Water Treatment Plant, and his evidence comments on and responds to some of the primary evidence presented in respect of these applications that relate to potential impacts on the supply of drinking water to the city of Palmerston North.
- (d) **Gavin Alexander** is a Technical Director within the Geotechnical Group at Beca Infrastructure Limited. He has more than 28 years of practical experience in geotechnical engineering, graduating with a Bachelor of Engineering from the University of Auckland, and

obtaining a Masters in Soil Mechanics and Engineering Seismology from Imperial College, London. He is a New Zealand Chartered Professional Engineer, a Fellow of the Institution of Professional Engineers of New Zealand, and a Member of the New Zealand Geotechnical, Structural Engineering and Large Dam Societies. Mr Alexander will present rebuttal evidence to further describe the extensive geotechnical work that was embodied in the evidence in chief of Mr James, and to respond to geotechnical issues raised in the evidence of Dr Alan Sandford Palmer.

- (e) **Anthony Parsons'** evidence comments on, and responds to, evidence in chief presented in respect of these applications that relate to civil engineering design and construction and environmental management matters. In particular, he comments on the evidence of Messrs James and Levy, by describing and providing comment on the adequacy of the civil engineering design, the water quality, earthworks erosion and sediment control measures proposed for the project, and the Construction Environmental Management Plan. Mr Parsons has more than 40 years' experience as a civil engineer, graduating from the University of Auckland with a Bachelor of Engineering in 1962. He also is a member of the Institution of Civil Engineers (UK) and the Institute of Engineers Australia and is a Chartered Engineer in both jurisdictions.
- (f) **Scott Vaughan** is Managing Director of Riley Consultants Limited, and a professional civil engineer. He holds a Bachelor of Engineering with honours from the University of Auckland, and is a New Zealand Chartered Professional Engineer, a member of the Institute of Professional Engineers of New Zealand, and a member of the New Zealand Geotechnical Society. Mr Vaughan also has extensive experience in the design of wind farms, having been involved in the design of both the Mahinerangi and Tararua 3 wind farms. His rebuttal evidence comments on the evidence of Messrs James and Levy, by describing and providing opinion on the adequacy of the civil engineering design, the water quality,

earthworks erosion and sediment control measures proposed for the project, and the Construction Environmental Management Plan.

5.12 Landscape Effects

- (a) **Allan Wyatt** is a highly experienced landscape architect and a Partner of Environmental Resources Australia Pty Limited. He is also the ERM Director responsible for Landscape Architecture in Australia and South East Asia, and holds a Graduate Diploma in Landscape Design from the Royal Melbourne Institute of Technology. Mr Wyatt has developed specialist expertise in the visual assessment of proposed wind farm developments, and has carried out extensive investigations and analyses for more than 30 wind farm developments throughout Australia. He is an Associate of the Australian Institute of Landscape Architects, and a Fellow and member of the executive of the Victorian Planning and Environmental Law Association. Mr Wyatt's evidence addresses the potential landscape and visual amenity effects of the Turitea Wind Farm.
- (b) **Stephen Brown** holds a Bachelor of Town Planning and a post-graduate Diploma of Landscape Architecture, and has more than 26 years' experience as a landscape architect in New Zealand. Mr Brown has undertaken assessments of a number of wind farm projects in New Zealand, and has also undertaken and participated in many landscape assessments aimed at identifying landscape values at the district and regional levels. However, in respect of the Turitea Wind Farm, Mr Brown's assessment and evidence is confined to the quality of the landscape surrounding the Turitea Wind Farm site, including identification of both Outstanding Natural Landscape/Features, and Amenity Landscapes within the sub-regional catchment that surrounds Turitea.
- (c) **Brad Coombs**¹³ is an Associate, Senior Landscape Architect, and the Tauranga Manager of Isthmus Group Limited. He holds the

¹³ We understand that on behalf of PNCC, Mr Maassen has agreed to now withdraw his challenge to all but paragraphs 4.14-4.17 of Mr Coombs' evidence.

qualifications of Bachelor of Landscape Architecture (Hons), and Bachelor of Horticulture. He has advised Mighty River Power in respect of its submission to Horizons regarding the Proposed One Plan, and has prepared evidence for the associated hearing. His evidence in respect of the Turitea Wind Farm comments on, and responds to, that of Mr Phillip Hindrup regarding the status of the skyline of the Tararua Ranges within the Proposed One Plan.

5.13 Social Impact and Community Perception Survey

- (a) **Emanuel Kalafatelis** is a partner of Research New Zealand, and is responsible for managing the company's research and evaluation work. He holds a Bachelor and Honours in Social Geography from the Victoria University of Wellington. His evidence addresses the results of a public perception survey, which was undertaken between 27 March and 7 April 2009 with residents living within approximately 15km of the Turitea Wind Farm.
- (b) **Dr Peter Phillips** is the Managing Director of Dialogue Consultants Limited, and holds a Doctor of Philosophy. Over the last 25 years he has undertaken a wide range of public consultation exercises and social impact assessments in both New Zealand and overseas. This work has focused mainly on infrastructure development and public policy, and Dr Phillips was, most recently, the consultation adviser to Transpower on the North Island Grid Upgrade Project, and undertook the social impact assessment for the same project. His evidence responds to the social impact aspects of Mr Baines' evidence, and also addresses those aspects of Mr Clive Anstey's and Mr Jeff Baker's evidence relating to the application of social science method to the interpretation of qualitative information.

5.14 Noise Effects

- (a) **Nevil Hegley** is the Principal of Hegley Acoustic Consultants Limited. He holds a Master of Science from Southampton University, has more than 30 years' experience in acoustics, and has assisted in the acoustic investigations for almost 20 wind farm projects. Mr Hegley's evidence details his investigations regarding

compliance with the relevant accepted industry standard for wind farm noise control and mitigation.

- (b) **Christopher Day** is a Principal of Marshall Day Acoustics Limited. He holds a Bachelor of Engineering from Monash University, Australia. Mr Day has more than 35 years' experience as an acoustics engineer, and has, with his team, worked on numerous wind farm proposals. He has undertaken a peer review of Mr Hegley's evidence and as a result of which, he concurs with, and supports Mr Hegley's conclusions regarding possible acoustic effects of the project, and the nature of appropriate conditions.

5.15 Health Effects

- (a) **Dr David Black** is Honorary Senior Lecturer in Environmental Medicine at the School of Population Health of the University of Auckland's Faculty of Medical and Health Sciences. Dr Black holds BHB (Bachelor of Human Biology) and MBChB (Bachelor of Medicine and Bachelor of Surgery) degrees from the University of Auckland. He has developed specialist experience in the health and safety aspects of the electricity generation, distribution and supply industry and in the telecommunications industry. He has recently worked on a number of wind farm proposals, and his evidence addresses the potential for health effects to arise from the operation of the Turitea Wind Farm.

5.16 Ecological Effects

- (a) **William Shaw** is the Principal Ecologist and a Director of Wildland Consultants Limited. He holds a Master of Science from the University of Canterbury, and has particular expertise in ecological management (especially ecological restoration), the evaluation of ecological significance, and the assessment of ecological effects of actual and proposed land uses. He has undertaken an assessment of the potential ecological effects of the Turitea Wind Farm on the environment, and assisted with development of the mitigation package that addresses those effects.

5.17 Avifauna Effects

- (a) **Professor John Craig** is Professor of Environmental Management at the University of Auckland, and holds a PhD in ecology from Massey University. He has 40 years' experience working in New Zealand environments, both as a researcher, and as an expert witness relating to terrestrial and avian ecology. Professor Craig's evidence is a peer review of the Ecological Assessment of the proposed Turitea Wind Farm as it relates to avifauna, which was prepared by Mr William Shaw.

5.18 Aquatic Ecology Effects

- (a) **Dr Brian Coffey** is a freshwater ecologist, holding a Bachelor of Science, Master of Science with honours and Doctor of Philosophy from the University of Auckland. He is a past president of the New Zealand Limnological (freshwater sciences) Society, and has more than 35 years' experience in aquatic ecology. Dr Coffey's evidence addresses the potential effects of the Turitea Wind Farm on in-stream aquatic ecology. He discusses the potential effects of constructing the proposed wind farm on aquatic ecology, and the application of industry best practice in order to avoid and/or mitigate those effects.

5.19 Traffic Effects

- (a) **Richard Galloway** is a senior transportation engineer of Traffic Design Group. Mr Galloway has a Bachelor of Engineering from the University of Canterbury, and has been involved in the design of more than 12 wind farm projects, both in New Zealand and the United Kingdom. Mr Galloway's evidence describes traffic-related effects during the construction phase of the Turitea Wind Farm and addresses in detail the routes proposed for turbine transportation. Mr Galloway and Mr Tate (appearing for PNCC) have agreed to a set of conditions of consent, and concur that if these are adhered to, the transportation related effects will be acceptably minor in accordance with the purpose of the Act.

5.20 Archaeological Effects

- (a) **Dr Rodney Clough** is the Director of Clough & Associates Limited, Heritage Consultants. He holds a Doctorate in Archaeology from the University of London and a Master of Arts in Anthropology from the University of Auckland. Dr Clough has 35 years' experience in the field of archaeology. His extensive experience includes research, survey, investigation, analysis and report preparation, covering a variety of time periods and geographic locations. Dr Clough has prepared an assessment of the potential heritage effects of the Turitea Wind Farm, and discusses the management processes that will address potential effects.

5.21 Radio Effects

- (a) **Jason Hills** is a Senior Engineering Consultant with Kordia[®] Limited. He holds a Bachelors with honours majoring in Information Engineering from Massey University, and has worked in the radio communications industry for nine years, five of these with BBC Research and Development in the United Kingdom. Mr Hills' evidence outlines the assessment he has undertaken regarding the potential for interference effects to various radio communications facilities resulting from the proposed Turitea Wind Farm, and how such effects will be appropriately avoided, remedied or mitigated.

5.22 Planning

- (a) **Greg Pollock** is the Business Development, and Technical Director - Planning, with Beca Carter Hollings and Ferner Limited. He holds the qualifications of Bachelor of Resource and Environmental Planning (Hons), Master of Resource and Environmental Planning, and a Diploma in Business Studies (Dispute Resolution). Mr Pollock has 13 years' professional experience in planning, and has practised in both New Zealand and Australia. Mr Pollock's evidence addresses the Board on relevant provisions of the RMA and relevant statutory documents, and

describes how the sustainable management purpose of the RMA will be provided for by granting the present applications.

Qualification of Mr James as Expert Witness

5.23 Counsel understand that a concern was raised in the course of the Hauāuru mā Raki hearing regarding the qualifications of one of the common witnesses between that Board of Inquiry hearing, and the present proceedings, Mr Christopher James. Notwithstanding that concern, Counsel submits his status is as an expert witness in this proceeding.

5.24 Mr James is employed by Beca Carter Hollings and Ferner Limited as a senior civil designer, based in its Wellington office, and has been called to give evidence as a wind farm *designer*. Although Mr James is not formally qualified as a civil engineer, he has more than 40 years' experience working on the design and construction of a range of civil engineering projects, including: wind farms, roading, industrial sites, marine works, water supply and sewage schemes. Mr James has undertaken the roading and turbine assembly area construction designs for three consented wind farms: Te Apiti, White Hill, and West Wind. He has also undertaken preliminary designs for six other windfarms, totalling 525 turbines, and 320km of roads.

5.25 The Environment Court has previously considered the situation of a witness asserting status as an expert without having formal qualifications on several occasions. In each case, the Court determined that formal qualifications are not a necessary prerequisite.

5.26 *Scurr v Queenstown Lakes District Council*¹⁴ involved an appeal in respect of a decision to decline resource consent to subdivide a parcel of land in Wanaka. Mr Haworth, representing the Upper Clutha Environmental Society (a section 271A party), claimed to be an expert with regard to matters canvassed in the appeal and those planning matters pertaining to the Upper Clutha area. Mr Haworth was the President of the Upper Clutha Environmental Society, a position he had

¹⁴ C060/05.

held for nine years since its inception. Mr Haworth also held a degree in Business Studies, was a qualified accountant, and had lived and worked in Wanaka for 14 years as an owner/operator of a backpacker lodge business, which he considered made him very familiar with the aspects of the visitor industry in Upper Clutha. He had represented the Society at a number of hearings regarding the District Plan, subdivisions and resource consent applications.

5.27 When determining whether Mr Haworth could be regarded as an expert witness the Environment Court noted that:

“The essential privilege of an expert witness as compared to a lay witness, is to be allowed to express opinions. There is clear New Zealand authority that to qualify as an expert witness one need not necessarily have formal, professional qualifications.”¹⁵

5.28 In *Cash for Scrap Limited v Manukau City Council*¹⁶ the Environment Court affirmed *Scurr*, and stated:

“it is of course possible for someone to be qualified as an expert witness without formal qualifications and having instead extensive experience.”¹⁷

5.29 In the present circumstances, Mr James has specialised knowledge based on considerable and in-depth experience in the field of civil engineering and drafting. Although he is without formal qualifications as a civil engineer, it is submitted his substantial and specialised experience supports his opinion, and the value of that opinion, in wind farm design and engineering, is such as to qualify him as an ‘expert’.

5.30 If the Board consider it necessary, the matter can be approached in another way. That is, section 4B of the Commissions of Inquiry Act 1908 applies (by virtue of section 41 RMA), and pertains to evidence that may be presented in a hearing such as this.

¹⁵ Ibid at [para 47].

¹⁶ A198/05.

¹⁷ Ibid at at [para 32].

5.31 Section 4B enables the Board to receive as evidence any statement, document, information, or matter that in its opinion *may assist it* to deal effectively with the subject of the inquiry hearing, whether or not it would be admissible in a Court of law. Accordingly, even if the Board were to reach an unfavourable conclusion as to the strict admissibility of Mr James' evidence, it may still be received by the Board to assist it in dealing with civil engineering and design matters pertinent to the resource consent applications at issue.

6. STATUTORY AND LEGAL CONTEXT

6.1 Mighty River Power's applications for consent were lodged in August 2008, so the provisions of the RMA as amended by the Resource Management Amendment Act 2005 (together with all previous amendments) apply. Section 104(1) sets out the matters to which you are required to have regard to in determining the applications. Section 104(1) is subject to Part 2 of the Act, both which are addressed fully below.

6.2 The fundamental issue for the Board to bear in mind in weighing and evaluating the evidence and exercising discretion is the Act's single broad purpose as set out in section 5:

"(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) 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.*”

- 6.3 The Environment Court has noted in a number of decisions, that 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 and the scale or degree of them, and their relative significance in the final outcome (see *Genesis Power Limited v Franklin District Council*).¹⁸
- 6.4 The Court held in *North Shore City Council v Auckland Regional Council*¹⁹ that where a proposal is found to promote one or more of the aspects of sustainable management on some issues, and on others is found to attain in part, or not to attain fully, one or more of the aspects described in subsections 5(2)(a), (b) or (c), it would be wrong to conclude that the latter overrides the former with no judgment of scale or proportion.
- 6.5 The Court noted in *Genesis* that the remaining sections in Part 2 then inform and assist the single purpose of the Act. Those sections must not be allowed to obscure the sustainable management purpose of the Act, but rather should be approached as factors in the overall balancing exercise to be conducted by decision-makers acting under it.²⁰ Those who appear before you in this hearing may emphasise different aspects of, or approaches to, considerations arising under Part 2, but in the final analysis these considerations are but factors in the overall balancing.
- 6.6 Importantly, in the *Genesis* decision, the Court also confirmed (at para [61]) that the positive effects of a development must be considered in order to make the ultimate judgment. In this regard, the Court usefully identified and summarised the positive effects of renewable energy as follows:

¹⁸ [2005] NZRMA 541, at para [51].

¹⁹ [1997] NZRMA 59, at 93.

²⁰ *Supra* note 18 at para [53].

- (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) more thermal generation will have adverse effects, including contributing to climate change and depleting fossil fuels.
- (c) as a matter of national energy policy set in accordance with relevant legislation, New Zealand is pursuing options for renewable energy.
- (d) the benefits of renewable energy include:
 - (i) security of supply (achieved through diversification of New Zealand's generation base);
 - (ii) reduction in greenhouse gas emissions (through meeting the national need for electricity without contributing to New Zealand's greenhouse gas emissions during operation);
 - (iii) reduction in dependence on the national grid (through local demand support and load support);
 - (iv) reduction in transmission losses (by reducing supply requirements from distant sources);
 - (v) reliability of supply (once built, a hydro power station has no fuel price exposure, and is dependent only on sufficient annual water supply);
 - (vi) development benefits; and
 - (vii) contribution to New Zealand's renewable energy target.

6.7 The Court in *Genesis*²¹ (referring to *NZ Rail Ltd v Marlborough District Council*²²) also stated that where Part 2 matters compete amongst themselves, regard must be had to the statutory hierarchy as between

²¹ Ibid at para [55].

²² [1994] NZRMA 70.

sections 6, 7 and 8 as part of the balancing exercise. Part 2 matters are subordinate to the primary purpose of the Act – and in *NZ Rail* the preservation of the natural character of the coastal environment (a section 6(a) matter) was found to be subordinate to the primary purpose of promoting sustainable management.

- 6.8 In recognising and providing for section 6 matters, those provisions are accessory to the principal purpose of the Act. Likewise, so far as section 7 matters are concerned, it is clear that “particular regard” is to be had to those considerations in the context of achieving the purpose of the Act.²³
- 6.9 Although factors such as those in sections 6, 7 and 8 are important to the exercise undertaken by the Board, they “*are not intended to be applied as a series of competing considerations liable to undermine achievement of the purpose laid down in s5*”.²⁴ Thus, as noted by the Environment Court in *Kemp v Queenstown Lakes District Council*,²⁵ effects on matters of national importance are not required to be avoided at all costs, but can appropriately be remedied or mitigated as provided for in section 5(2)(c).
- 6.10 Matters not listed in the RMA as matters of national importance may be still taken into consideration on that basis if a particular activity assumes national importance. That is, whilst such an activity cannot override the purpose of the Act, or take priority over or add to matters listed in section 6, the matters in Part 2 can be balanced against a specific activity that is proved to be of national importance (*Marlborough District Council v NZ Rail Limited*).²⁶ This is the approach taken by the Environment Court in *Ngati Rangi Trust v Manawatu-Wanganui Regional Council*,²⁷ where the efficiency of electricity generation was recognised as being a matter in the national interest that could be taken into account in the context of

²³ see *Auckland Volcanic Cones Society Inc v Transit New Zealand* [2003] 7 NZRMA 316, at para [60].

²⁴ see *Minister of Conservation v Western Bay of Plenty District Council* A71/2001, at para [30].

²⁵ [2000] NZRMA 289, at 323.

²⁶ [1995] NZRMA 357.

²⁷ A67/2004, at paras [401]-[402].

considering resource consent applications for the continued operation of the Tongariro Power Development.

- 6.11 Such an approach was also discussed in *Takamore Trustees v Kapiti Coast District Council*²⁸, where Justice Ronald Young held that

“Section 5 defines sustainable management in such a way that the extent of the project being considered under the RMA will have a bearing on how a decision under the Act affects sustainable management. This in turn will affect some of the balances to be struck within the statute...the size and the potential benefits of a project cannot be ignored in s5.”

- 6.12 His Honour went on to note that rather than imposing a “characterisation” of national importance to indicate the relative importance of the project, it *“may be preferable for an identification of the size of the project and the effect it will have on the lives of people and the environment in every sense. This will give the project perspective and thus enable its proposed consideration in terms of s5”*.

- 6.13 Applying those comments in the present case, it is submitted that the extent and importance of the Turitea Wind Farm project are such as to bear upon the way the Board undertakes its overall balanced judgment. That is, we must, when evaluating significant new renewable generation initiatives, consider the benefits for the nation, whether in terms of support for economic growth generally, local and regional load support and security of supply, or the country's international climate change obligations. In the present circumstances, all of those considerations are live, and it is submitted that they have the kind of bearing on the Board's decision that the High Court had in mind in *Takamore Trustees*.

7. SECTION 104 CONSIDERATIONS

- 7.1 Subject to Part 2 matters, consent authorities are required to have regard to those relevant matters set out in sections 104(1)(a)-(c). The three elements from section 104(1) relevant are:

²⁸ AP191/02

- (a) any actual and potential effects on the environment of allowing the activity (section 104(1)(a));
- (b) any relevant provisions of a national policy statement, regional policy statement, and plan or proposed plan (section 104(1)(b)); and
- (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application (section 104(1)(c)).

Assessing effects on the Environment (s104(1)(a))

Relevant statutory framework for assessing effects

7.2 Section 104(1)(a) requires consideration of “*any actual and potential effects on the environment of allowing the activity*”. In so doing, it is important to first determine the relevant “environment” against which effects must be assessed and secondly, which “effects” may be taken into account. The former essentially involves consideration of the “existing environment”, “receiving environment” or “future environment” (as it has variously been termed) which applies beyond the boundaries of the application site. The latter is the more familiar “permitted baseline” analysis, which is only relevant to the application site itself.

7.3 While to a large extent it involves overlapping considerations, assessment of the “existing environment” and application of the “permitted baseline” are two distinct exercises, undertaken for different reasons. The purpose of the “existing environment” assessment is to determine the nature of the environment on which an activity may have effects. That idea is conceptually different from the purpose of the permitted baseline analysis which, as noted in *Queenstown Lakes District Council v Hawthorn Estate Limited*,²⁹ is:

“to isolate, and make irrelevant, effects of activities on the environment that are permitted by a district plan, or have already been consented to. Such effects cannot then be taken into account

²⁹ [2006] NZRMA 424, at para 65-66.

when assessing the effects of a particular resource consent application...Where it applies, therefore, the “permitted baseline” analysis removes certain effects from consideration under s104(1)(a) of the Act”.

Existing Environment

- 7.4 The leading authority on what the “environment” comprises is the Court of Appeal decision in *Hawthorn*, in which it was held as follows:

*“In our view, the word “environment” embraces the future state of the environment as it might be modified by the utilisation of rights to carry out permitted activity [sic] under a district plan. It also includes the environment as it might be modified by the implementation of resource consents which have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented. We think Fogarty J erred when he suggested that the effects of resource consents that might in the future be made should be brought to account in considering the likely future state of the environment. We think the legitimate considerations should be limited to those that we have just expressed”.*³⁰

- 7.5 Beyond the description of the actual environment, there are accordingly two key issues with respect to the “existing environment” for the purposes of the present applications: the status of the resource consents granted in late 2008 for the neighbouring Motorimu Wind Farm; and the implications of subdivision consents granted for residential development in the foothills of the Tararua Ranges to the west of the application site, and extending across towards Palmerston North.

Motorimu Wind Farm consents

- 7.6 On 25 June 2007, Motorimu Wind Farm Limited (*Motorimu*) was granted consent for 75 of a proposed 127 wind turbine development immediately to the south of the Turitea site. Motorimu subsequently appealed that

³⁰ Ibid, at para 84.

decision, and by the time of hearing before the Environment Court, sought consent for a revised proposal of 113 turbines (including the 75 wind turbines for which consent had already been granted – that is, the appeal sought consent for an additional 38 wind turbines). The Environment Court granted consent for an additional 5 wind turbines by a decision dated 26 September 2008.³¹

- 7.7 To date, the resource consents for the Motorimu Wind Farm have not been given effect to, or indeed acted upon in any way. In accordance with *Hawthorn*, they therefore fall squarely within the category of existing but unimplemented consents which may form part of the existing environment. As the Court stated in *Hawthorn*, “*it will always be a question of fact as to whether or not an existing resource consent is going to be implemented*”.³²
- 7.8 The question is therefore whether the Motorimu consents are “likely” to be implemented, such that they should be considered relevant to the present applications. In our submission, there are a number of factors in the present case which clearly indicate that the Motorimu consents are in fact *very unlikely* to be given effect to before they lapse, and therefore should not form part of the Board’s considerations as follows:
- (a) Before the Environment Court, Counsel for Motorimu stated that if consent for the additional 38 turbines was refused, the whole development would be rendered uneconomic and therefore be unlikely to proceed. The Court accepted this, but determined that establishment of the consented turbines may still be viable for another operator.
 - (b) Following the Court’s decision, in the third quarter of 2008, Allco Wind Energy Investments New Zealand Limited (*Allco*, Motorimu’s parent company) sought to divest its New Zealand wind farm assets (including Motorimu). Allco’s parent company, Allco Finance Group, has subsequently also been placed into receivership. In

³¹ *Motorimu Wind Farm Limited v Palmerston North City Council and Horowhenua District Council* W 067/2008.

³² *Ibid*, at para [79].

2008, Mighty River Power and several other generators undertook due diligence with respect to the potential acquisition of the Motorimu Wind Farm. As a result of this process, Mighty River Power has confirmed that, on its analysis, the Motorimu Wind Farm as currently consented is indeed highly uneconomic. Consequently neither Mighty River Power nor any other party progressed acquisition of the Motorimu Wind Farm assets.

- (c) As a result of being placed into receivership, Allco has also allowed relevant landowner agreements necessary for construction of the Motorimu Wind Farm to lapse. Motorimu's resource consents therefore *cannot* presently be implemented, and that will not change unless or until new landowner agreements are entered into, by another party, who has also obtained consent holder status for the resource consents themselves.

7.9 Notwithstanding Mighty River Power's principal position that the resource consents for Motorimu should not form part of the existing environment, all its independent experts have undertaken their assessments on a conservative basis, and so have fully taken into account any cumulative effects arising in combination with Motorimu, as currently consented.

7.10 Particularly with respect to landscape and noise, all expert assessment has concluded that the effects of the Turitea Wind Farm will be acceptable, even having regard to any cumulative impacts from Motorimu. The case is that the Board can be assured that all effects of the Turitea Wind Farm have been comprehensively and robustly assessed, even if it declines to accept our submission as to the status of the Motorimu consents.

Subdivision consents

7.11 As outlined in the report provided to the Board following the expert planners' caucusing, it is agreed on the basis of *Hawthorn* that, as a minimum, the existing environment also includes:

- (a) 95 existing vacant lots within the jurisdiction of PNCC on which residential dwellings could be constructed as a permitted activity under the operative PNCC District Plan (*PNCC District Plan*); and
- (b) 84 recently subdivided sites on which residential dwellings could also be constructed as a permitted activity.³³

7.12 As noted in the Planners' Caucusing Report, these numbers are based on a review of potential development within 3km of the nearest turbine on the application site. This zone was chosen arbitrarily to assist the Board's consideration of the existing environment, and has only been used for the purposes of that specific caucusing exercise.³⁴ It is accepted that the existing environment would include any other existing vacant lots outside this zone, and within TDC's jurisdiction, on which residential dwellings could be constructed as a permitted activity.

7.13 It is not considered that the 3km zone can or should be used or imposed by the Board as a "buffer" requirement. Nor have any of Mighty River Power's experts used it as a basis for (or constraint in) undertaking their assessment of the potential effects of the Turitea Wind Farm. To the contrary, the evidence (and in particular that on potential visual/landscape and acoustic effects) provides analysis and information from which the Board can consider the potential effects of the project on these permitted activities, to the extent necessary or appropriate.

7.14 On behalf of PNCC, Mr J. Baker contends that for the purposes of these applications, the existing environment should also include a further 371 lots of possible residential development in the Pacific Drive area, for which concept plans have been prepared.³⁵ However, Mr J. Baker and Mr Pollock have agreed that any such subdivision will require resource consent as a discretionary activity under the PNCC District Plan, and that the relevant consent applications have not yet been lodged with PNCC, let alone granted.

³³ Planning Caucusing Report, pp 5-9.

³⁴ Ibid.

³⁵ Ibid.

7.15 It is submitted that on the basis of *Hawthorn*, Mr J. Baker's position is not tenable. As noted by Judge Sheppard's division of the Environment Court in *Living Earth Limited v Auckland Regional Council and Manukau City Council*,³⁶ in accordance with the Court of Appeal's decision, "*the effects of resource consent applications that have not been made, but which conceivably might be made, are not to be taken into account*"³⁷ in considering the environment in which future effects, and effects arising over time, will be operating.

7.16 Judge Sheppard then went on to state:

"Counsel for Watercare Services submitted that a reading of the Hawthorn judgment to hold that in assessing a future environment a consent authority cannot take into account any activities which require a future resource consent, - not even a controlled activity – would be a strict reading. Counsel urged that a better reading would only exclude future applications for non-complying activities, discretionary activities and restricted discretionary activities.

*On any reading of it, the Court of Appeal's Judgment in Hawthorn was not prepared with haste, but was (with respect) carefully composed. The Judgment of the Court was given by Justice Cooper, who is thoroughly familiar with the range of classes of resource consents, and the attributes of each class. We consider it inappropriate and unjustified to presume that in rejecting having regard to resource consent applications not yet made but which might conceivably be made, the learned Judge would have intended to make an exception further future applications for controlled activities, but failed to express that exception".*³⁸

7.17 This aspect of the Environment Court's decision was not challenged on appeal before either the High Court or Court of Appeal.

³⁶ A126/06.

³⁷ *Ibid*, at para [179].

³⁸ *Ibid*, at para 188-189.

7.18 It is submitted that the additional 371 lots Mr J. Baker has identified could not be considered part of the existing environment even if their subdivision was a controlled, rather than discretionary activity. It is submitted that the evidence for Mighty River Power provides the appropriate basis for assessing the potential effects of the Turitea Wind Farm on that development, *should* the Board nevertheless consider these lots are relevant to its determination.

Permitted baseline

7.19 Analysis of the permitted baseline involves an essentially similar exercise to assessment of the relevant existing environment – although one relates to the site itself while the other considers the surrounding area, and both have quite different purposes. A useful summary of the process involved in considering the permitted baseline was provided in *Hawthorn*, where the Court of Appeal stated:

“We have earlier expressed our view that the “permitted baseline” has in the previous decisions of this Court been limited to a comparison of the effects of the activity which is the subject of the application for resource consent with the effects of other activities that might be permitted on the subject land, whether by way of right as a permitted activity under the district plan, or whether pursuant to the grant of a resource consent. In the latter case, it is only the effects of activities which have been the subject of resource consents already granted that may be considered, and the consent authority must decide whether or not to do so: Arrigato Investments Limited v Auckland Regional Council at paras [30] and [34]-[35].”³⁹

7.20 For completeness, it is noted that the Board also has discretion to disregard the effects of the proposal if those effects would be permitted on the subject land “*by way of right as a permitted activity under the district plan*”, in accordance with section 104(2) RMA.

³⁹ Supra note 29, at para [63].

7.21 As outlined in Mr Pollock’s evidence,⁴⁰ the relevant regional and district planning documents provide for a range of permitted activities that can be undertaken on the application site, and which would have a level of adverse effects. However, it is not possible to identify any one large scale activity on the site that is not fanciful, and which would provide a useful comparison for the purposes of the present applications.

7.22 On this basis, it is submitted that the permitted baseline is of limited assistance or relevance to the Board’s determinations in the present case. The Board will recognise that the relevant planning documents do not identify the application site as being pristine, or requiring preservation. The Plans contemplate a degree of change in the rural environment, given the number of permitted activities provided for that would generate similar effects to those from these applications (albeit at a much smaller scale).

7.23 It is submitted that the Board may consider the full range of potential effects from the Turitea Wind Farm, without allowance for the permitted baseline. This is the basis on which all Mighty River Power’s expert assessments have been undertaken, as outlined in the evidence you have read.

Relevant threshold for effects

7.24 As outlined above, overall the Turitea Wind Farm requires resource consent as a discretionary activity. In *H K Ahn and J D Lim v Christchurch City Council*,⁴¹ Judge Smith’s division of the Environment Court held that in accordance with section 104(1)(a), with respect to discretionary activities:

“The Court is required (as is the Council in the first instance) to consider all effects which are more than minimal in reaching a decision in respect of an application for consent. A description of any particular effect as minor or not can, at best, be of assistance

⁴⁰ Pollock EIC, paras [48-51].

⁴¹ C68/07, at paras [13]-[14].

on a discretionary application in identifying the scale of the effect for the eventual integrated decision the Court must make.

This division has found reference to the word minor to be unhelpful generally in discretionary applications for two reasons:

(a) It confuses both the Court and parties as to the application of section 104D and section 104(1);

(b) It can lead to an assumption that any effect that is less than minor but more than minimal is not an effect which must be taken into account.”

7.25 Accordingly, some of Mighty River Power’s witnesses have expressed their assessment of relevant effects having regard to the “more than minor” terminology, to indicate that the effects have been taken into account but are acceptable. Others, however, including Mr Wyatt, have adopted a different approach (primarily commenting on the “acceptability” of effects, having assessed their likely significance), in recognition of the fact that the proposal is a discretionary, rather than non-complying activity. In both cases, Mighty River Power’s expert witnesses have had the touchstone of sustainable management at the forefront in reaching their conclusions, and each way of expressing those conclusions reflects a deliberate and careful effort to present an evaluation that responds to the imperatives in Part 2 of the Act.

Positive effects

7.26 It is settled law that it is appropriate to consider all relevant effects, including a proposal’s positive benefits.⁴² This is consistent with the definition of “effect” in section 3, which includes positive effects.

7.27 As noted by Judge Whiting’s division of the Environment Court in *Genesis*,⁴³ “*the positive effects of the proposal are not site-specific but have to be seen in the wider context of Part II of the Act and in a national context*”. The Court also noted that “*electricity is a vital resource for New*

⁴² See for example *Elderslie Park Limited v Timaru District Council* [1995] NZRMA 433.

⁴³ *Supra* Note 18.

Zealand. There can be no sustainable management of natural and physical resources without energy, of which electricity is a major component.⁴⁴

7.28 The Court in *Genesis* went on to identify the positive effects from that proposed Wind Farm development, as outlined in paragraph 6.3 above.

7.29 If granted, the present applications will provide those identified benefits, and others besides. The significant positive effects and benefits to be derived from the Turitea Wind Farm are addressed in detail in Mighty River Power's evidence. In summary, these include:

- (a) generating significant economic benefits, including a total (direct and indirect) impact on the local economy of approximately \$504 million during the construction phase, and ongoing contribution of at least \$1.9 million per year from salary and other related costs during operation;⁴⁵
- (b) creating approximately 250 FTE jobs during construction, and 26 FTE jobs during operation;⁴⁶
- (c) utilising New Zealand's best wind resource in a sustainable and environmentally responsible manner;
- (d) diversification of rural land use, in a manner that is compatible with existing agricultural activities;
- (e) making an important contribution to New Zealand's international environmental obligations under the Kyoto Protocol, primarily by displacement of thermal generation and avoidance of greenhouse gas emissions. Based on the likely installed capacity of 336MW,⁴⁷ Dr Layton has estimated that at 45% utilisation, the Turitea Wind Farm could displace approximately 503,500 tonnes of CO₂ from a

⁴⁴ Ibid, at para [64].

⁴⁵ Layton EIC, para [5.5].

⁴⁶ Ibid, para [5.6].

⁴⁷ Being the relevant figure prior to the deletion of turbine zone 55.

gas-fired plant, or 1,192,500 tonnes from a coal-fired plant, per annum. At 33% utilisation, the emissions displaced would be 368,980 tonnes or 873,900 tonnes respectively;⁴⁸

- (f) assisting with the government's target of achieving 90% of electricity generation from renewable energy sources by 2025, as set out in the National Energy Strategy (NES), and New Zealand Energy Efficiency and Conservation Strategy 2007 (NZECS);
- (g) ensuring the security of New Zealand's energy supply, by adding to the diversification of the generation portfolio (thereby reducing our current reliance on thermal and hydro generation), and providing generation closer to demand load (thereby reducing transmission losses and alleviating pressure for new grid investment);
- (h) funding the establishment of an Eco-Park through royalties from the Wind Farm, which will have significant ecological benefits in particular through the pest control and species re-introduction measures that are proposed; and
- (i) upgrading works on the local roading network, including the closure of an existing unsafe intersection on the Pahiatua Track.

7.30 The present applications represent an opportunity to achieve all of these benefits. As noted in *Genesis*, "*these are all matters which need to be considered and put into the crucible containing the evidential material to be weighed against the alleged and more site-specific potential effects*". Further, the Court confirmed in *Meridian* that the above factors "*are, in our view very powerful. They represent some key issue to be weighed against the adverse effects on the local environment*".⁴⁹

7.31 The extent of the site-specific potential effects is considered in more detail in the following section of these submissions. *Some of these (in particular relating to landscape and visual) are considered to be more than minor.* Overall, however, it is submitted that on balance, and in

⁴⁸ Supra note 45, para [2.6].

⁴⁹ Supra Note 4 para [400].

accordance with the overall judgment required under section 5 (as outlined further below), the proposal's site-specific effects are considerably outweighed by its positive effects and national benefits.

Other effects

Landscape/Visual effects

- 7.32 The project's potential landscape and visual effects, particularly in those arising in conjunction with other wind farms in the area, are clearly of critical importance and concern in the present case. In recognition of this, Mighty River Power has accordingly engaged Messrs Brown, Wyatt and Coombs to undertake a robust and comprehensive assessment of the various issues arising in this regard. Evidence on landscape and visual effects issues has also been presented by Mr Anstey on behalf of PNCC, and Mr Bray and Ms Lucas on behalf of TAG/FOTR.
- 7.33 Having undertaken a strategic assessment of the landscape surrounding the subject site, Mr Brown has concluded that, due to the contrast between the more natural, forest dominated "internal" qualities of the Turitea Reserve and its more modest periphery, the landscape of and around the proposed wind farm site does not qualify as being outstanding in terms of section 6(b). He does, however, fully accept that it has values consistent with an amenity landscape. It is noted that both Messrs Anstey and Bray (and to some extent Ms Lucas) also appear to agree with Mr Brown's assessment that the proposed wind farm site is not an outstanding natural landscape.
- 7.34 Mr Wyatt has similarly concluded that the application site is not an outstanding natural landscape for the purposes of section 6(b). His main focus, however, has been on evaluating the potential visual and landscape effects of the project in the context of the relevant statutory framework and against specific criteria. In this regard, his overall conclusion is that based on a balanced, contextual analysis of landscape and visual effects, there are no reasons to preclude granting consent to the development as currently proposed.

7.35 Both Mighty River Power and Mr Wyatt accept and acknowledge that the wind farm's greatest potential impact will undoubtedly be on those residential properties in close proximity to the proposed wind turbines. However, Mr Wyatt's evidence demonstrates how mitigation of such effects can be achieved using landscape planting and treatment, where this is necessary and can be agreed with the relevant land owner. Mr Wyatt further considers that in nearly all circumstances, appropriate landscape treatment will reduce a visual impact from "more than minor" to "minor" or in some cases "de minimis".

7.36 Importantly, Mr Wyatt has also comprehensively assessed the project's potential cumulative visual and landscape effects. As noted above, this assessment has included potential cumulative effects arising from the consented (but as yet unconstructed) Motorimu. That has occurred irrespective of our submission that, in accordance with Court of Appeal authority, this should not be considered to form part of the existing environment. On the basis of this assessment, Mr Wyatt has concluded that the proposal's cumulative impacts will be acceptably low, primarily given:

- (a) The limited number of locations from which cumulative views will be experienced, either simultaneously or sequentially;
- (b) The distance of even the closest turbines from such viewpoints; and
- (c) The high level of community acceptance for wind turbines in all but the most sensitive of locations.

7.37 Mr Coombs' evidence addresses the provisions of Horizon's Proposed One Plan relating to the skyline of the Tararua Ranges, and in particular the adequacy and robustness of the assessment on which those provisions have been based. By way of conclusion, his opinion is that those provisions are deficient, and should be rejected, because:

- (a) They are not based on a comprehensive assessment undertaken in accordance with recognised best practice methods and judicial guidance as to relevant criteria for such assessments;

- (b) They fail to identify and protect areas within the region that are considered to be outstanding;
- (c) They appear to place undue reliance and weight on scenic and visual values, relative to other applicable assessment criteria; and
- (d) The identification of a “skyline” as a landscape area is problematic, as a “skyline” is by its very nature is a difficult feature to identify and protect.

7.38 Having regard to the evidence of Messrs Brown, Wyatt and Coombs, it is submitted that the Board can justifiably conclude that the present applications do not give rise to section 6(b) concerns, as the proposed wind farm is not located in an outstanding natural landscape having regard to the modified *Pigeon Bay* criteria, discussed by various witnesses. For this reason, and on the basis of Mr Coombs’ conclusions, it is further submitted that the provisions of the Proposed One Plan relating to the skyline of the Tararua Ranges have been adequately acknowledged and addressed.

7.39 Finally, it is acknowledged that as a result of its very nature and scale, the Turitea Wind Farm and its component elements will be a new and visually prominent addition to the landscape of the Tararua Ranges. However, it is submitted that even taking into account the site’s amenity values and surrounding landscape, the project’s visual/landscape effects (including its cumulative effects) will be acceptable, having regard in particular to:

- (a) the small section of the Ranges that will be affected;
- (b) the landscape’s sensitivity and capacity to absorb further change;
- (c) the distances from which views will be obtained; and
- (d) the high level of community tolerance for such effects demonstrated by replicated studies.

Effects on PNCC Water Supply Catchment

- 7.40 The protection of the Turitea Water Supply Catchment, and the preservation of the quality of Palmerston North's drinking water is one of the key issues identified by PNCC in its evidence, and one of the two main issues for the Board to consider. However, the evidence to be presented by Mighty River Power's engineering experts will demonstrate that the development of the Turitea Wind Farm within the Turitea Reserve is not incompatible with the protection of Palmerston North's drinking water and, moreover, will not compromise the high quality of that water.
- 7.41 Messrs James, Levy, Parsons, and Vaughan, as well as Dr Coffey, have all contributed to the development of the Construction Environmental Management Plan, which is designed to ensure that suitable erosion and sediment control measures are put in place to protect the water catchment. In preparation for this hearing, and in accordance with Mighty River Power's desire to minimise the potential adverse effects of the Turitea Wind Farm wherever possible, spoil disposal sites have been removed from the water catchment area.
- 7.42 Mr Watson has extensive prior experience working in the Turitea Water Supply Catchment, and has undertaken an assessment of the potential risks to the water supply catchment posed by the development of the Turitea Wind Farm. He has concluded that the quality of the treated water provided by the Turitea Water Treatment Plant will not be impacted by the development of the Turitea Wind Farm and that as such, the standard of the drinking water sourced from Turitea will remain higher than that required by the New Zealand Drinking Water Standards.

Noise effects

- 7.43 A comprehensive acoustic assessment has been undertaken by Mr Hegley, and peer reviewed by Mr Day. On the basis of their assessment, both Mr Hegley and Mr Day have concluded that, subject to the imposition of appropriate conditions, the Turitea Wind Farm will be able to comply with the with the requirements of *NZS6808:1998 – Acoustics – The Assessment and Measurement of Sound from Wind Turbine*

Generators (NZS6808) at all of the closest dwellings from which written approvals have not been obtained.

7.44 Evidence in respect of acoustic issues has been presented by Mr Nigel Lloyd on behalf of PNCC, and Dr Robert Thorne on behalf of the Friends of Turitea Reserve (*FOTR*) and Tararua Aokautere Guardians (*TAG*). As a result of caucusing, all experts have in large part agreed a set of conditions. As outlined in the Acoustic Caucusing Report, the only outstanding issues are whether:

- (a) the primary noise limit should be 40dBA (as recommended by all parties except Dr Thorne), or 35dBA (as recommended by Dr Thorne);
- (b) the secondary noise limit should apply at all times when low background noise levels are present (as recommended by Mr Lloyd), or where the District Plan indicates that an area is intended to receive special protection in the form of low noise limits (as recommended by Mr Hegley and Mr Day); and
- (c) one of the tests for modulation with respect to special audible characteristics should be whether the spectral characteristics exhibit more than a 6dBA variation (as set out in proposed condition 15 attached to Mr Lloyd's evidence), or more than a 1/12 octave variation (as set out in proposed condition 30 attached to Dr Thorne's evidence).

7.45 With respect to the appropriate primary noise limit, both Mr Hegley and Mr Day note that the World Health Organisation guidelines recommend an *internal* sound level of 30 to 35dBA to protect against sleep disturbance. The noise level reduction from outside to inside, with windows open, is 15dBA. Thus the primary limit of 40dBA outside, as included in the proposed consent conditions, is considered by those expert witnesses to be more than adequate to protect against sleep disturbance. That limit has also been widely adopted in District Plan noise controls around the country, which commonly specify either 40dBA (or 45dBA) as their night-time noise limit.

7.46 As discussed by Messrs Hegley and Day, it is overly simplistic to assert that the draft revision to NZS6808 suggests that a higher level of acoustic protection is required “in low background levels”. Rather, the criteria proposed with the draft standard to justify the imposition of a more stringent design level can be summarised as:

- (a) For evening and night time periods;
- (b) When the wind speed, background noise and wind turbine noise are all at certain levels; and
- (c) If the relevant District Plan specifically recommends the application of lower noise limits, thus indicating an area deserves special protection.

7.47 The condition recommended by Messrs Hegley and Day is submitted to be consistent with the draft revisions to NZS6808.

7.48 Having regard to the evidence of all acoustic experts, and the outcomes of the Acoustic Caucusing Report, it is submitted that the Board can be satisfied that all noise effects will be adequately avoided, remedied or mitigated, subject to the imposition of appropriate conditions.

Health effects

7.49 As Dr Black has discussed, the operational Turitea Wind Farm will not pose any risk to public health. His evidence shows that electric fields at the two Turitea Wind Farm substations will be effectively screened, and magnetic fields contained within the substation sites, and that any exposure will conform to the recommendations of the Ministry of Health and the 1998 International Commission for Non-ionising Radiation Protection guideline, the basis for most international standards. He considers that the Turitea Wind Farm will not pose any public health risk to air quality, and that water quality risks will be adequately minimised through the erosion and sediment controls proposed. Dr Black’s evidence further demonstrates that the Turitea Wind Farm will not pose a risk to health through noise effects.

Terrestrial Ecology effects

- 7.50 Given the location of the Turitea Wind Farm within the Turitea Reserve, Mighty River Power directed its expert advisors to place particular emphasis on the potential effects of the wind farm on terrestrial ecology. To this end, it engaged Mr W. Shaw and Professor John Craig to assess potential effects on the flora, fauna (particularly avifauna) present at the site.
- 7.51 Mr W. Shaw has been involved in the ecological assessment at Turitea Reserve since 2005. Since that time, all proposed turbine zones, access roads, sub-station sites, transmission alignments, and soil disposal sites have been evaluated in terms of vegetation cover, plant species, fauna habitat, and relative ecological impacts. As a result of these investigations, sites that would otherwise have been contemplated as potential turbine locations were removed from consideration, for the final layout. Wherever possible, infrastructure has been sited to minimise or avoid any indigenous vegetation and effects on terrestrial ecology.
- 7.52 On the basis of the assessments undertaken, Mr W. Shaw concludes that the ecological effects of the Turitea Wind Farm at a large proportion of the site are minor or relatively minor. The most significant effect associated with the Turitea Wind Farm is the clearance of up to 25 ha of indigenous vegetation from the 3,500 ha Turitea Reserve. As Mr W. Shaw discusses, the vegetation to be cleared is horopito-dominant vegetation and is part of a very large tract of similar vegetation that has developed following previous disturbance by fire and browsing animals. Indeed, the vegetation to be removed is only c.2.3% of the c.1,100 ha of horopito-dominant vegetation in the Reserve and c.0.7% of the total Reserve. It is also only c.0.8% of the area of similar vegetation in the northern Tararua Range and only c.0.17% of the wider extent of similar vegetation in the northern Tararua and southern Ruahine Ranges.
- 7.53 Nevertheless, to mitigate this loss, a substantial mitigation package has been developed. This includes the re-vegetation of approximately 75 ha of former pine plantation (including control of browsing pests) and a further area of approximately 8 ha of roads and construction platforms

that will be re-vegetated in accordance with the re-vegetation management plan.

7.54 Professor Craig has undertaken a thorough review and assessment of the potential effects of the Turitea Wind Farm on avifauna, and as a result of that assessment, expects that the effects of the proposed wind farm on bird life will be less than minor. As he explains in his evidence in chief, Professor Craig considers that the wide spacing of turbines, their size, the considerable clearance between the ground vegetation and the lower sweep of the blades, as well as the placement of turbines on ridges where bird activity is much reduced will mean that bird strike deaths will be minimal. Where bird deaths do occur, it is expected that the vast majority of these will be introduced species, rather than native species.

7.55 Accordingly, while it is acknowledged that the Turitea Wind Farm will have some adverse effects on existing indigenous vegetation and very minor effects on fauna, both Mr W. Shaw, and Professor Craig consider that the mitigation proposed by Mighty River Power will adequately and appropriately address these effects.

7.56 Further, when considered in conjunction with the 'EcoPark' initiative – enabled by the Turitea Wind Farm and under development by PNCC – Mr W. Shaw and Professor Craig conclude that the project will result in a substantial net benefit to the Turitea Reserve and the wider natural environment.

Freshwater Ecology effects

7.57 An assessment of the potential effects on freshwater ecology has been undertaken by Dr Coffey.

7.58 Through undertaking sampling and observations of the water catchments potentially affected by the Turitea Wind Farm, Dr Coffey considers that the headwater catchments of the Kahuterawa, Otangane and Tainui Streams, the southern headwater catchment of Matarua Creek and the Palmerston North City water supply reservoirs should be considered significant habitats of indigenous fauna. In those areas where insufficient information was available to fully describe in-stream community structure

in receiving waters for the wind farm, Dr Coffey has adopted a conservative approach, and has assumed that such communities were of the highest quality and greatest sensitivity.

7.59 Dr Coffey also assessed the potential causes of adverse stream-effects, and has identified the following activities as posing risk to in-stream communities:

- (a) increased sediment loading to watercourses from vegetation clearance, and construction / earthworks activities (including suspended solids and wind-borne dust);
- (b) the accidental spillage of hydrocarbons into watercourses from machinery; and
- (c) the accidental spillage of concrete products from temporary concrete batching plants entering watercourses.

7.60 With regard to the sediment control guidelines to be adopted, as recorded in the Aquatic Ecology Caucusing Report, Drs Coffey and Blaschke have agreed that the Greater Wellington Regional Council's Erosion and Sediment Control Guidelines are a potential tool for the management of erosion and sediment issues. They have also agreed that the use of the guidelines would need to be adapted for conditions at the site.

7.61 Overall, Dr Coffey's evidence concludes that the effects of constructing the Turitea Wind Farm on aquatic ecology will be less than minor, provided best industry practices are adopted and implemented (including the adoption of an adaptive aquatic management response). To this end, he has proposed a suite of conditions of consent that have been adopted by Mighty River Power and will be included in the revised set of conditions discussed later in these submissions.

Archaeological/Heritage effects

7.62 As Dr Clough notes, the proposal will not affect any known archaeological site, and the potential for discovering unidentified archaeological remains within the wind farm area is low. Even so, the

proposed consent conditions include accidental discovery protocols to account for this possibility. The archaeological sites identified within the application area (being two quarry sites and an associated barrow/cart track) will also be marked out during construction to protect them from accidental damage, as recommended by Dr Clough. No submitters have presented expert evidence relevant to archaeological or heritage effects.

Traffic effects

7.63 Several submitters have raised concerns regarding potential traffic effects. However, evidence in this regard has only been called on behalf of PNCC. A comprehensive set of traffic-related conditions have been agreed between Mr Galloway, and Mr Tate, PNCC's traffic engineer.

7.64 As recorded in the Traffic Caucusing Report, both Messrs Galloway and Tate agree that the Turitea Wind Farm can be constructed and operated with no more than minor traffic or transportation effects, subject to compliance with the agreed conditions.

Radio frequency effects

7.65 Mr Hills has undertaken a comprehensive assessment of the potential effects of the proposed Turitea Wind Farm on radio-communication services. His evidence concludes that for the most part such effects will be so low as to not require any specific mitigation or other action. The most significant potential for effects is in relation to analogue terrestrial television services, which only involve a small number of houses (23), and can be easily mitigated. Indeed, analogue television broadcasting is also to be phased out in the near future. Potential effects on RADAR systems have also been adequately addressed, as outlined by Mr Henry, to the extent that Airways New Zealand has now withdrawn its submission. No party has called evidence with respect to potential effects of the project on radio-communication services.

Cultural effects

7.66 The application site lies within the rohe of the Rangitaane iwi, and the Tararua Ranges form an intrinsic part of Rangitaane culture. There are

four sites of significance in the vicinity of the Turitea Wind Farm, being the peaks Ramiha, Marima, Arawaru and Tirohanga.

7.67 Mr Henry's evidence outlines the consultation that has been undertaken with the various Rangitaane interests (as identified by local community members and Council iwi liaison officers), including Te Rangimarie Marae Trustees, TMI and Rangitāne o Tamaki nui a Rua. All three of these groups have filed submissions in respect of the applications, although that from the Te Rangimarie Marae Trustees (in support of the project) was rejected by the Minister as out of time. Mr Paul Horton has also subsequently filed evidence in support of TMI's submission.

7.68 Mighty River Power has now reached agreement in principle with TMI regarding a Memorandum of Understanding between them to address the matters of concern raised in its submission and Mr Horton's evidence. The key elements of the MoU include:

- (a) Undertaking blessing ceremonies prior to, and within 6 months of completing, construction of the Turitea Wind Farm;
- (b) Removing turbine zone 55, given its potential effects on a site of cultural significance (Tirohanga Peak);
- (c) Implementing accidental discovery protocols (which are to be included in the proposed consent conditions discussed later in these submissions);
- (d) Developing and funding a cultural monitoring programme in consultation with TMI;
- (e) Establishing a tertiary scholarship; and
- (f) Commissioning of a pou whenua to be erected at the entrance of the Turitea Wind Farm;

7.69 A cultural values assessment has been undertaken by Tamaki Nui a Rua, and provided to Mighty River Power very recently. This assessment does not identify any particular sites of cultural significance, although it is noted that the Tararua Ranges are of particular significance to this iwi.

On the basis of this assessment, it appears likely that a Memorandum of Understanding may also be able to be reached with this group.

7.70 Mighty River Power takes its Treaty obligations very seriously. As evidenced through its actions to date, Mighty River Power is strongly committed to open and ongoing discussion with all iwi, to ensure that cultural considerations and concerns are identified and addressed. In light of the consultation undertaken with iwi, and the agreement reached with TMI, it is submitted that there is no reason to refuse the present applications on cultural grounds.

Social effects

7.71 Large infrastructure projects such as the Turitea Wind Farm often give rise to differences in opinion within the public.

7.72 Dr Peter Phillips' rebuttal evidence demonstrates that the evidence given by Mr James Baines is inappropriate, is not a robust social assessment, and is unreliable. In particular, Dr Phillips opines that the survey undertaken by Mr Baines is not a representative sample, and further, that some of the survey results have been interpreted inappropriately. Accordingly, Mr Baines' evidence cannot be relied upon as a valid contribution to the assessment of the potential for social effects from the Turitea Wind Farm.

7.73 Moreover, as Mr Kalafatelis explains in his evidence, the public perception survey undertaken by Research New Zealand has demonstrated that 60% of respondents to that survey support the construction and operation of the Turitea Wind Farm. In contrast, only 18 percent opposed the proposal with nine percent 'strongly opposing' it.

Statutory/Planning Instruments (s104(1)(b))

7.74 In accordance with section 104(1)(b), the Board must also have regard to any of the various statutory instruments that are relevant, again subject to Part 2.

7.75 Prior to Mighty River Power's applications being lodged, the Government publicly notified a national policy statement on renewable electricity

generation (*proposed Renewable Electricity NPS*). The Proposed Renewable Electricity NPS includes five policies to recognise the importance of renewable energy, encourage its development, and clarify the Government's position in relation to renewable energy. It establishes the national significance of the benefits associated with renewable energy generation. A Board of Inquiry heard from Government officials in April this year, followed by the presentation of public and other submissions in May and June.

7.76 As Mr Pollock discusses, the applicable planning and statutory instruments are:

- (a) NPS on Electricity Transmission;
- (b) Proposed NPS on Renewable Electricity Generation;
- (c) RPS;
- (d) Proposed 'One Plan' (which combines the proposed RPS and various operative Regional Plans);
- (e) Operative Manawatu-Wanganui Regional Land and Water Plan;
- (f) Operative Manawatu-Wanganui Regional Plan for the Beds of Rivers and Lakes;
- (g) Operative Regional Air Plan for Manawatu-Wanganui;
- (h) Operative Manawatu Catchment Water Quality Regional Plan;
- (i) Operative Palmerston North District Plan;
- (j) Proposed Plan Change 42 to the Palmerston North District Plan;
- (k) Operative Tararua District Plan; and
- (l) Proposed Tararua District Plan.

7.77 Each of those contains a large number of potentially relevant objectives and policies, which are outlined in detail in the AEE. They will be addressed comprehensively by Mr Pollock from a planning perspective,

and by other experts in relation to their specialist areas. Mr Pollock will confirm his assessment that, overall, and drawing upon the evidence of Mighty River Power's other experts, effects of the Turitea Wind Farm can be mitigated to the extent that it is not inconsistent with (and in some respects receives significant support from) the intended environmental outcomes from the RPS and other planning documents.

Any other relevant matters (s104(1)(c))

7.78 As noted in the AEE and Mr Pollock's evidence, there are a range of other important documents and considerations beyond the regional and district planning instruments that are relevant to the determination of the applications under section 104(c), including the:

- (a) NZES;
- (b) NZEECS;
- (c) Turitea Reserve Management Plan (*TRMP*);
- (d) Palmerston North Water Supply Bylaw 2008 (*Bylaw*); and
- (e) National Environmental Standard for Sources of Human Drinking Water (*NES*).

7.79 Each of these documents is accordingly addressed in the following section of these submissions, as well as in the evidence of relevant experts.

New Zealand Energy Strategy to 2050

7.80 The NZES was released by the previous government in October 2007. That national strategy set out Central Government's long term objectives for the future of the New Zealand energy system and the initiatives proposed to achieve those. The NZES is intended to be a complementary policy framework to an emissions trading regime, in order to achieve specific outcomes in the energy sector in shorter timeframes than market-based measures such as emissions trading.

7.81 The NZES provides clear support for all renewable energy sources (including wind), in particular by setting a target of 90 percent of New Zealand's electricity generation to be from renewable sources by 2025.

7.82 In March this year, Energy and Resources Minister, the Hon. Gerry Brownlee also released the present Government's draft revised Policy Statement on Electricity Governance, which sets out new objectives and outcomes expected from the Electricity Commission.⁵⁰ The Government at that time also indicated its intention to review the NZES, to refocus on security of supply, affordability and environmental responsibility, with the overriding goal of maximising economic growth.⁵¹

7.83 While no revised NZES has been released to date; indications are that the renewable energy goal will remain. The NZES seeks to achieve that goal by providing clear signals to industry and decision makers (such as the Board) that opportunities for cost effective, renewable and energy efficient electricity generation (such as represented by the Turitea Wind Farm) should be maximised, while ensuring appropriate safeguards for the environment. These signals include:

- (a) a publicised direction that *"for the foreseeable future, it is preferable that all new electricity generation be renewable, except to the extent necessary to maintain security of supply"*;
- (b) recognition that *"all forms of energy generation have some adverse environmental effects. Proposals with unacceptable adverse effects should not proceed, but our commitment to a renewable electricity target requires a substantial increase in renewable capacity overall"*; and
- (c) an indication that various regulatory methods will also be introduced to guide future decision making, including (as already noted above) development of a national policy statement on renewable energy.

⁵⁰ Ministerial Press Release: Hon Gerry Brownlee: *"New Policy Statement on Electricity Governance"*, 2 March 2009.

⁵¹ Ministerial Press Release: Gerry Brownlee: *"Unlocking New Zealand's Energy and Resources Potential"*, 24 February 2009.

7.84 In respect of Motorimu, the Environment Court held that the development of that wind farm was clearly in accordance with Government policy direction,⁵² and would (albeit in a small way) contribute to New Zealand meeting its obligations under the Kyoto Protocol and achieving the 90% renewable energy target.⁵³

7.85 One of the four specific reasons set out in the Minister for the Environment's express direction to call-in the Turitea project was that: *"the proposal will contribute to the achievement of the national target of 90% of electricity generation from renewable energy sources by 2025"*.⁵⁴

7.86 The NZES recognises that while there is growth in new technology leading to other non-traditional sources of generation, those sources are *"at a relatively early stage of development and are not currently economic"*. While the NZES supports diversification of the renewable generation market, this should continue to be primarily based on proven renewable generation sources such as wind.

7.87 An additional aim of the NZES particularly relevant to the Turitea Wind Farm is to increase security of supply, by promoting the spatial distribution of electricity generation closer to the point where it will be used. That security of supply objective has also been recently reiterated by the Minister of Energy and Resources in the draft Policy Statement for Electricity Governance noted above. The NZES recognises that spatial distribution has the additional benefit of improving the energy efficiency of the electricity system, by reducing transmission and distribution energy losses.

7.88 In respect of the Turitea Wind Farm, the proposal is to be located within close proximity to Linton substation, which is situated within a particularly strong part of the National Grid. It is also located near Palmerston North, and power will be distributed and used there and throughout the Wellington region (being major load centres). Electricity generation at

⁵² Supra note 31 at para [349].

⁵³ Ibid at para [357].

⁵⁴ Hon Dr Nick Smith, Minister for the Environment *"Ministerial direction for call-in"* of Mighty River Power Limited's Proposed Turitea Wind Farm, 18 December 2008.

this location accordingly has an advantage over South Island generation sources. For Wellington and lower North Island centres (that might otherwise require South Island generated electricity), no transmission via the High Voltage Direct Current link between the North and South Islands is required.

7.89 The Turitea Wind Farm represents exactly the sort of generation project that is anticipated and supported by the NZES, given the Minister's explicit reasons for his call-in direction, and that it will:

- (a) assist in the reduction of greenhouse gas emissions through the displacement of non-renewable energy generation;
- (b) advance the Government's targeted growth in renewable generation (as stipulated in the Minister's direction);
- (c) provide for more efficient transmission of energy; and
- (d) as noted above and discussed in the evidence of Dr Layton and Mr P. Baker, result in greater energy efficiency through the minimisation of transmission lines losses and more direct supply.

7.90 The key message of the NZES relevant to today's proceedings is that "*making the right choices today will allow New Zealand to sustainably power its future*". Therefore, granting the present applications for the Turitea Wind Farm is an important part of making that right choice.

New Zealand Energy Efficiency and Conservation Strategy

7.91 Like the NZES, the NZEECS was released in October 2007 as part of the Government's broad range of climate change policies, and in accordance with the Energy Efficiency and Conservation Act 2000.

7.92 It is a key component of the Central Government response to meeting energy, climate change, sustainability and economic transformation goals, and gives effect to a number of the objectives set out in the NZES. The NZEECS restates the commitment to 90 percent renewable generation by 2025. It further notes that meeting that target will require generating electricity from a "*diverse range of renewable sources such*

as wind, geothermal, hydro and biomass” and that “more distributed generation ... could also make useful contributions to achieving the target”.

7.93 The NZEECS focuses primarily on practical methods to achieve the policies from the NZES, specifically those relating to energy efficiency, the need for growth in renewable generation and increases in electricity supply generally. While the methods identified in the NZEECS are generally prospective, they record Government policy intentions, including:

- (a) recommendations to address distribution network losses;
- (b) producing a National Policy Statement for renewable energy (on which submissions have now been heard);
- (c) establishing programmes to support the increased distribution of generation capacity by the end of 2009; and
- (d) developing projects providing rural security of electricity supply by the end of 2010.

7.94 The NZEECS and NZES both direct that all new generation capacity should be from renewable sources unless security of supply dictates otherwise. It also makes clear that, where possible, this should be spatially distributed to assist with the reduction of transmission lines losses and increasing economic efficiency. The consistency of the Turitea Wind Farm with such objectives has already been addressed in these submissions.

New Zealand Emissions Trading Scheme

7.95 The New Zealand Emissions Trading Scheme (*NZ ETS*) came into force in September 2008 following the passage of the Climate Change Response (Emissions Trading) Amendment Act 2008, late in the last Government’s term. The resulting legislation seeks to enable New Zealand to meet its international obligations under the United Nations Framework Convention on Climate Change and Kyoto Protocol, support and encourage global efforts to reduce greenhouse gas emissions, and

reduce New Zealand's net emissions below those considered to be 'business as usual'.⁵⁵

7.96 The NZ ETS is covered in Parts 4, 5 and 6 of the Climate Change Response Act 2002, and the Stationary Energy Sector (Part 5 - subpart 3) covers the greenhouse gas emissions associated with fossil fuels used in electricity generation. Essentially, participants in the NZ ETS are required to surrender emissions units for carbon (greenhouse gases) associated with coal and natural gas mined or imported, with obligations of the energy sector commencing from 1 January 2010. While some sectors are eligible for free allocation of emissions units under the legislation, this is not the case for electricity generators. Nor do any policy mechanisms exist for any tradable carbon credits to be produced from new renewable generation projects. Essentially, under the NZ ETS, thermal generators that use coal, gas and geothermal steam will be required to pay additional emissions charges to account for greenhouse gases associated with fuel purchased and used for generation. Arguably, this mechanism in itself can also incentivise renewable generation, as unlike thermal generators, renewable electricity operators will not have additional fuel costs to pay, (given no coal or natural gas purchases are required) yet electricity sold on the open market will still attain marginal prices from consumers - given the market design. Accordingly, New Zealand's growing energy demands are encouraged to be met by new renewable energy sources such as wind at Turitea.

7.97 Following the General Election, a Special Select Committee was formed to undertake a review of the NZ ETS, with submissions heard earlier this year and recommendations and report back to Parliament are due later in 2009. Following the review hearings, the NZ ETS legislation may be amended to reflect the recommendations of the Select Committee, and indications at this stage are that an emissions trading scheme will be retained in some form. Presently the NZ ETS as enacted remains in force, and seeks to introduce a price on greenhouse gas emissions to provide an incentive for New Zealanders to reduce emissions. It also supports New Zealand achieving its international climate change

⁵⁵ Climate Change Response Act 2002, section 3 'Purpose'.

obligations – specifically the United Nations Framework Convention on Climate Change and Kyoto Protocol obligations (with stipulated emissions targets to be met).

Turitea Reserve Management Plan

7.98 As noted earlier in these submissions, PNCC has approved a change in purpose to allow the Turitea Reserve to be used for renewable electricity generation. The objective recorded in Section 8 of the amended (and current) TRMP is “*to allow electrical generation activities in the Reserve that do not compromise the Reserve’s function as a water supply catchment and ensure adverse effects and other values are appropriately mitigated*”.

7.99 Mr Pollock’s evidence addresses the TRMP in more detail. In summary, however, it is submitted that the evidence to be presented on behalf of Mighty River Power will demonstrate that the construction, operation and maintenance of the wind farm will not compromise its function as a water supply catchment, and that any adverse effects from the project will be appropriately avoided, remedied or mitigated.

7.100 In particular, Mr Levy outlines the measures to be adopted and practices followed to ensure that there will be no adverse effects on water supply or treatment. Messrs Shaw and Wyatt, Dr Coffey and Professor Craig identify potential impacts on indigenous plants, animals and habitats within the Turitea Reserve, as well its natural landscape values. Mr W. Shaw and Mr C. Shaw also outline the development of an Eco-Park within the Reserve to be funded via royalties from the project, which also forms an important benefit of the project.

7.101 Having regard to all these factors, it is submitted that the project is consistent with the objectives and policies of the TRMP.

Palmerston North Water Supply Bylaw 2008

7.102 The Bylaw (or previous versions of it) has been in place for some years. The Bylaw appears to be in part intended to protect the water supply catchment from human defecation and uncontrolled sediment runoff. Mighty River Power is acutely aware of the Turitea Reserve’s water

supply role, and the need to ensure the wind farm does not affect this. In response to the evidence of Mr Taylor and Mr Male, it has now removed all soil disposal sites from within the water catchment area.

National Environmental Standard for Sources of Human Drinking Water

7.103 With respect to the applications, Regulation 12(3) of the NES requires a condition to be imposed on grant of consent, which essentially obliges Mighty River Power to notify certain parties (including Horizons) if an event occurs during construction of the Turitea Wind Farm that may have a significant adverse effect on the quality of the PNCC water supply. This requirement will therefore be reflected in the revised proposed consent conditions, to be presented as discussed further below.

8. SECTION 105 CONSIDERATIONS

8.1 Section 105 requires the Board to have regard to the following additional matters with respect to applications for discharge permits:

- (a) the nature of the discharge and sensitivity of the receiving environment to any adverse effects;
- (b) the reasons for the proposed choice; and
- (c) any possible alternative methods of discharge, including discharge into any other receiving environment.

8.2 All relevant discharges and the sensitivity of the receiving environment to adverse effects from those are addressed comprehensively in the evidence to follow. That evidence concludes that taking into account the design of the Turitea Wind Farm and proposed mitigation, effects of the discharges on receiving environments will not be significant.

8.3 The discharge methodology, locations and regimes for the Turitea Wind Farm have been selected primarily because, based on the comprehensive and thorough range of expert assessments that have been undertaken, Mighty River Power determined they will best ensure that the effects of those discharges will be avoided if possible, and

otherwise adequately remedied or mitigated. On this basis, it is submitted that there are no matters under section 105 that should give the Board pause for concern.

9. SECTION 107 CONSIDERATIONS

9.1 In accordance with section 107, the Board is restricted from granting discharge permits in certain circumstances. The evidence on behalf of Mighty River Power is that none of the discharges associated with the Turitea Wind Farm will give rise to more than minor adverse effects in the receiving environment, including any of the effects listed in section 107.

10. SECTION 141B(2) CONSIDERATIONS

10.1 Section 147(4)(b) concerns the conduct of an inquiry following Ministerial call-in, and the *“factors to which the board of inquiry **must** have regard”* (emphasis added). Pursuant to section 147(4)(b) this Board of Inquiry is to have regard to:

“(i) any relevant factor under section 141B(2); and

(ii) the reasons stated under section 141C(b)”.

10.2 First, section 141B(2) concerns any relevant factors that the Minister for the Environment may have regard to in deciding whether a matter is, or is part of, a proposal of national significance (and a non-exclusive list of example factors are noted in that clause).

10.3 Second, section 141C(b) concerns the form of the Minister’s direction in that it must *“state the reasons for calling the matter in”*.

10.4 In his written direction of 18 December 2008, calling in the matters involved in the Turitea proposal, Minister for the Environment, the Honourable Dr Nick Smith⁵⁶ gave the following four reasons,:

(a) The proposal affects or is likely to affect or is relevant to New Zealand’s international obligations to the global environment;

⁵⁶ Hon Dr Nick Smith, Minister for the Environment *“Ministerial direction for call-in”* of Mighty River Power Limited’s Proposed Turitea Wind Farm, 18 December 2008.

- (b) The proposal affects or is likely to affect more than one region or district;
- (c) The proposal will contribute to the achievement of the national target of 90% of electricity generation from renewable energy sources by 2025;
- (d) The proposal will have national benefits deriving from the use and development of renewable energy in accordance with section 7(j) of the RMA.

10.5 The relevance of those call-in matters is covered in the sections that follow and the evidence for Mighty River Power. New Zealand is a party to the United Nations Framework Convention on Climate Change and the Kyoto Protocol. Those international treaties aim to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system, and as outlined in the evidence of Dr Layton,⁵⁷ the Kyoto Protocol creates binding obligations on New Zealand by setting a specific target for domestic emissions. If the target is not satisfied domestically (through actions to reduce greenhouse gas emissions), New Zealand will be required to purchase carbon credits/emissions units on the international market in order to meet its international treaty obligations. Producing carbon-free electricity from wind farms (as opposed to coal or gas fired plant) forms a critical part of New Zealand reducing its net emissions, and in addition, its risk of international emissions liability under Kyoto.

10.6 While it is not necessary to go into the detail of the obligations under the UNFCCC and the Kyoto Protocol, it is patently clear that *“curbing and eventually reducing the emission of greenhouse gases, principally CO₂ from the combustion of fossil fuels, is a priority if we hope to reduce the human activity component of climate change and avoid its effects on this country, and others”*.⁵⁸

⁵⁷ Dr Thomas Brent Layton EIC, at para [4.4].

⁵⁸ *Outstanding Landscape Protection Society Incorporated v Hastings District Council*, [2008] NZRMA 8 at para [100].

10.7 In addition to addressing New Zealand's international obligations, the Turitea Wind Farm will contribute significantly to the achievement of a national goal of 90% renewable energy within New Zealand's electricity generation sector by 2025. That is confirmed by the Minister's direction and reasons for call-in, and the evidence in support of this proposal. Similarly, the section 7(j) 'benefits of renewable energy' (identified by the Courts to date and in expert evidence presented in support of the Turitea proposal), provide clear assistance as to the positive contribution wind energy generated at this particular location will deliver.

11. PART 2

11.1 Turning directly to Part 2 matters, it is submitted that there are a range of matters in sections 5, 6, 7 and 8 that you may consider relevant to this hearing.

Section 5 – Purpose

11.2 Section 5 requires consideration of whether the Turitea Wind Farm will promote the sustainable management purpose of the Act under section 5(1), and whether it meets the various considerations set out in section 5(2).

11.3 With respect to section 5(1), it is submitted that the evidence will allow the Board to conclude that the Turitea Wind Farm has been designed to ensure that – on an overall broad judgment – the use, development and protection of natural and physical resources will be managed in a way that promotes the sustainable management purpose of the Act. This is particularly so given the significant positive benefits that the Turitea Wind Farm will generate for both present and future generations, whilst avoiding (or mitigating and/or remedying where avoidance is not possible) the adverse environmental effects it may generate.

11.4 The benefits of the Turitea Wind Farm have been explained above, and are outlined too in the evidence for Mighty River Power. To briefly recap however, the Turitea Wind Farm will:

- (a) utilise one of the best wind resources in the world in an efficient, sustainable manner;

- (b) provide a major new additional supply of sustainably generated electricity to the Manawatu Region;
- (c) ensure improved security of electricity supply for the Manawatu Region (by diversifying the current generation base, thereby reducing reliance on the national grid), at a time when electricity consumption is growing at 1.4% per annum;⁵⁹
- (d) reduce electricity generation costs in the Manawatu Region, and reduce or defer future transmission upgrade costs and reduce transmission line losses;
- (e) enable the freeing up of electricity for supply elsewhere in New Zealand, that would otherwise be required for the Manawatu Region;
- (f) generate significant employment opportunities and secondary (multiplier) economic benefits (primarily to the Manawatu Region) during the construction phase;
- (g) reduce CO₂ emissions by between 368,980 and 1,192,500 tonnes per annum depending on the turbine technology utilised;
- (h) increase the levels of pest control within Turitea Reserve to allow for the revegetation of indigenous vegetation and potential reintroduction of species; and
- (i) ensure protection and/or restoration of indigenous vegetation.

11.5 It is submitted that the Turitea Wind Farm will make a significant contribution to the Manawatu communities and to New Zealand, which on balance outweigh any potential adverse effects from the Turitea Wind Farm on the surrounding local environment.

11.6 It is submitted that the Turitea Wind Farm meets the requirements of section 5(2)(a), given that it only involves the harnessing and use of wind, and not the consumptive use of a finite resource. The Turitea Wind

⁵⁹ Refer, Statement of Evidence of Dr Thomas Brent Layton dated 1 May 2009, at paragraph 3.9.

Farm will also provide security of energy supply for future generations in an environmentally sound and sustainable way (utilising a renewable resource), and as such is entirely consistent with New Zealand's national climate change and energy efficiency policies.

11.7 With respect to section 5(2)(b), construction, operation and maintenance of the Turitea Wind Farm will be carried out in compliance with appropriate conditions and management plans, which the Environment Court has found to be sufficient to ensure that the life-supporting capacity of air, water, soil and ecosystems will be appropriately safeguarded (see *Royal Forest and Bird Protection Society v Manawatu-Wanganui Region*).⁶⁰ The evidence for Mighty River Power demonstrates, that based on the assessments undertaken and the mitigation measures proposed for the Turitea Wind Farm, the life-supporting capacity of the Tararua Ranges eco-system will not be compromised.

11.8 Finally, section 5(2)(c) requires that any adverse effects of the Turitea Wind Farm on the environment be adequately avoided, remedied or mitigated. The potential effects of the Turitea Wind Farm, and the manner in which they will be avoided (if possible), remedied or mitigated, will be outlined in detail later in these submissions, and in the evidence. It therefore suffices to say for now that, based on the expert assessment that has been undertaken, the Turitea Wind Farm will satisfy the criteria from section 5(2)(c), given the measures to avoid or mitigate adverse effects that have been incorporated in its design, or will be imposed by way of consent conditions.

Section 6 – Matters of National Importance

11.9 Section 6 sets out those matters of national importance which may be of relevance to the determination of any particular resource consent application, and which, if relevant, a consent authority must “*recognise and provide for*” in making its decision and giving effect to the purpose of the Act. As already outlined above, however, it is now settled law that section 6 matters are not “trump cards” or ends in themselves that must

⁶⁰ [1996] NZRMA 241

be protected at all costs, but rather are subordinate to the primary purpose of the promotion of sustainable management. The matters from section 6 relevant to the Board's consideration of the present applications are as follows.

11.10 Section 6(b) requires the Board to recognise and provide for:

“The protection of outstanding natural features and landscapes from inappropriate ... use and development.”

11.11 In this regard, Messrs Wyatt and Brown confirm that the Turitea Wind Farm will not affect any outstanding natural features or landscapes in the Tararua Ranges.

11.12 Section 6(c) makes recognising and providing for the following a matter of national importance:

“The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.”

11.13 With respect to the Board's task in accordance with section 6(c), the Act does not contemplate reinstatement of an already modified environment. Rather, the concept of 'protection' means keeping safe from injury or harm, not absolute protection, prevention or prohibition (see *Environmental Defence Society v Mangonui County Council* [1989] 3 NZLR 257; and *Auckland Volcanic Cones Society Inc. v Transit New Zealand Limited* [2003] 2 NZRMA 54).

11.14 The significance of ecological effects on indigenous vegetation and habitats of indigenous fauna are discussed in detail in the evidence of Mr Shaw. The expert ecological evidence is that significant areas of indigenous vegetation and habitats of indigenous fauna have in large part already been protected by their exclusion from the development area. The evidence further demonstrates that the potential ecological effects of the Turitea Wind Farm will be minor, as a result of the mitigation proposed (as set out in detail in Mr W. Shaw's evidence).

11.15 Accordingly, it is submitted that the Board need have no concerns about the Turitea Wind Farm appropriately responding to the matters from section 6(c).

11.16 In accordance with section 6(e), in considering the applications the Board must recognise and provide for:

“The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.”

11.17 The evidence attests as to the importance Mighty River Power ascribes to its relationship with tangata whenua, and the extent to which Mighty River Power places importance on cultural obligations to and associations with the land and environment. In the circumstances, it is submitted that there can be no question that this relationship with the local environment will be recognised and provided for through the ethic and practice of guardianship.

11.18 The final relevant matter in respect of the applications under section 6 is section 6(f); recognising and providing for:

“The protection of historic heritage from inappropriate ... use and development.”

11.19 Submissions made above regarding ‘protection’ are equally relevant in the context of section 6(f). Appropriate protection of Maori heritage has also already been addressed in the context of the requirements of section 6(e).

11.20 With respect to remaining historic heritage values, Dr Clough concludes that there are only three relevant historic or archaeological sites within the site of the Turitea Wind Farm, and that the proposal, as currently designed, will not affect any of these. It is therefore submitted that any effects on historic heritage will be less than minor, and not a matter that the Board will find any concerns with.

Section 7 – Other Matters

11.21 Section 7 sets out other matters that (if relevant) a consent authority must “*have particular regard to*” in considering consent applications.

11.22 The first of these are sections 7(a) and 7(aa), relating to “*kaitiakitanga*” and “*the ethic of stewardship*”. For the reasons noted above (in the context of section 6(e) RMA), it is submitted that the requirements of these provisions have been satisfactorily addressed from a tangata whenua perspective.

11.23 Section 7(b) requires consideration of the “*efficient use and development of natural and physical resources*”. In the current electricity generation and supply climate (and as indicated in the *Genesis* decision (para [222])), it is clear this matter is of great significance to both these applications and the country generally.

11.24 Securing additional generation capacity for the region that is efficient and sustainable has been a key focus of Mighty River Power’s operations over a number of years. This focus has been a guiding principle for, and is fully reflected in, development of the project before the Board. In particular, and unlike some other forms of power generation, the Turitea Wind Farm will make use of a renewable energy resource without consuming or depleting it, and has been designed with a fundamental focus on the avoidance of adverse effects where possible. Further, the fact that the Turitea Wind Farm is a discretionary activity raises the inference that it is an efficient use of resources (*LRG Investments Limited v Christchurch City Council*,⁶¹ applied in *Genesis* at paragraph 220).

11.25 As you will hear from Dr Layton, the Turitea Wind Farm will contribute to the efficient use and development of resources in a manner that is consistent with current government policy, as well as generating economic benefits for the Manawatu Region during both its construction and operation. Dr Layton also considers that, with the adoption of

⁶¹ C064/98.

appropriate mitigation, such efficiencies and economic benefits will far outweigh the potential economic costs of the Turitea Wind Farm.

11.26 The Courts have also noted that in terms of section 7(b), the efficient use and development of resources is the key to achieving the enabling aspect of section 5 (see *Carter Holt Harvey Forests Limited v Tasman District Council*).⁶² In light of the above, it is further submitted that the Turitea Wind Farm will serve this purpose by:

- (a) not impairing (and indeed in some respects enhancing) the social well being and health of other people and the community;
- (b) avoiding where possible, and otherwise remedying or mitigating adverse effects on the environment (as will be addressed in more detail later in these submissions); and
- (c) maintaining amenity values and the quality of the environment (again, this is addressed in detail in a following section of these submissions).

11.27 In accordance with sections 7(c) and (f), the Board must have particular regard to the maintenance and enhancement of amenity values (as defined in section 2) and the quality of the environment.

11.28 While the applications have been opposed by submitters on the basis of environmental effects from the Turitea Wind Farm, it is important to note first that the expert evidence to follow concludes that the potential effects will not be unacceptable (and in important respects will be significantly positive), subject to adequate mitigation through the operational and management measures proposed and consent conditions.

11.29 Secondly, and in any event, those matters contained within section 7(c) and (f) do not override the purpose of the Act. Indeed, in *Shell New Zealand v Auckland City Council*⁶³, the Court of Appeal confirmed that section 7(c) does not “require” the maintenance and enhancement of amenity values. This is because the Act contemplates applications for

⁶² (1998) 4 ELRNZ 93

⁶³ [1996] NZRMA 189

resource consent for activities that do not enhance amenity or even maintain it. The identical rationale applies to section 7(f).

11.30 It is not disputed that wind farms result in changes to the landscape and visual character of a given location. Both the Courts and generators alike recognise that visual and landscape change will be inevitable. However, as recognised by the Court in *Unison 1*,⁶⁴ after considering the landscape evidence presented and perception issues - “*the most that can be said is that some people will have a positive predisposition, and others will not*”. The Court in that case also noted that, “*it is self apparent that landscape issues are matters about which reasonable and informed people may hold conflicting views. It is not possible to say that one view is right and another wrong.*”⁶⁵ This view has been confirmed by the survey undertaken by Mr Kalafatelis, and is explained further in Mr Wyatt’s evidence.

11.31 The evidence also outlines in detail, the mitigation measures incorporated into the design and operation of the Turitea Wind Farm, which together with the recommended conditions of consent, will ensure that amenity values and environmental quality of the Turitea Ranges are protected and maintained.

11.32 In addition, in relation to section 7(f), in our submission, the production of energy from a renewable resource also contributes to the maintenance and quality of the environment in the wider, national sense, by encouraging and facilitating renewable energy production and the reduction of greenhouse gas emissions.⁶⁶ On the basis of the above and evidence to follow, it is submitted that the Board can readily conclude that the Turitea Wind Farm will not offend any matters from sections 7(c) or 7(f).

⁶⁴ *Unison Networks v Hastings District Council* (W058/06), at para [61].

⁶⁵ *Ibid* at para [69].

⁶⁶ See *Genesis* (supra note 18) at paragraph [220], where the Environment Court stated: “*To the extent that this proposal would provide for the generation of sustainable and renewable energy, it would assist New Zealanders to maintain the quality of their environment, and to some extent, enhance it by encouraging and facilitating a move towards renewable energy and to reduce the emission of greenhouse gases.*”

11.33 Section 7(d) requires the Board to have particular regard to the “*intrinsic values of ecosystems*”. In this regard, it is relevant to note that “*intrinsic values*” is defined in section 2 as meaning those aspects of ecosystems and their constituent parts which have value in their own right, including:

- (a) their biological and genetic diversity; and
- (b) the essential characteristics that determine an ecosystem’s integrity, form, functioning and resilience.

11.34 In terms of these matters, the terrestrial and aquatic ecological evidence to be presented will demonstrate that, subject to appropriate mitigation measures and consent conditions (as described further in that evidence), the issues referred to in these provisions will be appropriately addressed.

11.35 Section 7(g) relates to “*any finite characteristics of natural and physical resources*”. With respect to this consideration, the evidence describes how the Turitea Wind Farm will produce energy that might otherwise have been sourced from burning fossil fuels. Such fossil fuels are a finite resource and the current proposal is therefore likely to slow the rate of use of those resources. To the extent that section 7(g) is relevant, therefore, it is submitted that having particular regard to it in fact gives rise to a further positive factor.

11.36 Finally, sections 7(i) and (j) focus on “*the effects of climate change*” and “*the benefits to be derived from the use and development of renewable energy*”. The Act was amended as from 2 March 2004 to explicitly include these matters. As the Court recognised in *Genesis* (at para [222]):

“this 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 in the proposed wind farm.”

11.37 In essence, the resource management benefit of using such resources is that power generation from them displaces the need, in terms of the merit order utilised in the New Zealand electricity generation system, to generate electricity from non-renewable sources such as coal or gas.

Both coal and gas have a far greater potential impact on both the global environment in terms of greenhouse gas emissions, and New Zealand's ability to meet its Kyoto Protocol obligations and relevant emissions targets as evidenced in the evidence of Dr Layton. Again, it is submitted that those obligations exist regardless of any domestic emissions trading scheme legislation or related policies.

11.38 In dealing with section 7(j) 'benefits', the Court in *Upland Landscape Protection Society v Clutha District Council*⁶⁷ concluded that the purpose of that section "is to avoid re litigating on a case-by-case basis, the benefits of renewable energy over those which use non-renewable energy" sources. The Court stated that if Parliament had intended to require such benefits to be proven in each case, there was little point in section 7(j). That is so because 'any benefit' or 'benefits (if any)' were simple drafting solutions if particular benefits had to be proven by an applicant in every case.⁶⁸ The Court also recorded that section 7(j) requires decision makers to assume that wind generation has benefits, a key benefit of which was avoidance of the use of non-renewable energy resources - considered by the Court to be a reflection of the potential environmental effects of such energy sources in terms of carbon emissions or other effects on the environment.⁶⁹

11.39 In respect of any *de minimis* arguments as to wind farm benefits, these were addressed, and roundly rejected in *Genesis*.⁷⁰ Further, in *Upland Landscape Protection Society*,⁷¹ the appellant contended that benefits of wind power were overstated in that wind farms did not replace the requirement for thermal generation. However, the Environment Court rejected this contention as follows:

⁶⁷ C085/08.

⁶⁸ *Ibid* paragraph [231].

⁶⁹ *Ibid* paragraphs [234] and [238].

⁷⁰ *Supra* note 18 at paragraph [228], and as noted in *Meridian Energy Limited v Wellington City Council* (W031/07) at paragraph [395].

⁷¹ *Supra* note 67 paragraphs [208]-[209].

“it is not necessary for us to be satisfied that the wind farm would have any impact upon the existing configuration of power supply... if it addresses future demand.... Every gigawatt hour which is supplied from the renewable source avoids the need to consider using or commissioning thermal production.... to supply that increase in demand. Accordingly in practical terms we are satisfied that there is a benefit to the environment as a whole in the commissioning of new renewable resources rather than thermal”.

11.40 Similarly, in *Motorimu*,⁷² the Court rejected the proposition that *the* wind farm would make such an insignificant contribution to New Zealand’s generation needs that consent should not be granted, and noted that while it would only make a limited contribution, it would make a contribution nonetheless (and when combined with other renewable energy sources).

11.41 The benefits of renewable energy from the Turitea Wind Farm have been outlined earlier in these submissions. Further, as also noted throughout these submissions, the government has stated that New Zealand’s stock of generation resources must be greatly increased, and that the increase should be achieved through the consenting and implementation of renewable energy infrastructure. The Turitea Wind Farm is entirely consistent with that goal, and Mighty River Power’s applications have accordingly received the support of the Energy Efficiency and Conservation Authority.

Section 8 – Treaty of Waitangi

11.42 In accordance with section 8, all persons exercising powers and functions under the Act must take into account the principles of the Treaty of Waitangi. In respect of the Turitea Wind Farm, and as noted above, Mighty River Power has acted in good faith towards iwi and protected their interests through consulting closely with relevant iwi both pre and post lodgement of the applications. It is submitted that the Board can therefore have confidence that the Treaty principles have been taken into account in respect of the applications, as required by section 8.

⁷² Supra note 31 at paragraphs [73] and [74].

Conclusion on Part 2 Matters

11.43 Having regard to the relevant statutory criteria, and comprehensive expert assessment undertaken in respect of the Turitea Wind Farm, it is submitted that on an overall balanced judgment, as required under section 5, the Turitea Wind Farm is fully in accordance with the sustainable management purpose of the Act.

11.44 In particular, the Board can be confident that the Turitea Wind Farm appropriately addresses all relevant matters of national importance, other matters and the principles of the Treaty of Waitangi as required by sections 6, 7 and 8.

11.45 In terms of section 5, the main driver behind development of the Turitea Wind Farm has been to provide additional generation capacity to meet the Manawatu region's predicted growth in electricity demand in an efficient and sustainable manner. As a result, the Turitea Wind Farm will enable both present and future communities to provide for their social, economic and cultural wellbeing and for their health and wellbeing, given the security of supply, range of efficiencies and other positive benefits it will generate.

11.46 Mighty River Power therefore submits that enabling the Turitea Wind Farm to proceed, in accordance with appropriate conditions, will not merely promote, but in fact actively work to achieve sustainable management.

12. SUBMITTER CONCERNS

12.1 A comprehensive summary of submissions has been prepared for the Board by Hill Young Cooper, dated April 2009. As outlined in that summary, some 702 submissions were received in respect of the proposal, 49 of which were accepted by the Minister as either late or non-complying. Mighty River Power is aware that a number of these submissions (including that from Airways New Zealand) have now been withdrawn, but has not been provided with details as to all of these.

12.2 The matters raised in submissions have been categorised in that summary as follows:

- (a) Effects on the natural environment (including stream and river quality, renewable energy and CO₂ emissions);
- (b) Social and cultural effects;
- (c) Economic effects;
- (d) Effects on amenity (including noise, visual, traffic, waste and dust);
- (e) Regulatory and strategic issues (including consistency with the NZECS, NZEECS and New Zealand's commitments under the Kyoto Protocol);
- (f) Process issues; and
- (g) Other.

12.3 Mighty River Power takes seriously the matters raised in all submissions, and has ensured that these are carefully considered by its various experts. This is also reflected in the modifications to the proposal (including the deletion of some 10 turbines for proximity, ecological and cultural reasons, as outlined in particular by Mr Henry) that have occurred since the applications were originally lodged. Mighty River Power's experts have also provided detailed responses to matters raised by submitters as necessary, and appropriate to their area of expertise, in the evidence presented.

12.4 The submissions also reflect and reinforce the key importance with respect to these applications of visual/landscape issues, and in particular cumulative visual effects. A number of submissions relate to the visual effects of individual turbines on individual residences. Another consistent theme is that the Tararua Ranges are already "saturated" with turbines, and that Palmerston North has already "done its bit" in terms of New Zealand's sustainability efforts.

12.5 As already noted, Mighty River Power accepts that the wind farm will be a significant and visually prominent addition to the landscape, and that its adverse effects in this regard require careful and robust consideration by the Board. This is why it has ensured its own experts have undertaken a

thorough and rigorous assessment of such effects, and commissioned a public perception survey to further test some of the assumptions on which this assessment was based. It further accepts that it is not possible to avoid, remedy or mitigate all these effects. Even so, as outlined further in these submissions, it considers that the project provides substantial benefits and positive effects that counterbalance, and in an overall judgement outweigh, those adverse effects.

Status of negotiations with the Department of Conservation and Tanenuiarangi Manawatu Inc.

The Department of Conservation

12.6 DoC and Mighty River Power have met on a number of occasions to discuss ecological issues, with respect to the present applications. DoC has also provided comments on draft ecological conditions, and discussions about possible conditions are ongoing. Monitoring of effects on avifauna and bats is intended to be supplemented by 2 post graduate research projects, to be undertaken by Massey University scholars. DoC's involvement in this regard is also intended to be ongoing.

Tanenuiarangi Manawatu Inc.

12.7 Mighty River Power has agreed a MoU with TMI, aimed at cementing its existing working relationship with that iwi, and ensuring that as construction of the Wind Farm progresses, TMI is fully empowered to play a key role with respect to the undertaking of appropriate cultural monitoring. The MoU also recognises the significance of certain cultural sites, and as a result, Mighty River Power has agreed to remove turbine 55 from its application. Mighty River Power understands that a representative from TMI will be addressing the Board directly about its relationship with Mighty River Power, and the cultural matters arising with respect to the Turitea Wind Farm project.

Irrelevant considerations

12.8 It is also necessary to comment on a number of concerns raised by submitters, which are not relevant to the Board's consideration of these applications, as follows.

Property values

12.9 A number of submitters have raised concerns regarding perceived effects of the project on property values. However, it is submitted that this should not form part of the Board's consideration of the present applications, as it is not a relevant matter under the RMA for the purposes of determining whether a resource consent should be granted.⁷³ That is primarily because rather than being an effect on the 'environment' as defined in the RMA, diminution of property effects are simply another measure of adverse effects on amenity values, which are already adequately taken into account and should not be "double counted". Further, valuation evidence is often speculative in nature, and therefore far less helpful to the Board than directly addressing physical effects on the environment. It is further noted that no party has called any evidence with respect to valuation matters.

Alternatives

12.10 You are likely to hear from a number of submitters who would wish to see New Zealand adopt different methods of electricity generation. In addition some submitters, while supporting wind generation generally, will also suggest that such generation would be more usefully located at other sites within New Zealand.

12.11 The most important point with respect to both points is that under the Act, an applicant for a discretionary activity does not have to demonstrate that there is no alternative method or site, or that adequate consideration has been given to alternative sites or methods. Rather, the application is tested on its own merits, by reference to the provisions of the Act and of the Plan.⁷⁴

12.12 That said, the place of renewable energy in New Zealand's current generation portfolio, and Mighty River Power's desire for diversifying its own operations into wind generation, are addressed in detail in particular by Drs Heffernan and Layton. Dr Layton and Messrs P Baker and Wong

⁷³ *Foot v Wellington City Council* W73/98.

⁷⁴ See, for example, *Freilich v Tasman District Council* [2005] NZRMA 410.

Too also provide evidence as to the selection of the Turitea Wind Farm site, and its proximity to both load centres and the national grid.

Decommissioning

12.13 Decommissioning of turbines was also a common theme, with many submitters concerned as to who would be responsible for taking the turbines away once they were no longer useful. It was also noted that a decommissioning plan was not part of the application.

12.14 It is correct that Mighty River Power's current applications do not cover decommissioning activities, nor is there any requirement under the RMA that they do so. Mighty River Power has applied for land use consents that run with the land. While it is unlikely that decommissioning will generate substantial (if any) environmental effects, Mighty River Power will seek any necessary resource consents in this regard when it comes to undertake that work, and in accordance with the relevant plans and rules in place at that time.

Change of Purpose of Turitea Reserve

12.15 Given the nature of comments made in some submissions, it is important to reiterate that concerns relating to the change of purpose for the Turitea Reserve, and the Reserves Act generally, are not relevant to or able to be re-litigated in the context of the present applications.

Wind Farm Moratorium in advance of National Guidance

12.16 Finally, some submitters have suggested there should be a "moratorium" on any further wind farm development, until further national policies, guidelines or standards are developed regarding wind farms. These submitters also seek that this national guidance include minimum set backs from residences, compensation, and the identification of areas which are suitable for wind farms, and those that are "no-go" areas.

12.17 The short point is that the Board does not have jurisdiction to entertain these submissions, let alone make such a determination in the context of the present applications, given the requirements of both the RMA and the Minister's Directions calling in these applications. Clearly, the Board is

obliged to consider these applications pursuant to the relevant and current statutory criteria, as already detailed in these submissions. That aside, current Government policy (as indicated by documents such as the NZES, NZEECS and proposed Renewable Energy NPS) would indicate that such a moratorium is very unlikely to be imposed in the foreseeable future.

13. SECTION 42A REPORTS

13.1 As discussed via judicial telephone conferences on Wednesday 1 July and Thursday 2 July 2009, Mighty River Power will be circulating supplementary evidence regarding the various reports prepared for the Board pursuant to section 42 of the RMA on Monday 20 July 2009, and substantive legal submissions in respect of these reports will be presented on Monday 27 July 2009.

14. CONSENT CONDITIONS

14.1 As directed, a preliminary set of draft consent conditions was circulated with Mighty River Power's evidence on 1 May 2009. Since then, further detailed condition drafting in particular around water quality, sediment control, noise, ecology and traffic has occurred where possible and as agreed with experts during caucusing. However, as a result of receiving the section 42A reports commissioned by the Board, further caucusing will be occurring between various experts during the adjournment (in particular in the areas of water quality, noise and traffic), which is expected to result in significant additions to and refinement of those conditions. An updated set of conditions, reflecting the results of that caucusing, will therefore be provided when addressing the section 42A reports on 27 July 2009.

15. PRINCIPAL SUBMISSION

15.1 Mighty River Power's applications for consent have been developed to ensure that any environmental effects will be acceptable. Mighty River Power's principal submission is that all consents sought should be granted because:

- (a) the Turitea Wind Farm satisfies the requirements of the RMA, and of Part 2 and sections 104(1), 105 and 107 in particular; and
- (b) the evidence demonstrates that all aspects of the Turitea Wind Farm have been professionally engineered and designed, and that there are proper avoidance and mitigation measures in place to ensure it will not result in adverse environmental effects that are unacceptable; and
- (c) the Turitea Wind Farm represents a significant opportunity to add to the limited national store of renewable electricity generation sources. That opportunity ought not to be lost because of concerns about adverse effects that in Mighty River Power's submission are outweighed by competing considerations and are in any event sufficiently avoided, minimised and mitigated by way of both detailed design and proffered consent conditions.

15.2 Ultimately, the Board's assessment of the applications involves a pragmatic weighing and balancing of the evidence to be presented and the concerns raised by submitters. That balancing must take proper account of both adverse and positive effects, in light of matters which are *relevant* under the Act and against the key matters provided by the purpose of the RMA, being the "*sustainable management of natural and physical resources*". It is a proposal of national significance, which pays careful attention to local and other effects as required by the Act.

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Counsel for Mighty River Power Limited

6 July 2009