



# Report

## Section 42A Report

### Turitea Windfarm

20 MAY 2009

Prepared for  
Turitea Board of Inquiry and Ministry for the Environment  
Ministry for the Environment  
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Wellington

42770450

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## Introduction

The Ministry for the Environment, on behalf of the Board of Inquiry for the Mighty River Power Turitea Wind Farm proposal, contracted URS New Zealand Limited (URS) to prepare a section 42A Officers report which addresses the following:

- Review of relevant plans and other statutory information related to the application.
- Review the application and submissions and identification of any issues.
- Assess the adequacy of information and whether any further information should be sought on a matter and/or any gaps in the information.

Mighty River Power seeks consent to construct and operate a wind farm approximately 10 km southwest of Palmerston North, within the Turitea Reserve and on adjoining private properties. When complete, the wind farm would have an installed capacity of up to 336MW.

Mighty River Power is seeking consent for:

- A maximum of 127 turbine zones and up to 122 turbines,
- Two transmission lines,
- Two substations,
- Associated works and discharges.

This report makes no recommendations about the merits, suitability or otherwise, of Mighty River Power's application and addresses only those matters identified above. It is a factual assessment, building upon the work undertaken by Horizons Regional Council, Palmerston North City Council and Tararua District Council in making initial assessments of the application prior to the call-in by the Minister. URS has not engaged any experts to review the adequacy of the technical supporting documents contained in the application appendices.

In preparing this section 42A report, URS reviewed the following documents comprising the application:

- Mighty River Power – Turitea Wind Farm, Applications and Assessment of Environmental Effects – dated August 2008.
- Mighty River Power – Turitea Wind Farm, Assessment of Environmental Effects – Appendices, dated August 2008.
- Information relating to the Revised Turbine Layout, including statement by Mighty River Power - Explanation of Turitea Modifications, site layout plan prepared by Beca - drawing no. 0848-RK200 Rev F, Letter from Wildland Consultants dated 16 January 2009 and letter from Hegley Acoustic Consultants dated 16 January 2009.
- Mighty River Power – Turitea Wind Farm – Section 92 Requests for Further Information – Consolidated Responses, dated January 2009.



## Review of Plans and Statutory Information

The purpose of this section is to review the relevant plans and other statutory information relevant to the application (including the further information received) and identify if each plan etc. is addressed in the documentation. In undertaking this review URS considers that the following plans and statutory information are applicable:

### *Regional and District Plans*

- Manawatu-Wanganui Regional Policy Statement (August 1998)
- Manawatu-Wanganui Regional Air Plan (January 1999)
- Manawatu -Wanganui Land and Water Regional Plan (September 2003)
- Manawatu-Wanganui Regional Plan for Beds of Rivers and Lakes and Associated Activities (March 2001)
- The Proposed Manawatu-Wanganui (Horizons) One Plan (notified 31 May 2007)
- Operative Palmerston North District Plan (and Proposed Plan Change 42 - Earthworks)
- Operative Tararua District Plan (March 1998)
- Proposed Tararua District Plan (April 2008)

### *Statutory Information*

- PNCC Alteration to Purpose of Turitea Reserve and Amendments to Management Plan – Council decision adopted 30th October 2006
- The Reserves Act 1977
- Central Government Energy Policy
- The Electricity Act 1992
- NZ Energy Efficiency and Conservation Strategy (NZECS) (2007)
- The Climate Change [Emissions Trading and Renewable Preference] Bill (ETS Bill)
- National Policy Statement on Electricity Transmission
- Proposed National Policy Statement on Renewable Electricity Generation
- New Zealand Energy Strategy
- Horizons Regional Land and Riparian Management Strategy (1999)
- Conservation Management Strategy
- Conservation Act 1987
- Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007
- Resource Management Act 1991

**Tables 2-1, 2-2 and 2-3** below, provide a review of the relevant District and Regional Plans, statutory information and the Resource Management Act as they relate to the proposal.

We have identified whether we consider the application has adequately addressed the stated document as well as providing further comment under 'Review Comments' on matters we consider are lacking in the application information.

## 2 Review of Plans and Statutory Information

**Table 2-1 Regional and District Plans**

	Reference Document	In App'n?		Section in AEE or Further Information	Review comments
		Yes	No		
<b>Regional Plans</b>	The Manawatu-Wanganui Regional Policy Statement (Operative July 1998) - Chapter 22 – Outstanding Natural Features & landscapes - Chapter 29 – Energy and Infrastructure	✓		7.5, 7.6, 7.6.1, 7.7, 7.7.1, 7.7.2, 7.7.3, 7.7.4, 7.7.5, 7.8, 7.8.1, 7.9, 7.9.1	Appendix R provides a full assessment against the relevant rules of this regional planning document.
	Land and Water Regional Plan (2003)	✓		5.2.1 Appendix Q and R	Appendix R provides a full assessment against the relevant rules of this regional planning document.
	The Regional Plan for the Beds of Rivers and Lakes (2001)	✓		5.2.1 Appendix Q and R	Appendix R provides a full assessment against the relevant rules of this regional planning document.
	Manawatu Catchment Water Quality Regional Plan (Operative October 1998)	✓		Refer to Further Information – Consolidated Response, pgs 12 and 13 and Attachments 11 & 12	Not addressed in August 2008 AEE but subsequent reference to the MCWQRP is made in the Further Information – Consolidated Response, pgs 12 and 13 and Attachments 11 & 12
	Regional Air Plan (1999)	✓		5.2.1 Appendix Q and R	Appendix R provides a full assessment against the relevant rules of this regional planning document.
	Horizons Proposed One Plan (Notified May 2007) - Chapter 3 – Infrastructure - Chapter 5 – Land - Chapter 6 - Water - Chapter 7 – Living Heritage Schedule F – Regional Landscapes	✓		5.2.1 Appendix Q and R	Appendix R provides a full assessment against the relevant rules of this regional planning document.  It is noted that submissions have been received against the provisions contained in the Proposed One Plan. As the POP is not yet operative, issue of weighting to give to the provisions in the POP vs provisions in the RPS and Operative Plans need to be considered.
<b>District Plans</b>	Palmerston North City Council District Plan – Operative (2000)	✓		1.8.3 – Requiring Authority Approvals  5.2.2 Appendix Q and R	Turitea Reserve and all roads designated in PNCC District Plan – Approval sought from PNCC via separate approvals process. No further information is provided about the status of these applications.  - No Assessment is made against Rule 20.3.9.1, which relates to access standards.

## 2 Review of Plans and Statutory Information

	Palmerston North Water Supply Bylaw (July 2008)		x		No assessment is made against this bylaw
	Tararua District Plan -Operational (1998)	✓		1.8.3 – Requiring Authority Approvals  5.2.3 Appendix Q and R	All roads with Tararua District designated. Approval from TDC sought via separate approvals process. No further information is provided about the status of these applications. Appendix R provides a full assessment against the relevant rules of this district planning document.
	Tararua District Plan -Proposed (Notified May 2008)	✓		1.8.3 – Requiring Authority Approvals  5.2.3 Appendix Q and R	All roads with Tararua District designated. Approval from TDC sought via separate approvals process. No further information is provided about status of these applications. Appendix R provides a full assessment of the relevant rules of this district planning document.

**Table 2-2 Other Statutory Information**

Reference document	In App'n?		Section in AEE or Further Information	Review comments
	Yes	No		
PNCC alteration to the purpose of Turitea Reserve Management Plan – Council decision adopted 30 Oct 2006	✓		7.12.5 Chapter 7	
The Reserves Act 1977	✓		1.8.1 7.12.5	
Central Government Energy Policy	✓		7.12.1(b)	
The Electricity Act 1992	✓		3.2 7.12.4	
NZ Energy Efficiency and Conservation Strategy (NZECS) (2007)	✓		3.2 7.12.3	
The Climate Change [Emissions Trading and Renewable Preference] Bill (ETS Bill)	✓		3.2 7.12.4	
National Policy Statement on Electricity Transmission	✓		7.12.1(a)	
Proposed National Policy Statement on Renewable Electricity Generation	✓		7.12.1(b)	
New Zealand Energy Strategy (NZES 2007)	✓		3.2 7.12.2	
Horizons Regional Land and Riparian Management Strategy (1999)	✓		7.12.6	
Conservation Management Strategy	✓		7.12.7	The application considers there are no relevant provisions in the Conservation Management Strategy of relevance to the

## 2 Review of Plans and Statutory Information

				proposal. Consultation has occurred with the Department of Conservation as the proposal is located within DoC's Wanganui Conservancy. This being the case, reference to the Conservation Management Strategy, particularly in terms of (g) recreation, and (h) commercial activities, may be necessary.
Conservation Act 1987	✓	✗	1.8.2	The AEE identifies that the proposal requires a concession under this Act for access to a Conservation Area (Tararua State Forest Park) for construction, operation and maintenance of the Wind Farm and states that this concession has been granted in favour of PNCC. A copy of this concession should be obtained.
Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007		✗		No assessment in the Application information against this National Environmental Standard, although the Water Supply Catchment is discussed in section 2.1.2 of the AEE.

**Table 2-3 Resource Management Act 1991**

Reference document	In App'n?		Section in AEE or Further Information	Review comments
	Yes	No		
Section 105 considerations	✓		5.34 7.13	
Section 107	✓		5.3.4 7.14	Reference is also made in the AEE to the Construction Effects Report – Appendix E & Ecology & Avifauna – Appendix D
Section 141B(2)		✗		Reasons for the Minister's Call-in of the Application not addressed in AEE or Further Information given that the call-in decision was made in December 2008 and notified on 24 January 2009 subsequent to the lodgement of the Application and submission of the further information.
Part 2 Assessment	✓		Section 7	Section 7 provides a comprehensive review of the statutory context that is relevant to the proposal.
Fourth Schedule Assessment	✓		Section 6	A comprehensive Assessment of Effects is provided in the AEE, however the following matters

## 2 Review of Plans and Statutory Information

			<p>Additional information/ clarification is also provided in relation to a number of technical areas in the S.92 Further Information – Consolidated Response, dated January 2009</p>	<p>may require further consideration:</p> <ul style="list-style-type: none"> <li>- a more detailed section on the consideration of alternatives.</li> <li>- a more detailed assessment of the risks of hazardous substances.</li> <li>- a more detailed assessment of alternative methods to discharge.</li> <li>- Clarification in the proposal identifying who the specifically affected parties are.</li> </ul> <p>The Turitea Wind Farm Project was modified subsequent to lodgement of the consent applications in August 2008, resulting in a reduction in the number of potential turbine sites from 136 turbine zones and 131 turbines to 127 turbine zones and 122 turbines. The effects of this change has been addressed briefly by MRP's Ecological and Noise Consultants, however other potential effects (positive and negative) should also be addressed with respect to other technical assessments.</p>
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## Identification of issues

In undertaking a review of the Application and submissions to identify potential issues, URS have reviewed the application documents (as listed in the Introduction Section of this report) which includes the draft Turitea Wind Farm Summary of Submissions Report (prepared by Hill Young Cooper, dated March 2009) and two(2) pages of further comments received by MfE on the draft Summary of Submissions report.

In addition to the issue categories identified by Hill Young Cooper, we have identified a number of specific issues raised by submitters, as outlined in **Table 3-1**. These issues are further categorised according to whether they are likely to occur during the construction phase or operational phase of the wind farm. We note that the application does not include reference to decommissioning.

Several issues raised by submitters are not considered to be planning matters, these are marked with an asterix(\*)

**Table 3-1 Specific Issues raised in Submissions**

Issue Category (from HYC Summary of Submissions Report)	Specific Issue identified
<b>Construction</b>	
Effects on natural environment	<ul style="list-style-type: none"> <li>• Effect of development on water supply – pollution and sedimentation – integrity of water supply</li> <li>• Effect of development on streams, including Kahuterawa and Turitea Streams and Manawatu River – silt run-off and increase of weeds</li> <li>• Effect on ecology – flora/fauna – bats and birds - biodiversity</li> <li>• Close proximity to fault line</li> <li>• Erosion and water run-off – potential for flooding</li> <li>• Effect on reserve – ecological impact/fragmentation – permanent change</li> <li>• Air discharges</li> <li>• Ecopark – inadequate mitigation</li> <li>• Greenhouse gases – emission from construction</li> <li>• Discharges from cleanfill</li> </ul>
Social and cultural effects	<ul style="list-style-type: none"> <li>• Cultural impacts</li> <li>• Effect on archaeological sites</li> <li>• Effect on community cohesiveness</li> <li>• Effects on archaeological/historic sites</li> <li>• Damage to houses from increased wind</li> <li>• Effect on recreational qualities of reserve</li> <li>• Health effect of transmission lines/windfarms</li> </ul>
Economic effects	<ul style="list-style-type: none"> <li>• Limited job prospects created from wind farm*</li> </ul>
Effects on amenity	<ul style="list-style-type: none"> <li>• Cumulative effect of windfarms</li> <li>• Consideration of alternative locations</li> <li>• Noise/ vibration effects</li> <li>• Visual effect on skyline/landscape values – recovery of native vegetation</li> <li>• Health and safety / Increase in traffic</li> </ul>

### 3 Identification of issues

Issue Category (from HYC Summary of Submissions Report)	Specific Issue identified
Regulatory and strategic issues	<ul style="list-style-type: none"> <li>• Compliance with planning policy</li> <li>• Decommissioning process</li> <li>• Content and conclusions of impact assessment report</li> </ul>
Process issues	<ul style="list-style-type: none"> <li>• No decommissioning plan</li> <li>• Lack of information and consultation</li> <li>• Regulatory authorities should not be involved in public/private partnerships</li> <li>• Lack of confidence in MRP to consult with public</li> </ul>
Other	<ul style="list-style-type: none"> <li>• Road safety associated with use of roads for construction</li> <li>• Technology is unproven</li> </ul>
<b>Operational</b>	
Effects on natural environment	<ul style="list-style-type: none"> <li>• Effect of development on water supply – pollution and sedimentation</li> <li>• Contamination of environment as a result of storage of hazardous substances/fire</li> <li>• Greenhouse gases – emission from maintenance</li> </ul>
Social and cultural effects	<ul style="list-style-type: none"> <li>• Effect on property values*</li> <li>• Effect on rates paid by residents*</li> <li>• Effect on jobs</li> <li>• Effect on tourism</li> <li>• Effect on community cohesiveness</li> <li>• Change in use of Turitea Reserve and effects on access, including loss of hunter's access</li> </ul>
Economic effects	<ul style="list-style-type: none"> <li>• Limited job prospects created from wind farm</li> </ul>
Effects on amenity	<ul style="list-style-type: none"> <li>• Noise and vibration from wind farm operation</li> <li>• Visual impact of turbines</li> <li>• Cumulative effect of windfarms</li> <li>• Close proximity of turbines to homes</li> </ul>

## Assessment of Adequacy of Information

URS assessed Mighty River Power's application (application documents and subsequent s.92 responses) to determine whether the information submitted is adequate, whether there are gaps in the information, and/or whether further information is required, particularly in light of the issues raised in submissions.

Prior to call-in by the Minister for the Environment, Horizons Regional Council, Palmerston North City Council and Tararua District Council assessed the relevant applications in accordance with Section 92 of the RMA. Palmerston North City and Tararua District Councils sent several joint interim further information requests to MRP as listed in **Table 4-2**:

**Table 4-2 PNCC & TDC Further Information Requests**

Date further information request sent	Date information received from MRP
3 September 2008	2 October 2008
10 September 2008	10 October 2008, 24 October 2008 & 5 November 2008 (with the exception of a base map and visual simulations).
26 September 2008	24 October 2008 (including base map and visual simulations)

Horizons Regional Council also sent two further information requests as listed in **Table 4-3**:

**Table 4-3 Horizons Regional Council Further Information Requests**

Date further information request sent	Date information received from MRP
20 August 2008	19 September 2008 & 26 September 2008
4 September 2008	7 October 2008

Mighty River Power collated their responses to the further information requests made by the consent authorities into a report titled 'Section 92 Requests for Further Information – Consolidated Responses – dated January 2009'.

The previous sections of this report informed this assessment of the adequacy of information. **Table 4-4** identifies matters where further information may be required and/or where there are potential gaps in the application information, and provides comments where relevant.

**Table 4-4 Further Information/Gaps in Information**

Further Information Required and/or Potential Gaps in Information	Comment
Proposal requires a concession under the Conservation Act for access to a Conservation Area (Tararua State Forest Park) for construction, operation and maintenance of the Wind Farm.	Clarification on the status of the concession and (if granted) a copy of the concession should be obtained to ensure all documents relevant to this proposal are available to the Board of Inquiry

## 4 Assessment of Adequacy of Information

Further Information Required and/or Potential Gaps in Information	Comment
Assessment against Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007	The effect of the proposal on water supply – pollution and sedimentation – and maintenance of the integrity of the water supply has been raised in submissions. Reference to and assessment against relevant National Environmental Standards is required.
Assessment against Palmerston North Water Supply Bylaw (July 2008)	This bylaw addresses the protection of water supply and establishes the processes by which controlled access to the Turitea Controlled Catchment Area can occur. No mention of this bylaw is made in the Application information
Access Standards	No Assessment is made against Rule 20.3.9.1 PNCC District Plan, which relates to access standards.
Noise Assessment Draft Noise standards for Windfarms	<p>Whilst currently under review, the draft Noise Standard for Windfarms is proposing to introduce technical refinements to noise measurement and prediction methods. Information regarding the possible changes to noise measurement and prediction compared to the current standard (NZS6808:1998) would provide a useful background material to the Board.</p> <p>It is also noted in the S.92 Further Information Consolidated Responses, pg.53, a Noise Management Plan is to be prepared.</p> <p>Nigel Lloyd – PNCC Acoustic Consultant noted the identification of the uncertainties in noise predictions undertaken with respect to base information and inputs into the noise prediction programme.</p>
Additional information for Assessment of Environmental Effects	<p>In the S.92 Consolidated Response (pg.9), MRP consider it is not necessary to undertake an assessment of any effects associated with decommissioning at this stage, given that the only relevant effects to be considered under this proposal are associated with construction, operation and maintenance. It is considered that information about decommissioning of the wind farm (in part or in its entirety) should be provided.</p> <p>A robust review of the various technical assessments is required, in light of the modified Turitea Wind Farm Project which results in a reduction in the number of potential turbine sites from 136 turbine zones and 131 turbines to 127 turbine zones and 122 turbines. The effects of this change has been addressed briefly by MRP's Ecological and Noise Consultants, however other potential effects (positive and negative) should also be addressed with respect to other technical assessments.</p>
Social Impact Assessment	Requested by PNCC in their submission to the Board of Inquiry.
Cultural Impact Assessment	Section 8.3.2 AEE and S.92 Consolidated Responses pgs 7-9 outlines the consultation undertaken with Tangata Whenua and the on-going nature of this consultation, however no Cultural Impact Assessment has been prepared.
Traffic Impact Assessment  Further information noted by Tim Kelly – PNCC Traffic Planning Consultant)	<p>The traffic impact assessment does not appear to cover recreational use of Turitea Reserve and Hardings Park.</p> <ul style="list-style-type: none"> <li>- Information regarding expected number, size, arrangements and management of over-dimensioned loads.</li> <li>- Information on maximum truck movements/day using the Southern Access.</li> </ul>

## 4 Assessment of Adequacy of Information

Further Information Required and/or Potential Gaps in Information	Comment
Economic Assessment particularly relating to an analysis of the cost to society of the construction externalities of building the wind farm	In the S.92 Consolidated Responses, pgs. 35 & 36 and Attachment 17, MRP advises that this information will be supplied at a later date. The timeframe for supplying this assessment is unclear.
Visual Assessment and simulations provided	Specific visual simulations from various viewpoints were requested by PNCC as part of the S.92 Further Information request, but with the agreement of Council were deferred until following the close of the submission period. Agreement on additional viewpoints from which simulations should be prepared was to occur between PNCC's landscape architect and MRP's landscape architect. Additional visual simulations may be required and should be confirmed with MRP.
Consideration of alternatives	It is international good practice to consider alternative methods and locations for development. The Fourth Schedule of the RMA requires consideration of alternatives for discharges, and where effects are considered to be significant. Although MRP considers greatest effects to be more than minor only, this appears to be after mitigation. The consideration of alternatives for site design is provided, but is not particularly well defined. Accordingly, we would expect to see a more detailed assessment, particularly around turbine locations, access etc.
Construction Assessment	There is no assessment of scale of effects in the Construction Assessment.
Assessment of cumulative effects	There are a number of operational and consented windfarms adjacent to the proposed Turitea windfarm site. The definition of effects includes cumulative effects. However, the AEE makes limited reference to this category.

### 4.1 Summary

It is generally considered that the application (including the further information) presents a comprehensive assessment of the matters which would be expected to be addressed in an application of this nature and scale.

A number of editorial requests/clarifications were sought by PNCC/TDC and Horizons in their S.92 Further Information Requests. These matters have been noted by MRP (refer Attachment 1 of the S.92 Consolidated Responses, dated January 2009) but MRP have not considered it necessary to reissue the reports to address these particular matters. While not ideal, given the cross referencing that is required by the reader, it is considered that MRP have adequately addressed the editorial matters raised either by acknowledging the matter or providing a more detailed response to the matter raised.

It is considered that the provision of the identified further information and/or potential gaps in **Table 4-4** will provide further clarity with respect to the potential effects of this proposal.



## Limitations

URS New Zealand Limited (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of the Turitea Windfarm Board of Inquiry and the Ministry of the Environment and only those third parties who have been authorised in writing by URS to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Proposal dated 20 March 2009.

The methodology adopted and sources of information used by URS are outlined in this report. URS has made no independent verification of this information beyond the agreed scope of works and URS assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between April and May 2009 and is based on the information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.





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