IN THE MATTER OF	The Resource Management Act 1991
AND IN THE MATTER OF	Application to the South Taranaki District Council for Land Use Consents – RML16030.1 to construct, operate and maintain the Waverley Wind Farm and; RML16030.2 2 for the construction, operation and maintenance of a single circuit 110 KV transmission line between the Waverley Wind Farm and an electric substation on Mangatangi Road Waverley Both near Waverley, South Taranaki
APPLICANT	Tararua Wind Power Limited
CONSENT AUTHORITY	South Taranaki DISTRICT COUNCIL

REPORT AND DECISION OF HEARINGS COMMISSIONERS

Mr. Paul Rogers (Chair) and Ms. Gina Sweetman and Mr. Shannon Bray

7 July 2017

Heard on the 22nd, 23rd, 24th and 25th of May 2017 in the Council Chambers at South Taranaki City Council

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SUMMARY OF DECISION

1 For the reasons outlined in this Decision, the South Taranaki District Council, pursuant to sections 104, 104(B) and 108, and subject to Part 2 of the RMA, GRANTS the following resource consents:

(a) *Land use consent*: RML16030.1 for the construction operation and maintenance of the Waverley Wind Farm as described in the Application by Transpower Limited (now Tararua Wind Power Limited) dated 14 April 2016 (all held on South Taranaki District Council file RML16030) subject to the conditions set out in Appendix A attached to and forming part of this

decision; and

(b) *Land use consent*: RML16030.2 for the construction, operation and maintenance of a single circuit 110 KV transmission line between the Waverley Wind Farm and an electrical substation on Mangatangi Road Waverley as described in the Application by Transpower Limited (now Tararua Wind Power Limited) dated 14 April 2016 (all held on South Taranaki District Council file RML16030) subject to the conditions set out in Appendix B attached to and forming part of this Decision.

INTRODUCTION

2 This is the report and decision of Independent Hearing Commissioners Mr Paul Rogers (Chair) and Ms Gina Sweetman and Mr Shannon Bray. We were appointed by the South Taranaki District Council, (**STDC**), to hear and decide[1] an application (the **Application**) by Tararua Wind Power Limited (the **Applicant**) for resource consents associated with a proposal for the construction, operation and maintenance of a 48 turbine wind farm near Waverley, South Taranaki, known as the Waverley Wind Farm, (**WWF**).

REPRESENTATIONS AND APPEARANCES

Applicant:

Mr. Brian Whelan, Director Peet Aviation Limited

Ms. Mary O'Keeffe, Archaeologist (Heritage Solutions

Mr. Peter Clough, Senior Economist (New Zealand Institute of Economic Research)

Mr. Ryan Piddington, Environmental Advisor (Trustpower Limited)

Mr. Mahanga Maru, Director Te Iti Kahurangi Limited

Mr. Richard Turner, Senior Resource Consent Management Consultant (Mitchell Daysh Limited)

Mr. Ian Carlisle, Chartered Professional Engineer and Technical Director Traffic Design Group Limited

Mr. Donald Tate, Civil and Geotech Engineer and Director Riley Consultants Limited

Mr. Gavin Lister, Landscape Architect and Founding Director Isthmus

Mr. Stephen Brown, Landscape Architect (Brown Limited)

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[1] In accordance with section 100A of the RMA.

Dr. Mark Sanders, Ecologist and Director Ryder Consulting Limited

Mr. Stephen Fuller, Principal Ecologist (Boffa Miskell Limited)

Dr. Martin Single, Environmental Consultant and Director Shore Processes Limited

Mr. John Martin, Registered Line Mechanic (Electronet Services Limited)

Mr. Nevil Hegley, Chartered and International Professional Engineer and Principal Hegley Acoustic Consultants

Mr. Clayton Delmarter, General Manager, Tilt Renewables Limited

Submitters in support:

17 Grenville Gaskell - New Zealand Wind Energy Association*

22 Ranald Gordon - Parininihi Ki Waitotara Incorporation*

18 Alistair Wilson - Wind Farm Developments Limited

Submitters in opposition:

16 Laura Findlay - Department of Conservation (**DoC**)*

15 Poiha Kemp Broughton – *submission withdrawn by letter dated April 2017*

8 Nigel and Diane Alexander*

12 Sally Sisson*

13 Graham Young - Te Runanga o Ngaati Ruanui Trust*

21 Tim and Lorraine Honeyfield

1 Robert and Anita Bremer*

3 Wheturangi Tapitata-Walsh - Wai o Turi Marae, Whenuakura Marae and Te Waiora Iti Marae - *submission withdrawn by letter dated 21/04/17*

9 Anne Marie Broughton - Te Kaahui o Rauru - *submission withdrawn by letter dated 21/04/17*

10 Anne Marie Broughton - Te Kaahui o Rauru - *submission withdrawn by letter dated 21/04/17*

5 Will Dickie*

23 Frazer Fieldes*

11 Maggie Lister*

6 Paul Mitchell*

7 Mike and Angela Connell*

Neutral Submitters:

14 Nadine Perera - Powerco Limited (neutral subject to conditions being imposed) – *submitter no longer wishes to be heard as advised by letter dated 31/03/2017*

20 Finbar Kiddle - Heritage New Zealand (**HNZPT**) – *submission withdrawn by letter dated 12/12/2016*

19 Alan Stancliff - Fish and Game New Zealand (**FGNZ**) (neutral subject to conditions being imposed)*

2 Robert Hayes*

4 Robert Hayes*

(NOTE: Numerals are the submission number and those identified with an asterisk indicate their wish to be heard at the hearing)

South Taranaki District Council Section 42A reporting officers

David Forrest – Planner (Principal, Good Earth Matters Consulting Limited)

Julia Williams – Landscape Architect (Director, Drakeford Williams Limited)

Carolyn Copeland - Senior Roading Engineer (South Taranaki District Council)

Nigel Lloyd – Acoustical Consultant (Acousafe Consulting & Engineering Limited)

BACKGROUND AND PROCEDURAL MATTERS

3 The hearing of the Application commenced on Monday 22nd May 2017 and evidence was heard over the course of four days.

4 During the hearing, we undertook a site visit (on Tuesday 23rd May 2017), viewing the Application project site and the surrounding area.

5 Prior to the hearing, separate reports were produced pursuant to section 42A of the Resource Management Act 1991 (**RMA**) by the STDC's Reporting Officer, David Forrest accompanied by expert reports by Julia Williams, covering landscape and amenity issues, Carolyn Copeland, covering roading and traffic and Nigel Lloyd, covering noise. Collectively we refer to all of those reports as the "S42A Reports".

6 The S42A Reports provided an analysis of the matters requiring consideration and recommended the resource consents sought by the Applicant be granted, subject to recommended consent conditions.

7 Expert evidence was pre-circulated in accordance with section 103B RMA.

8 There is a procedural issue to deal with which are withdrawn submissions 3, 9, 10, 15, and 19. We will treat these submissions as withdrawn, recording that they receive no further consideration.

9 Another procedural issues arose relating to a purported submission by Sustainable Whanganui. We were provided a copy of a hand written letter dated 24 May 2016 signed by a Donna Mummery. The possible submission had on its face a number of issues including no clear relief. Mr Forrest refers to this matter in his S42A report. He received an email from a Nicola Patrick on 8 July 2016 advising that Sustainable Whanganui had not made a submission. We agree with Mr Forrest that given the advice contained within Ms Patrick's email we should resolve the matter by accepting that email as notice of withdrawal of the submission and so we give the submission, such as it is, no further consideration.

10 After receiving and considering the reply, inclusive of proposed consent conditions, on Friday 9 June 2017, we concluded that we have received all necessary information for us to proceed with our deliberations and issue a decision. Accordingly we closed the hearing effective as from Friday 16 June 2017.

PRELIMINARY COMMENTS

11 Before moving onto the background of the Application and the hearing process, we would like to make the following preliminary comments.

12 Firstly, we record our appreciation at the manner in which the hearing was conducted by all the parties taking part. In this respect, we would like to acknowledge input of the S42A reporting officers including the specialist report writers, the willingness of the Applicant, various submitters and advisors to accommodate a certain amount of dialogue during the hearing via the approach we adopted.

13 We also acknowledge the assistance of the STDC Planning Manager, Mr Blair Sutherland, and the Hearing Administrator Ms Christine Bromell, prior to, during and after the hearing process. The above actions promoted a smooth process that has greatly assisted us when assessing and determining the issues.

14 The Application was initially lodged by Trustpower Limited. Trustpower Limited was separated into two New Zealand listed companies, one being Tararua Wind

Power Limited which is the successor[2] in respect of the Application and the other being, Tilt Renewables Limited.

15 In addition to the land use consents sought from STDC, the Applicant also, as part of the proposal, had applied for a number of ancillary resource consents from the Taranaki Regional Council (**TRC consents**). The TRC consents were granted on a non-notified basis on the 19th October 2016 and consist of:

(a) 10277-1.0, 10278-1.0, 10279-1.0, 10280-1.0, 10281-1.0, 10282-1.0 and 10287-1.0 Land Use Consents

(b) 10288-1.0 Discharge Permit (To discharge stormwater and sediment from earthworks to water or land)

(c) 10283-1.0 Discharge Permit (To discharge to air)

(d) 10286-1.0 Water Permit (To take and use surface water)

(e) 10284-1.0 and 10285-1.0 Water Permits (To take and use groundwater)

16 We assume the Taranaki Regional Council (**TRC**) at the time it processed the TRC consents was of the opinion that those applications were sufficiently unrelated[3] to the applications lodged before STDC so that it was unnecessary to hear and decide the applications together and presumably the Applicant agreed.

17 We also record that the Applicant withdraws that aspect of its Application which purported to seek resource consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) on the basis that this NES does not apply to the WWF Proposal. This is because the WWF project site is Production Land and the WWF does not involve any of those activities set out in clause 8 of the NES which trigger its application.

THE APPLICATION AND RESOURCE CONSENTS

The Application

18 The Applicant has provided, within its Application a detailed description of the proposed WWF including a site and area description and construction methodology[4] (the WWF Proposal). We adopt that information provided in the Application and provide the following summary. We do note that this description

[2] See Section 2A of the RMA 1991
[3] See section 103
[4] Trustpower Limited, 2016, Resource Consent Application and AEE, Pages 56-70, Section 3.4

(contained with the Application) of the WWF Proposal includes activities which have already been consented by the TRC. We identify them below. Also below we identify those remaining parts of the WWF Proposal in the Application for which resource consents from STDC are being sought and which make up the subject matter of this decision.

19 The WWF Proposal, as described in the Application includes[5]:

(a) The construction, operation and maintenance of up to 48 wind turbine generators, each with a maximum height of up to 160 metres above ground level (to blade tip) and each painted in the same off white colour palette with a non-reflective surface. The rotors will have 3 blades;

(b) The erection of up to four permanent wind monitoring masts with a maximum height of 110 metres above ground level;

(c) A 25 – 30 kilometre underground 33 kilovolt electrical and fibre optic cable network between the turbines and electricity substation / switchyard which will sit at an approximate depth of 1 metre;

(d) An internal access road network of approximately 25-30 kilometres but excluding road crossings required over the Waipipi Stream which will have a maximum width of approximately 10 metres (plus 1 metre shoulders on either side) and a pavement thickness of 200 – 500 millimetres;

(e) The upgrade and maintenance of existing local roads approaching the Waverley Wind Farm site, specifically, State Highway 3/Peat Road Intersection, Peat Road, site access from Peat Road and transmission line access route;

(f) The site will require earthworks;

(g) Land disturbance of approximately 53.6 – 66.25 hectare for hard stand platforms and internal access roads;

(h) Damming and diversion of water and the establishment of culvert structures for site access / internal road network purposes within the Waipipi stream and various watercourses / drainage channels within the site – TRC consent;

(i) The extraction of ground water for concrete batching, consisting of, abstraction of up to 2 litres of water per second from all bores within the shallow marine terrace aquifers (but will not exceed 88 cubic metres per

[5] Ibid., Pages 1-2, Section 1.1 and Pages 3-7, Section 1.4 and page 56-70, Section 3.4

day) and the abstraction up to 4 litres per second from all bores within the Whenuakura Formation aquifer (not exceeding 120 cubic metres per day) – TRC consent;

(j) The taking of surface water from farm bonds and watercourses / drainage channels within the project site for construction related activities – TRC consent;

(k) The de-commissioning and infilling of three farm ponds – TRC consent;

(l) The diversion and discharge of groundwater related to de-watering of the turbine foundations – TRC consent;

(m) Establishment of a temporary concrete batching plant, which will be centrally located on the site, have an approximate height of 10 metres and require a working area of approximately 100 metres by 75 metres;

(n) The construction of an operation / maintenance building on the site which will be approximately seven metres in height and require an area of approximately 40 metres by 15 metres;

(o) Implementation of a 13 kilometre above ground single circuit 110 kilovolt transmission line from the Waverley Wind Farm to an electricity substation operated by the Applicant on Mangatangi Road, Waverley which will involve suspension of three conductor wires between transmission poles up to 22 metres in height. The transmission line will be established within a transmission envelope that is 30 metres wide;

(p) The undergrounding of sections of Powerco Limited's existing 11 kilowatt transmission line, Waitangi Road, Waverley. The transmission line will be placed in a trench approximately one metre deep;

(q) Earthworks in relation to installation of transmission poles and trenching of a section of Powerco Limited's existing 11 kilowatt transmission line;

(r) The construction of an electricity substation / switchyard which will be approximately 4 - 5 metres in height but with gantry structures and lighting up to approximately 22 metres high and a footprint of approximately 10,000 metres square, including car parking.

Resource Consents - STDC

20 The Applicant has applied for the following resource consents from STDC to authorise the construction of the WWF:

RML16030.1 Land Use Consent

21 The Applicant seeks a land use consent for the construction, operation and maintenance of the WWF[6]. Under the Operative South Taranaki District Plan 2004 (**ODP**) and the Proposed South Taranaki District Plan 2015 (**PDP**), the activity status for this consent is 'discretionary'.

22 The proposed duration of the consent is 'unlimited'.

RML16030.2 Land Use Consent

23 The Applicant seeks another land use consent in respect of the construction, operation and maintenance of a 110 kV transmission line between the WWF and the existing electricity substation located on Mangatangi Road, Waverley, South Taranaki.

24 The activity status is 'discretionary' and the proposed consent duration is 'unlimited'.

25 Included as part of the Application are a range of management plans relating to the two land use consents described above. Those plans include:

(a) Earthworks and construction management plans;

(b) Construction noise management plans and operations noise management plans;

(c) Construction traffic management plans;

(d) An ecological monitoring and management plan;

(e) A bird collision monitoring plan;

(f) An accidental discovery protocol and management plan;

(g) A dune management plan dealing with mitigation and risk of dune instability;

(h) A contamination spill contingency management plan;

(i) A fire management plan;

(j) A network utilities management plan.

[6] Trustpower Limited, 2016, Resource Consent Application and AEE, Table 1.1, Pages 4-5

LOCATION

26 The project site of the proposed WWF development (the **project site**) spans a 980 hectare area adjacent to the South Taranaki coastline spanning from the Whenuakura River to south of Waipipi Point. Of the 980 project site, the project envelope as initially outlined in the WWF Proposal, consisted of approximately 804.37 hectares and the remaining 175.74 hectares was allocated as an environmental buffer zone (EBZ).

27 The EBZ was later increased to 234.5 hectares, reducing the project envelope to 745.5 hectares.

28 The project site is located approximately seven kilometres south-west of Waverley and approximately six kilometres south-east of Patea. The Applicant has provided a detailed description of the immediate and surrounding residential, open space, riverine and coastal environments in the Application[7]. We concur with that description.

29 The nearest residential dwelling to the project site is approximately one kilometre to the south-east on Waipipi Road. A recent coastal subdivision is being developed three kilometres south-east of the site at Waipipi Beach and a bach settlement is located above the coastal cliffs four kilometres south-east of the site at Waverley Beach.

30 The site is located south-west of Waverley town centre. The proposed WWF and associated works are predominantly located on privately owned land used for agricultural purposes, specifically dry stock and run-off grazing.

31 The Whenuakura River runs adjacent to the north-west boundary of the project site and flows into the Whenuakura Estuary before reaching the Tasman Sea.

32 Waipipi Stream traverses the middle of the site.

33 The northern boundary runs parallel to the coast at a distance of 1.3 - 3 kilometres inland. Small pockets of plantation forestry are dotted along this boundary.

34 Vegetation within the project envelope consists mostly of pasture on sand-mined surfaces but also includes grazed pasture-scrub mosaics, sand flats (bare sand with dispersed shrubs/grasses) and pockets of pine plantation.

[7] Trustpower Limited, 2016, Resource Consent Application and AEE, Appendix One Isthmus Report, Pages 9-10

PLANNING FRAMEWORK

RMA

35 The most relevant provisions of the RMA are Part 2, sections 5, 6, 7 and 8, 104, 104B and 108. These provisions are considered more closely below.

ODP

36 Under the ODP, the project site is zoned rural and falls within the coastal protection area (**CPA**).[8]

37 Objectives 1, 4, 9 and Schedule 2 are most relevant to the Application. These will be discussed later, however in summary:

(a) Objective 1 seeks to protect the natural ability of the land and soils for future generations.

(b) Objective 4 is to preserve and protect the natural character, historic values and ecosystem habitats of the coastal environment, whilst also avoiding inappropriate use, development and subdivision.

(c) Objective 9 is to "[p]rotect and enhance the outstanding natural features and landscapes of the District".

(d) Schedule 2 identifies significant natural areas (**SNA**) and includes the Waipipi Dunes. The Waipipi Dunes fall within the project site, but are outside of the project envelope.

38 The ODP does not identify specific outstanding natural features (**ONF**) or outstanding natural landscapes (**ONL**).

PDP

39 The PDP was notified by the STDC on 15 August 2015 and will replace the ODP once it becomes operative. The PDP is at appeal stage and therefore it is important we consider its provisions alongside the ODP.

40 The most relevant parts of the PDP to the Application are objectives:

(a) 2.1.3 - enable subdivision/development/land use in a manner that maintains and enhances rural character and amenity values;

(b) 2.9.6 – recognise the benefits of renewable energy through investigation, development, operation, maintenance and upgrading of renewable energy

[8] Operative District Plan for the South Taranaki District Council, 2004, Rural Maps 13 and 16

activities, including electricity generation;

(c) 2.15.3 and 2.15.4 – preserve and protect the coastal environment from inappropriate subdivision and development and avoid adverse effects on areas recognised as having outstanding natural character;

(d) 2.16.3 and 2.16.4 – protect ONF/ONLs from inappropriate subdivision, use and development and to recognise and have regard to the qualities and values of other natural features/landscapes when undertaking such development;

(e) 2.18.4 and 2.18.6 – protect waterbodies with high natural character and conservation from inappropriate use, subdivision and development and to enable activities on the surface of waterbodies while recognising and protecting the natural character and conservation of same;

(f) Schedule 2 – identifies SNAs and includes the Waipipi Dunes;

(g) Schedule 8 – specifies ONFs and ONLs as well as areas of outstanding natural character (**ONC**).

41 In contrast to the ODP, the PDP delineates the CPA at the inland edge of the coastal dunes. The rest of the site is classified as rural.[9] There is an issue of weighting relating to the two District Plans which we return to later.

Regional Policy Statement for Taranaki 2009 (RPS)

42 The RPS is a regional policy statement for the Taranaki region.

43 Like the ODP, the RPS does not specifically identify ONF/ONLs.

44 The RPS covers broad range of topics that are relevant to WWF but of particular relevance are sections 8 and 10:

(a) Section 8 of the RPS outlines resource management issues of regional significance which have effect on the coastal environment in Taranaki. CNC policies 1, 2 and 4 are the most pertinent to the WWF and in brief relate to the management of the coastal environment in a way that protects the natural character of same whilst also allowing appropriate subdivision, use and development of the coastal environment;

(b) Section 10 of the RPS refers to resource management issues of regional significance which effect the amenity values, natural features, natural landscapes and historic heritage of the Taranaki Region. NFL policy 1 and

[9] Proposed South Taranaki District Plan, Rural Map 18

3 are of most relevance to the Application and provide that ONF/ONLs are to be protected from inappropriate subdivision, use and development.

Regional Coastal Plan for Taranaki 1997 (RCP)

45 The RCP promotes sustainable management of natural and physical resources in the coastal management areas within the Taranaki region.

46 The project site for the WWF is not located within the CPA under the RCP however some of the objectives and policies apply to the Taranaki coastal environment generally. These will be considered later however by way of brief summary those that are relevant are:

(a) Objective 3A – maintain and enhance the natural character and amenity values of the coastal environment;

(b) Objective 4 – protect areas within the coastal management area that have significant conservation values, from adverse effects created by development / use. Whenuakura Estuary is highlighted as an area of outstanding coastal value.

Draft Coastal Plan for Taranaki 2016 (DCPT)

47 The RCP is currently being reviewed. The DCPT is still in early stages of formulation and as such the document currently has no legal effect. It is however important to understand the intention the TRC has for the Taranaki coastal environment so the provisions of the DCPT will be considered.

48 The DCPT identifies the Whenuakura Estuary and the coastal area from Whenuakura River to Waipipi as areas of ONC.

New Zealand Coastal Policy Statement 2010 (NZCPS)

49 The NZCPS is a national policy statement outlining policies in order to achieve the purpose of the RMA in respect of the coastal environment. The project site is located within a coastal area and therefore the NZCPS must be had regard to.

50 The NZCPS sets out a number of policies and objectives. Of most relevant to the landscape and natural character considered by the Application are objectives 1, 2, 3, 4 and 6. These objectives seek to preserve and protect visual and biophysical aspects of natural character whilst also providing for appropriate activities[10] and will be discussed further.

[10] Ibid, pages 20-21

National Policy Statement for Renewable Electricity Generation 2011 (NPSREG)

51 The purpose of the NPSREG is to enable the sustainable management of renewable electricity generation under the RMA through a number of objectives and policies which must be had regard to.

52 Policies A(d) and C1(a)(c) are most relevant to the Application and deal with the reversible adverse effects of some renewable electricity generation technologies as well as particular matters decisions makers must have regard to when deciding on a location for a renewable electricity generation technology. Objective A and policy A require decision makers to recognise and provide for the benefits of renewable electricity generation activities.

RULE ASSESSMENT AND OVERALL ACTIVITY STATUS

53 The Application[11] states resource consents sought from STDC for the WWF are to be assessed as Discretionary Activity. All planning accept that both the ODP and PDP are relevant and agreed as to status of the activity under both District Plans as being a discretionary activity.

54 In his principal evidence, at paragraphs 31-39, Mr Turner undertook an assessment of the rules triggered by the WWF in respect of both the ODP and PDP. We understood this assessment to be accepted by Mr Forrest. We accept and adopt Mr Turner's rule assessment as set out in those paragraphs.

55 We note that section 88A RMA applies to this Application, in that decisions have been released on submissions to the PDP that have subsequently amended the status of some of the activities post the lodgement of this Application. However, under section 88A(1) and 88(1)(A) RMA, it is clear that where an activity status has changed, the Application continues to be processed, considered and decided for the type of activity that it was for, or was treated as being as for, at the time the Application was first lodged.

56 We therefore agree the status of the activity is **Discretionary**.

FURTHER INFORMATION AND INFORMATION GAPS

57 Further information was requested under section 92(1) of the RMA with regard to the Application on 12 July 2016. This request was made by STDC.

[11] Trustpower Limited, 2016, Resource Consent Application and AEE, pages 119-120

58 In summary, the further information requested by STDC included:

(a) The provision of a Cultural Impact Assessment;

(b) Specific distances between the envelope boundary of the site and dwellings within 1.5 kilometres;

(c) Information as to whether it is possible for particular turbines to be built closer to the envelope boundary;

(d) The predicted noise level at dwelling 110;

(e) Whether different wind turbines would generate more noise that that assumed in Table 1 of the Hegley Report for the Siemens wind turbine SWT-3.0-113.

59 These further information responses form part of the Application before us and have been taken into account.

NOTIFICATION AND SUBMISSIONS

60 The Application was publically notified on 18 May 2016.

61 Overall, allowing for late submissions, 23 were received. Three submissions were in support, 15 submissions in opposition and 5 neither opposed nor supported. 14 submitters wished to be heard three did not wish to be heard and five did not indicate either way. As noted in the Background and Procedural Matters of this Decision, some submissions have been withdrawn.

62 The key issues raised in submissions were accurately summarized in Mr. Forrest's and Ms. Williams' S42A reports.

63 We adopt this summary and note that these matters broadly related to:

a) Views of the wind turbines and transmission line from closely located properties;

b) Cultural effects;

c) Noise associated with construction of the wind farm/transmission line as well as noise generated by the wind turbines and transmission line;

d) traffic and transportation effects;

64 Commonly identified reasons for supporting the Application include (in no particular order):

a) topography of the site;

b) the site has favourable wind characteristics;

c) WWF will contribute to the reduction of greenhouse gases;

d) WWF will result in efficient use of wind as a natural resource;

e) due to the EBZ, many adverse effects on natural character of landscape and ecology will be mitigated/avoided;

f) residential density in the vicinity of the WWF is low.

65 New Zealand Wind Energy Association (**NZWEA**) supports the Application on the basis that WWF will produce renewable energy at a low cost and without producing greenhouse gases. Wind Farm Developments Limited (**WFDL**) and Parininihi Ki Waitotara Incorporation (**PWKI**) are also in support of WWF but on the condition that, in respect of WFDL, the development is undertaken in accordance with industry best practice and in respect of PWKI, any cultural aspects important to local iwi and hapu are protected and added as conditions to the resource consents.

66 NZWEA supports this location of the project site in particular for a wind farm because of its flat and pasteurised topography. They believe that these aspects will mitigate visual pollution and will result in minimal adverse effects on the land.

67 NZWEA points out that appropriate site location for a wind farm is dictated by wind resource and as a result, ideal wind farm sites are often in exposed locations, such as on the coast, on hills or ridgelines. NZWEA believes the wind characteristics in the area make the proposed site an ideal location for a wind farm.

68 Commonly identified reasons for opposing the Application include (in no particular order):

a) visual pollution of wind farm and transmission line;

b) auditory effects including construction noise and noise generated by turbines and transmission line once construction completed;

c) increase in traffic in and around the site;

d) threat to birdlife, freshwater fish and indigenous flora and fauna;

e) disruption to neighbouring farms;

f) decrease in property values; and

g) lack of cultural impact assessment (although we note the submissions in

respect of this have been withdrawn).

69 Six submitters (Mr Will Dickie, Mr Paul Mitchell, Mr Nigel and Mrs Diane Alexander, Ms Sally Sisson, Mr Frazer Fields and Mr Tim and Mrs Lorraine Honeyfield) are concerned WWF will visually pollute the natural landscape, and in particular will obstruct the views from their properties. They are particularly concerned that the value of their properties could decrease as a result.

70 Mr Dickie, Mr Mitchell and the Alexanders and the Honeyfields believe the noise created by the wind turbines will adversely affect their properties.

71 Mr Dickie and the Alexanders are concerned that traffic in the area will increase and the Alexanders were particularly concerned about large vehicles using the narrow rural roads surrounding the project site.

72 Mr Dickie and Ms Sisson do not believe the WWF will benefit the local economy. Both also pointed out that few steps have been made to educate the public on any long term positive and negative impacts of the WWF.

73 Mr Dickie, DoC and the Alexanders are concerned the WWF could negatively impact on bird life within or migrating through the site area. DoC further raises the point that the WWF could threaten freshwater fish and indigenous flora and fauna at the site. We note however that by the time of their appearance at the hearing, DoC was satisfied that its concerns were met through the recommended and offered conditions of consent.

74 The Alexanders are worried about the impacts the WWF will have on their ability to run their farm with disruption, including stock movements.

75 Mr Robert and Mrs Anita Bremer are concerned that the proposed transmission line will create environmental and aesthetic effects on their property. They are also concerned that the line will cause damage or disruption to their farm during the installation phase.

76 Mr Robert Hayes, Mr Dickie, Ms Maggie Lister and Mr Mike and Mrs Angela Connell are concerned the installation of the transmission line would visually pollute the rural outlook, impacting on the aesthetic and cultural values of the area which in turn could impact on property values. Mr Hayes and Ms Lister also pointed out that installation of the transmission line had potential to negatively impact future recreational utilities, such as cycling and walking tracks that are to be developed in the area.

THE HEARING

Applicant's Case

Mr Jason Welsh and Mr Steve Mutch

77 Mr Jason Welsh and Mr Steve Mutch, legal counsel, conducted the Applicant's case presenting legal submissions and calling witnesses and answering questions during the course of the hearing.

78 The principal submission advanced by Mr Welsh was that the WWF Proposal satisfies the relevant provisions of the RMA including those in section 104 and Part 2. Further, he submitted, the WWF Proposal is founded on rigorous expert assessment and incorporates comprehensive mitigation and avoidance measures to address potential adverse effects. On this basis he said the effects of the WWF will be appropriately avoided, remedied or mitigated; and the sustainable management purpose of the RMA would be promoted by granting the Application is subject to appropriate conditions.

79 Mr Welsh emphasised the WWF will efficiently utilise the available wind resource in the Taranaki region and if consent is granted it would, in short, deliver a sustainable outcome for Taranaki and for New Zealand. He informed us the WWF will have an installed generation capacity of approximately 130 MW and will generate in the order of 490 GW hours of electricity a year.

80 He described the envelope approach adopted by the Applicant stressing that the Applicant is applying for resource consent for up to 48 turbines within a project envelope as opposed to applying for fixed or indicative turbine locations and/or specific turbine types. He explained this approach had been taken to retain some degree of flexibility over the micro siting of turbines and turbine type.

81 He explained to the extent that different turbine locations and turbines could result in different environmental effects being generated the Applicant had accepted the need to assume the worst case scenario in terms of assessment of effects. Therefore, he said, recognising the limited flexibility the Applicant wished to retain the assessment of several of the key effects such as noise, visual/landscape and shadow flicker effects have been undertaken on the basis of overstated effects (a 'worst-case scenario') particularly with those layouts to the north, east and west of the project site presented in the A3 visuals attached to the evidence of Mr Lister. He advised those layouts are fanciful and would not be constructed primarily due to efficiency reasons. He noted however the Applicant's relevant experts all consider that the WWF is appropriate even on these worst-case scenario layouts.

82 He pointed out that one of the unique features of the project site is its past use for sand mining undertaken by dredging operations on the project site throughout the 1970s and 80s. He explained this was a site wide activity resulting in much of the project site's coastal geomorphology, indigenous vegetation, and even archaeological sites being destroyed.

83 He explained the WWF Proposal included the EBZ which occupies nearly a quarter of the project site within which no turbines or other works will be located. He noted the EBZ had been defined and refined through import from the expert team commissioned by the Applicant with the extent of the EBZ being determined by a range of factors including visual/natural character values; ecological values; potential psychological values; and suitable noise setbacks. He submitted that the EBZ allowed the WWF to avoid effects on more sensitive environmental areas.

84 He explained to us post notification changes to the WWF Proposal which included increasing the size of the EBZ in comparison to that as originally applied for, changes to the design of the transmission line which included a reduction in pole heights from 22 m to 14 m and changes to pole locations and span lengths within the Waverley township so as to increase certainty and further reduce potential adverse effects. He informed us there were changes to conditions relating to ecology, avifauna, archaeological authorities, the transmission line and mitigation measures had further increase certainty and further reduced potential adverse effects of the WWF.

85 He informed us that both the changes to the WWF Proposal and proposed conditions had been agreed between the Applicant and some submitters resulting in withdrawal of submissions and entry into side agreements between the Applicant and those submitters.

86 He then set out for us the statutory and legal context in which he submitted the Application should be considered and determined. Very usefully he provided submissions in relation to the approach to section 104 and Part 2 of the RMA in the light of recent Supreme Court, High Court and Environment Court cases. We agree with his overall conclusions that we are required to consider and give appropriate weight to all the effects of the WWF Proposal under section 104 (1) (a) and the relevant planning documents under section 104 (1) (b) and that Part 2 remains relevant as stated in the Basin Bridge and Envirofume cases.[12] He then moved on to discuss the existing environment and the permitted baseline. In relation to the existing environment he stressed the need to adopt a real word approach to assessing the relevant environment in particular with regard to the

[12] *NZTA v Architectural Centre Inc* [2015] NZHC 1991 and *Envirofume Ltd v BofP* RC[2017]NZEnvC 12

issue of future residential development and that the Applicant had adopted this real world approach.

87 He also stressed the existing environment included those TRC consents granted to the Applicant and he identified the activities to which those consents relate as being:

(a) reclaiming the three artificial ponds;

(b) surface water take;

(c) dewatering of turbine foundations;

(d) taking use of groundwater;

(e) discharge of dust to air;

(f) construction and maintenance of culverts; and

(g) discharge of stormwater to land and water.

88 In terms of the permitted baseline, Mr Welsh's position is that the Application for the wind farm be considered taking into account the full range of potential effects from the WWF without any allowance for the permitted baseline.

89 However he considered the permitted baseline should be applied to the transmission line because he pointed out that both the ODP and PDP provide for above ground electricity transmission lines of up to 110 kV as permitted activities in the rural zone. He told us consent is needed for the WWF transmission line because it will carry a greater than 100 MVA provided for as the permitted standard in the ODP and under extreme weather climatic conditions the noise limit in the PDP may be exceeded. He pointed out the WWF transmission line poles will be below the permitted height levels for overhead transmission lines in both the ODP and PDP. Further he noted the polls and support structures including with wires proposed by the Applicant are entirely consistent with the types of 110 kV/100 MVA structures provided for as permitted activities by both District Plans.

90 So in essence he submitted that it is clear the District Plans permit above ground transmission lines with equivalent visual and landscape effects to the transmission line proposed by the Applicant. So he said the permitted baseline should be applied with respect to the visual and landscape effects for the electricity transmission line. We discuss and resolve this point later when considering Mr Turner's evidence on the Application of the permitted baseline to the transmission line.

91 Turning to effects by reference to the Environment Court decision in Genesis[13] he identified the positive effects arising from a grant of consent for the WWF. He noted those benefits relating to renewable energy generation are reinforced in the NPSREG. He also noted that the positive effects will arise not only in national terms but there will be he said significant benefits at the regional and local levels and benefits on the site of the wind farm itself. In contrast, he submitted the potential adverse effects of the WWF are limited to the immediate locality around the wind farm. It was his core submission be proposals local adverse effects are comfortably outweighed by its positive benefits.

92 He then went on to consider other effects such as visual effects landscape and natural character effects, civil engineering and geotechnical effects, effects on coastal geomorphology in particular the sand dunes, shadow flicker, terrestrial and freshwater ecology effects, avifauna effects, transport effects and noise effects both relating to construction and operation of the WWF. He also identified heritage and archaeology effects and effects on the aviation and electric and magnetic fields effects and effects on radio communications services and finally cultural effects.

93 It was his core submission that the evidence before us would provide us with confidence that the construction, operation and maintenance of WWF will occur in a manner that appropriately avoids, remedies is or mitigates adverse effects. In his view the measures proposed by the Applicant to manage potential adverse effects on the environment, including those through the WWF's design and through consent conditions are comprehensive and robust. In addition he said the WWF will have significant positive effects.

94 Turning to the statutory documents, he identified the relevant documents as being:

(a) The NZCPS;

(b) The NPSREG;

(c) The RPS;

(d) The ODP; and

(e) The PDP.

95 Noting that all of the above statutory documents in his submission provided varying levels of policy support for the WWF, he in particularly singled out for us

[13] *Genesis Power Ltd v Franklin District Council* [1995] NZRMA 433

the NPSREG and the NZCPS submitting that the WWF finds particular support in the policies of these two statutory documents.

96 He then moved on to address us in relation to the application of Part 2 of the RMA to the WWF traversing sections 5, 6, 7 and 8, concluding with the submission that on an overall broad judgement as required under section 5 of the RMA that the WWF accords with the sustainable management purpose of the RMA.

97 He then turned to discuss matters raised in submissions and evidence and within the section 42A Reports. We will traverse all of those matters when we consider the evidence in a more detailed fashion.

Mr Clayton Delmarter

98 Mr Delmarter is the general manager at Tilt Renewables Limited which was formed on 31 October 2016 through a demerger of Trust Power Limited into two companies. The Applicant is Tararua Wind Power Limited which is a fully owned subsidiary of Tilt Renewables Limited. In his role, he is responsible for the team charged with identification and development of renewable energy projects with a focus on wind and solar opportunities within Australia and New Zealand. Development activities include securing land access, site design stakeholder engagement, securing environmental and other necessary approvals and ultimately procurement and construction of new opportunities.

99 He provided an overview of Tilt Renewables Limited and the Applicant. He described in detail the site selection process and the WWF project site. He identified the key features of the WWF Proposal including modifications to the WWF Proposal since notification along with the reasons for these changes. He detailed the envelope approach adopted in the Application. He responded to submitter's evidence and the S42A Reports and summarised the positive effects that the WWF will have for the South Taranaki District and beyond.

100 In discussing site selection he made it clear that the selected site must have a good wind resource, must be of sufficient size to allow for a project with the required economies of scale. It must be reasonably proximate to the high voltage transmission network and load centres and there must be sufficient capacity within the approximate transmission network to accommodate the electricity to be generated by the wind farm. Finally the site must be reasonably accessible and have suitable geotechnical characteristics.

101 In addition he said further factors relevant to the site selection requires a consideration of the applicable regulatory and statutory framework, compatibility with adjoining land uses, separation from residences and the presence of areas of

environmental or cultural while the significance and the availability of tenure. In his opinion the WWF project site satisfied all of the criteria.

102 He explained the reason why the envelope approach was being pursued primarily because of the need to retain flexibility because there will be, he said, a relatively wide range of feasible turbine options for the project site. He also told us it was important to maintain a degree of flexibility with respect to the location and physical dimensions of the turbines in order to maximise production from the project site. Flexibility is, he said, key with respect to turbine procurement ensuring a competitive process can be run.

103 He detailed how the geographic extent of the EBZ was initially determined and then later extended. We consider this and in greater detail when we review other evidence. His major concern was with the officer's recommendation that the extended EBZ be fenced along the coastal protection area line. His concern with fencing was that given the WWF project site is currently farmed, and farming will continue post construction, fencing will adversely affect the farming production. We learned through evidence that stock grazing occurs now and has for some time within the EBZ and fencing the EBZ off from the balance of the land would result in a significant loss of productive area with associated commercial implications for farming operations. The Applicant did not accept the fencing recommendation.

104 The other point he made clear related to the rerouting of the proposed transmission line. He referenced the section 42A report recommendation that the 110 KV transmission line infrastructure in the facility of Waverley township, located on the road reserve along Swinbourne Street and Fookes Street, be placed underground. He advised the Applicant oppose this recommendation because the cost of doing so are prohibitive something in the order of five times the expected cost of an overhead line. He told us the cost of undergrounding in this section of the transmission line is equivalent to the anticipated cost of the entire proposed transmission line between the WWF substation and the transparent substation located in Mangatangi Road. The Applicant he told us was not in a position to accept the recommendation.

105 Also he advised the Applicant did not support the recommendation of re-routing the transmission line because doing so was not practical and would introduce considerable uncertainty for the rest of the project, impacting upon its viability.

106 Turning to positive effects he identified for us what he considered to be a range of significant positive economic effects and benefits on a regional and national scale these benefits included the following:

(a) the generation of approximately 490 GW hours of clean renewable electricity per year;

(b) the potential avoidance of approximately 337,000 tonnes of carbon dioxide emissions a year (assuming electricity produced from the WWF was generated from a coal fired plant);

(c) the construction/commissioning of the WWF will generate $325 million of capital expenditure over a two-year period. This will add $82 million of expenditure into the regional economy contributing $40 million in net value added;

(d) the construction of the WWF will need a workforce of between 8200 people over a two-year timeframe. Its operation will employ between eight and 10 people and annual operation/maintenance spending will contribute approximately $3.3 million to the local economy in value added each year;

(e) the WWF Proposal includes a number of significant ecological enhancements and mitigation initiatives such as:

(i) fencing and enhancement planting of 4.7 km of the Waipipi Stream and its major tributaries amounting to 13 ha of fenced riparian areas and the planting of 32,500 indigenous plants;

(ii) fencing of ecologically significant wetlands;

(iii) infilling of farm ponds in order to displace water birds from the project site so as to minimise/avoid bird mortality effects, and offsite habitat enhancement for displaced water birds;

(iv) translocation within the project site of native fish and plants from the ponds been infilled; and

(v) annual contributions to the Ashburton River/Hakatere shore bird management program of $25,000 CPI adjusted from the date of grant of this resource consent per annum together with a one-off contribution of $25,000.

107 Mr Delmarter told us the WWF Proposal represents many years of effort on behalf of the Applicant and the Applicant is confident that the project has very strong fundamentals, and strikes the right balance between satisfying the commercial practicalities of developing a project of this nature and managing potential effects. He noted the Applicant has gone to considerable lengths to properly manage potential adverse effects. He pointed out the Applicant had undertaken extensive consultation with affected stakeholders to genuinely seek to address their concerns.

Mr Donald Tate

108 Mr Donald Tate is a director of Riley Consultants Limited and has some 31 years' experience in civil and geotechnical engineering. Through detailing prior projects, he displayed for us his experience and familiarity with large scale earthworks and foundation projects. He also identified wind farm projects he has previously been involved with.

109 While his evidence was broader ranging we focused on those parts that provide and ask his expert view on the geological setting for the project site, the potential geotechnical constraints and how those constraints could be appropriately managed and addressed.

110 The key features of the project site that gave rise to geotechnical constraints were the presence of the Waipipi Stream and a number of drains and channels and several farm ponds. In addition the historical iron sands dredging had effectively disturbed all of the surface layers of the project site. The entire project site between a depth of 10m to 15m was made up of loose medium dense sand with silt horizons underlain by medium to dense old beach deposits of sand/silt/clay/conglomerate overlying weak siltstone and sandstone. Groundwater is somewhere between 2m and 3m below ground surface. The project site is nearby the inferred active Waverley fault zone though no active faults run through the project site.

111 While there was clearly an overlap with proposed activities on the project site and the TRC consents he nevertheless took us through the proposed management for general earthworks, the construction of access tracks and turbine platform designs as well as disposal of fill and erosion and sediment and dust control at the project site. He detailed the manner in which reclamation of the existing farm ponds would occur.

112 Essentially he said given the key features of the project site the key constraint in engineering terms is potential liquefaction and loss of support and/or lateral spreading of the ground in a seismic event.

113 This risk would be addressed, he said, by assessment of ground conditions foundations for access roading and turbine platforms and designing and building an appropriate engineering response to those conditions. He was well satisfied engineering solutions such as having the proposed turbines supported on piles or alternatively supported on shallow pads following ground improvement is achievable. He noted the final construction method would be determined at the time of detailed design and when the location and type of turbine had been selected along with the related track layout. He considered relatively small quantities of earthworks would be required and the fill disposal areas would be

located throughout the project envelope. These filled areas would present as low-level mounds within an already undulating landscape. The finished level, he said, would be grassed.

114 In addition, he detailed stormwater design and management of stormwater run-off relating to the access track and turbine platforms as well as stream culvert crossings.

115 He also detailed for us, water sources for concrete production and construction and sources of aggregate for the project. He was well satisfied the quantities of aggregate and fill materials for the construction of the turbine platforms and access tracks would be available. Water would be provided through the TRC consent 10284-1 to take groundwater from a well for construction related activities including concrete batching.

116 Given the sandy soil characteristic of the project site combined with the relatively flat topography of the project site, potential for soil erosion was, he said, limited. Nevertheless given the presence of water on site sediment control was important in his opinion. Provided the proposed erosion and sediment control measures are implemented, given those are in accordance with the TRC guidelines for earthworks within the Taranaki region he was confident appropriate erosion and sediment control would be available.

117 He acknowledged that while dust could be a potential issue during construction, provided a dust management plan was prepared and provided that plan included preventative measures to be employed to avoid nuisance levels of dust beyond the project boundary, he was confident dust would not be an issue.

118 He commented on submissions relevant to his expertise and those parts of the S42A Reports concerning his expertise. He also provided his expert opinion on recommended conditions of consent and included a draft earthworks and construction management plan within his evidence. That plan covered not only the construction activities but also included an earthworks management plan dealing with sediment dust and stormwater. The plan also included indicative access track layout and fill disposal sites and drawings illustrating sediment controls and details. The plan also included all of the TRC consents that had been granted for the WWF.

119 Overall it was his opinion that the construction of the WWF would be feasible from an engineering perspective and any potential or adverse civil/geotechnical engineering effects could be appropriately avoided, remedied or mitigated in accordance with standard environmental controls.

Mr Gavin Lister

120 Mr Gavin Lister is a landscape architect being formally qualified in landscape architecture with over 29 years' experience in that field. He informed us he had particular experience in infrastructure projects including electricity generation covering hydro-geothermal and wind. He has been involved in a number of wind farm projects. He informed us that he is familiar with landscape and natural character concepts and assessment methods. He informed us that he is familiar with the project site and the surrounding locality.

121 Accepting any wind farm will be a prominent feature within most landscapes and it was his considered opinion that the proposed site is an appropriate location for a wind farm and that the project site substantially avoids, remedies and mitigates adverse visual landscape and natural character effects.

122 The reasons he advanced for this conclusion were:

(a) the flat and modified nature of that part of the project site upon which the project would be developed, occupying as it does the site of the former Waipipi iron sands mine;

(b) the avoidance of the remnant natural features mainly the coastal dunes, Waipipi Stream and wetlands and the fencing and rehabilitation of the latter two features;

(c) the location of the project envelope inland of the coastal dunes so that the project envelope is located where coastal processes, influences and qualities are low;

(d) the location of the project envelope in an area of low natural character, and avoidance of most effects on physical aspects of natural character;

(e) that while the wind turbines will form a backdrop to the coast, they will be within an existing modified landscape inland of the dunes;

(f) in particular, the avoidance of adverse effects on the biophysical characteristics for which the Waipipi Dunes and Whenuakura Estuary have a proposed "outstanding natural character" classification;

(g) that the wind farm will coexist with the existing farm, and is compatible with the productive working character of the surrounding landscape;

(h) the subdued relief of the surrounding landscape which reduces potential visual prominence;

(i) the separation distance from most public viewpoints such as Waverley, State Highway 3, Patea, Waipipi and Waverley Beaches;

(j) the reasonably limited visual effects from private properties because of the settlement density and orientation of dwellings, and the mitigation of adverse visual effects through an offer of planting on effected properties; and

(k) the reversibility of natural character, landscape and visual effects because of the project envelope's flatness and existing modification.

123 Turning to the transmission, line Mr Lister was of the view that the proposed 110 kV transmission line will not look out of place in the rural landscape, being carried on monopoles and mostly aligned alongside minor rural roads and the railway line. He was also of the opinion, the revised design for the section of line around the perimeter of Waverley will mitigate the adverse effects within the town. He was of the view the shorter poles will appear as a moderately scaled up version of conventional utility poles and the poles are located, he said, to reduce visual effects in the revised design. While there will be visual and amenity effects on the streetscape of Swinbourne and Fookes Streets and on properties located opposite the transmission line he was of the view the effects will be moderate or less.

124 Turning to the EBZ and the issue of whether or not it should be aligned with the CPA as shown in the ODP Mr Lister was of the view the CPA should instead be aligned with the EBZ. He said that this because the EBZ had been mapped with the benefit of fieldwork, accurate LIDAR information, and input from coastal geomorphology, ecology and landscape experts.

125 In addition he noted the PDP explicitly provides for refinement of the CPA in response to such finals scale examination. Also he noted the actual adverse effects in his opinion will not be significant because the project envelope is restricted to flat farmland modified by iron sand mining.

126 He did not consider the offer of landscape planting to mitigate adverse visual effects should be extended to those properties assessed as having visual effects described as moderate. He noted the Applicant's offer by way of an "Augier" condition had been extended to those properties appraised as a "moderate/high" or greater effect. It was his opinion there was no compelling reason to extend the mitigation offer beyond that proposed.

127 In terms of undergrounding the transmission line on Swinbourne and Fookes Streets, he considered that was unnecessary given that the effects of the transmission line will be of moderate degree and that the existing utilities and Waverley are overhead.

Mr Stephen Brown

128 Mr Stephen Brown is a qualified landscape architect of some 34 years standing. He has significant experience in undertaking many landscape assessments aimed at identifying landscape and natural character values at the district and regional level. He has been involved in a number of site specific landscape natural character and amenity effects assessments located with a wide variety of development projects including wind farms.

129 Similar to other Applicant witnesses, he provided us with a description of the WWF Proposal and the project site. He then went on to fully and carefully assess the ODP natural character areas relevant to the project site of which there are two namely, ONC 2A being the Whenuakura Estuary and ONC 2B being the Waipipi Dunes. Both of these ONCs are shown on rural map 18 of the PDP (decisions version).

130 It was his considered opinion that he retains concerns about the ONC status attributed to the coastline around both the dunes and the estuary. It was Mr Brown's considered opinion that both of these areas fell short of being "close to pristine". They remain, he said, appreciably modified and subject to ongoing degradation both physically and experientially. Notwithstanding these concerns, he acknowledged the PDP clearly and the directives of the NZCPS in requiring the preservation of those natural qualities found with the two ONCs.

131 He also provided his assessment of STDC's assessment of the proposed ONC undertaken as part of the PDP process and to evaluate the proposed wind farms effects on it of the coastline between Whenuakura River and Waverley beach (the Waverley coastline). As well as the opinions he founded, as result of the site visit, he carefully considered the expert views of Dr Sanders relating to the subject coastline's ecological and habitat values.

132 Mr Brown told us the Waverly coastline reveals a strip of highly dynamic and legible cliffs that are eroding. Between two areas of more defined erosion at each end of the project site, the Waipipi Dunes are, Mr Brown said, visually expressive and also highly legible. Behind the coastal village he told us the landscape rapidly flattens out to form broad swathes of coastal terraces that have been subject to past iron sand mining. He noted these areas are now largely employed as pasture and dry stocking. In his view, this presented a very apparent dichotomy between those parts of the coastline still subject to active coastal processes and the coastal hinterland that is largely devoid of any natural landforms and features.

133 Mr Brown referred to Dr Sanders' findings in relation to vegetation types within the footprint of the project envelope noting the presence of many exotic species

across most of the subject land and the absence of significant sequences of native vegetation. He noted that exotic marram grass is the dominant vegetation cover on the Waverley Dune fields.

134 Mr Brown also noted, apart from close to the Whenuakura River, the immediate coastal environment is not identified as having any elevated significance from a scientific/ecological standpoint. He referred us to the Applicant's ecological Assessment of Environmental Effects report (**AEE**) which mentions and reports on the adverse effects that current stock grazing has on most local habitats with that stock grazing extending well into Waverley's dune field and along the margins of the Waipipi Stream. He noted the rather impoverished state of much of this biotic landscape is reflected in the lack of succession and sequence and local plant communities and the absence of most climate coastal species and the absence of linkage to other habitats behind the immediate coastline. The result of this he said is a situation in which most valuable habitats, plant communities, ponds and dune formations are rather sporadic and often isolated.

135 Discussing the area's experiential and perceptual values, he noted it was virtually impossible to physically approach the Waverley coastline except over the sand minded terraces and farmland. He considered the farmland dominates the landscape above the coastal cliff lines as well as near the Whenuakura River, Waverley Beach and behind the Waipipi Dunes. So in his opinion those parts of the local coastline that retain a sense of naturalness are largely confined to the dune area and the margins of the river and the cliffed areas near the northern and southern limits of the WWF project site. Moreover he said few parts of the coastal environment are totally, or even substantially divorced from the farming activity that dominates the coastal hinterland. Consequently a very real sense of modification, even degradation, permeates most of the coastal environment with few signs of repair and recovery.

136 In his view then, wildly abiotic characteristics of the Waverley coastline shoreline, principally its beachfront cliffs and dunes are relatively in keeping with the coastline that has a high level of natural character value it was his opinion that the coastal environment is less than outstanding overall particularly with reference to the factors found in policy 13 of the NZCPS.

137 He then expressed his opinion on the effect the introduction of up to 48 wind turbines would have on this coastline. Already concluding that most public perceptions of this coastline are typically of a highly modified coastline with a narrow strip of residual beach front, coastal cliffs and dunes which are largely concealed behind a broad swathes of farmland and other development sitting on the artificial terraces formed by the iron sand mining the wind turbines would add to the modified character of much of the coastline between Patea and

Waverley but would not fundamentally alter the interplay between modified and 'more natural "parts of the coastline then is already apparent.

138 Because the proposed turbines and related infrastructure would be excluded from the coastal environment and EBZ, it was his opinion this avoids adverse effects on the Whenuakura River mouth and its margins and on the Waipipi Stream and the coastal environment next to the project envelope. So impacts on the physical integrity and intactness on key geomorphological features would be avoided. He noted the intended protection of the Waipipi stream corridor and its environs could only help to improve the physical and ecological health of that stream which is he said currently severely depleted.

139 He was also well satisfied that the WWF would have no appreciable effects on the ONC areas because the extended EBZ would physically buffer them from the WWF. Also, he said the mitigation proposed for the Waipipi stream and its tributaries and nearby wetlands would enhance the project site's vegetative habitat and stream cores values.

140 He had also reviewed the WWF implications in relation to the broader spread of biophysical and experiential attributes identified in policy 13 (2) of the NZCPS, including that the WWF would have an adverse effect on the natural character of the Waverley coastline but that such effects would be limited over all by a number of factors including exclusion of all WWF components from the EBZ and coastal environment.

141 Key among these effects in his view was that WWF would have little real impact on public perception of Waverley's coastal environment because of the extent to which it is physically closed and visually screened by existing farms.

142 Also he told us such effects, as they are, have to be counterbalanced against the benefits of the mitigation measures. Therefore he said the WWF would not have an adverse effect in relation to the geomorphological, hydrological and ecological values of most of Waverley's coastline.

Dr Mark Sanders

143 Dr Mark Sanders is an ecologist holding formal qualifications and having some 20 years' experience as such. He told us he was a certified environmental practitioner. His evidence addressed potential effects of the WWF on terrestrial and freshwater ecology.

144 He explained, because the WWF had been under development for a considerable period of time, the Applicant had comprehensive information on the terrestrial, freshwater and avian values in and adjacent to the WWF project site.

145 He explained the vegetation of the project envelope consists of 94.3% and reduced pasture, 4.5% mixed rough pasture and describe (boxthorn, blue pins, blackberry), and 0.7% farm trees. He noted a number of farm ponds are present and the three largest will be filled to displace birds at risk of colliding with wind turbine rotors. He noted the Waipipi Stream is the largest watercourse on the project site and flows to the Tasman Sea unlike most of the farm drains, which percolate into the ground and within the sand dunes.

146 He noted that between the project envelope and the coast are sand dunes that are extensively invaded by exotic species such as maren grass and boxthorn. However he did note the dunes nevertheless retain some areas of intact native vegetation.

147 He noted a key feature of the WWF Proposal is the imposition of the EBZ which excludes all sites with terrestrial ecological values from the project envelope. So, he said, the construction and operation of the WWF will occur entirely within developed farmland which has low or negligible terrestrial ecological value so that potential adverse effects on terrestrial vegetation are avoided.

148 He drew to our attention to the package of ecological enhancement and mitigation measures that include fencing and planting along the entire 4.7 km length of Waipipi Stream and its major tributary drains within the WWF site. This will entail planting approximately 32,500 native plants over 13 ha he said. In addition fencing of ecological significant wetlands will involve some 15 ha in the south-eastern corner of the project site within the EBZ. It was his opinion this work will have a substantial positive effect on indigenous vegetation within and adjacent to the WWF.

149 He told us the project envelope does not provide suitable habitat for lizards because it comprises almost entirely pasture disturbed by stock and farming activities including cultivation and cutting of hay and baleage. However the proposed plantings and possible stock exclusion are, he said, likely to benefit lizards by providing suitable undisturbed habitats. As to bats he concluded there were no risks because the habitat is highly unsuitable and the nearest bat population is well outside that flight range of the WWF project site.

150 He told us in the lower reaches of the Waipipi Stream and the largest of the farm ponds, there are a number of native fish including shortfin and longfin eels. He explained: it's in the stream and its tributary drains present barriers to fish trying to migrate upstream. When these culverts are replaced he said the new culverts installed for roading will restore fish passage. This will benefit freshwater fish including heels by facilitating access to upstream habitat but also he said an extensive areas of tributary drains and wetlands on properties

upstream of the WWF. He also told us fish will benefit from the exclusion of stock from the stream and from riparian plantings along the stream.

151 He noted the proposed infilling of farm ponds on the WWF project site will result in loss of habitat for aquatic plants, invertebrates, fish and birds and there will be direct impact is he said on fish during pond drainage and infilling. So to mitigate these potential effects he advised it is proposed prior to infilling the ponds to translocate fish to the Waipipi Stream and aquatic plants to other ponds within the EBZ. He informed us to compensate for loss of pond habitat for birds, water bird habitat will be created or enhanced at off-site locations. It was his opinion these measures, combined with planting, fencing and restoration of fish passage along Waipipi Stream or mitigate the loss of pond habitat.

152 He also assessed the two ONC's identified in schedule 8B of the PDP namely, the Whenuakura Estuary (ONC 2A) and Waipipi Dunes (ONC 2 B). In doing so he noted that these two areas were identified and assessed on a combination of workshops and desktop collation of starter and aerial photography and generally limited and representative ground-based fieldwork. In his opinion the ecological information gathered for the WWF assessment provides a much more comprehensive and reliable basis for assessing the ecological components of these two areas than the very general information relied upon by STDC during the PDP review.

153 It was his assessment that the ONCs as a whole do not meet the very high level of indigeneity criterion set out in the landscape assessment prepared for the PDP review process.

154 He spent time in his evidence explaining DoC's submission and how following a series of consultation meetings the department's concerns were addressed in the proposed conditions.

155 Overall it was his opinion that the actual or potential adverse effects of the WWF on terrestrial and freshwater values are appropriately avoided, mitigated, or remedied by the various measures set out in the proposed conditions. In any event he noted this results in large part because the establishment of the EBZ has taken a conservative approach in excluding from the project envelope any known or potential valuable terrestrial vegetation or habitat.

156 He noted that while the WWF Proposal will result in a net loss of 3.7 ha of pond habitat within the project site, it was his assessment that this loss will be compensated for by a substantial improvement in the quality of freshwater habitat within the project site resulting from the rehabilitation of the Waipipi Stream and by conservation measures at off-site locations. It was his view these proposed measures would result in a net benefit to terrestrial and freshwater

values within the project site and probably also in freshwaters upstream of the site as a result of improved fish access.

157 In his evidence he attached and presented a draft ecological modelling and management plan which is to be included in the proposed conditions.

Mr Stephen Fuller

158 Mr Stephen Fuller is a qualified ecologist of some 30 years standing. He explained he works primarily in the area of ecological impact assessment, the determination of mitigation requirements and ecological restoration. In particular he informed us he had coordinated wind farm investigations in Northland, Waikato, Manawatu, Hawke's Bay and Wellington and he had assisted with wind farm investigations in both Canterbury and Southland.

159 He told us he had prepared the WWF assessment of potential collision risk to birds which formed part of the AEE accompanying the Application. He explained he had worked closely with Dr Saunders in the development of ecological mitigation and enhancement measures and also during discussions with DOC over consent conditions.

160 Essentially, after noting the very limited habitat within the project envelope for native bird species, he further recorded that adjacent habitats including dune, beach, coastline, wetland, river mouth and estuary habitats provide habitat for a total of 39 species of native or migrant birds, 21 of which have a national threat status.

161 Concentrating on the 21 species which have the threatened status he noted that only five were recorded with them or traversing the project envelope in sufficient numbers for them to be considered at risk from turbine collision. The species identified were the banded dotterel, the New Zealand pied oystercatcher, both of which were migrants and the black shag and little black shag both of which were regular visitors. He explained the collision risk for these species was modelled and an analysis of this modelling led to the development of avoidance or mitigation specific for each species.

162 He noted the EBZ excludes all sites with terrestrial ecological values from the project envelope resulting in the buffer being provided between those habitats and the project envelope. He saw this as a key avoidance measure.

163 Turning to mitigation for the three migrant species it was his conclusion that the small number of predicted mortalities that will occur will not be at a level that will impact on national populations. Nevertheless it was has recommended mitigation

that contributions to a management of a breeding site would assist with the protection of adults and checks to a level that would offset any losses.

164 In respect of the two species of shag, he concluded that the small number of predicted mortalities would not be at a level that would impact on national populations but the mortality level would have an impact on local populations. Accordingly he recommended that the pond which lies within the project site and which is used by the shag species, be removed thereby displacing these birds to alternative habitats elsewhere along the coast. To mitigate the loss of the pond habitat he recommended the creation of enhancement of foraging habitat for shag and other water bird species.

165 Insofar as monitoring was concerned, he recommended a range of post construction monitoring which is detailed within the conditions. On the conditions, he noted that as a result of ongoing engagement and expert caucusing carried out with DOC and its technical experts, a set of conditions has been developed that addresses both his recommendations and those raised by DOC.

Dr Martin Single

166 Dr Martin Single is an environmental consultant with 25 years' experience. He holds a Ph.D. in geography and the topic which he investigated was coastal processes and geomorphological change. His evidence primarily assessed the potential coastal related hazards to the WWF project site.

167 Those coastal hazards included erosion of the cliff shore and dune area. He also considered the effects of climate change in relation to retreat of the shoreline. It was his view the long term prognosis is the WWF project site will not be subject to shore erosion or inundation from coastal storms. He noted windblown sand and landward migration of the sand dunes may present a hazard to the WWF project site.

168 He noted a number of avoidance and mitigation measures had been proposed in conditions of consent. He considered in particular, the inclusion of the EBZ and the earthworks and construction management plan would provide mitigation such that there are negligible effects on coastal geomorphology.

169 He noted that he had also provided advice on the location of the inland boundary of the EBZ in addition to ecological and landscape considerations. In his view the EBZ promoted by the Applicant effectively encompasses areas of active sand dunes and projected future coastal hazards and is, he said, aligned to the landward extent of the coastal environment. He did not agree with the reporting officer's view recommending that the EBZ be extended further inland to the proposed CPA as identified by the PDP.

170 In respect of encroachment of sand that may be a hazard for the WWF he noted proposed condition 114 provides for the development of a dune management plan that has the objective of avoiding or mitigating the risk of dune instability within the project site boundaries. In this way that possible hazard can be mitigated the said.

Mr John Martin

171 Mr John Martin is a registered line mechanic and he has 36 years of experience in the design, construction and maintenance of distribution and high-voltage electricity transmission lines in New Zealand. He told us he is familiar with the WWF project site and has been involved in the development of the electricity transmission line design route and power pole configurations from the WWF to the proposed connection to Transpower's electricity substation on Mangatangi Road, Waverley.

172 He described in detail the route selection process, transmission line design and refinements since lodgement of the Application.

173 The refinements include pole consideration variation along the transmission line route. Concrete monopoles up to 22 m in height will be utilised with the electricity transmission line traverses the rural environment. However the poll height reduces within the Waverley township in order to minimise effects where the concrete monopoles will be up to 14m in height. He told us within Waverley township the polls have also been subject to micro site-ing to alleviate any adverse effects on views of Mt Taranaki from residences located on the opposite side of the transmission line in Swinbourne Street.

174 He confirmed, based on his experience, the most practical design configurations for the electricity transmission line is overhead line with single concrete poles with the occasional hardwood pole where additional strength is required for turning tight angles.

175 It was his view burying a high voltage cable over a distance of approximately 12.6 km would be economically prohibitive.

176 It was his view, the concerns of Waverley residents such as Mr and Mrs Connell and Mr Hayes, particularly in relation to visual and amenity impacts, that those concerns had been appropriately dealt with by the location and design of the transmission line.

177 He told us that as well is undergrounding the transmission line in Waverley township the idea of rerouting the transmission line around the township to the east and north had been extensively investigated. He did not consider this to be

a viable alternative as this would require the permission from several landowners some of which had already refused. He also noted this re-routing even if it were possible, would create other significant issues, namely entry into the Transpower substation. He told us the presence of the existing Transpower aerial 110 kV line in an out of the substation makes entry from this direction impractical.

Mr Nevil Hegley

178 Mr Nevil Hegley is a qualified civil engineer specialising for the last 33 years in acoustics. He has been involved in approximately 17 proposed and existing wind farms throughout the country.

179 His evidence addressed potential noise effects of the WWF including noise from construction of the wind farm. That construction includes the roading network and the erection of wind turbine generators (**WTG**), and noise from construction traffic on the internal side roads and public roading network. He also assessed intermittent noise from temporary operational support works such as maintenance of the WTGs. He also assessed when degenerated noise from each of the WTG's and noise from the construction of the transmission line and operational noise associated with that line.

180 He informed us a full assessment of the proposed construction works had been undertaken and the noise levels at the closest dwellings had been determined for the construction and subsequent maintenance of the WWF.

181 An assessment of potential operational noise from the WWF was undertaken based on the following indicative parameters:

(a) WTG hub height modelled is 100 m;

(b) maximum height to blade tip is 160 m; WTG rotor diameter modelled is 113m;

(c) up to 48 WTG's will be established with the project envelope;

(d) sound power rating of the WTG's to be installed will not exceed the background sound plus 5dB or a level of 40dB La90(10min) whichever is the greater urban notional boundary of any existing or consented dwelling; and

(e) the location and type of the WTG adopted in the noise modelling has been selected to represent the upper level of noise expected for all residents in the area based on an envelope approach. Mr Hegley explained this means the maximum likely number of the WTG is to be installed assuming the

WTG's are at the closest location of the northern, eastern and western boundaries of the project envelope in each direction was adopted for that noise analysis. He further explained that layout, whilst it provided a worst-case scenario, was unlikely to be utilised. A realistic non-fanciful layout was also modelled. He detailed that all layouts had been modelled to determine the highest noise levels in each direction and combined noise contours having been created encompassing each of the individual predicted noise contours.

182 He also informed us the operational noise from the WWF has been predicted at each of the closest dwellings to the project envelope for each of the potential wind farm layouts based on the wind blowing from the WTG directly towards the receiver position.

183 After explaining how the wind noise generated from the WTG is was to be undertaken he informed us that based on predicted noise levels and field measurements of the existing environment it was his conclusion the requirements of NZS 6808: 1998 acoustics – the assessment and measurement of sound WTG ("NZS 6808") will be complied with at the notional boundary of all existing and consented dwellings near the WWF.

184 He also informed us for non-related WTG noise the requirements in terms of noise of both the ODP and PDP will be complied with at the notional boundary of any existing dwelling, as well as the boundary of any other rural zone.

185 He informed us that construction noise from the project envelope will easily comply with the long-term requirements of NZS 6803: 1999 acoustics-construction noise ("NZS 6803") at all times when measured 1m from the facade of any dwelling near the WWF.

186 He advised us that construction will be undertaken frequently at night however there may be particularly lengthy concrete pours or delivery of components where stacking of vehicles on the state highway is required to be avoided. He informed us night-time construction activities will comply with the lower night-time noise requirement of 45dB L_{Aeq} in NZS 6803 at the closest existing or consented dwellings, ensuring sleep will not be disturbed for residents.

187 He further informed us, so as to optimise the control of construction noise it is proposed the Applicant provide a construction noise management plan (**CNMP**) prior to commencing work at the WWF. He said the CNMP would be submitted to STDC for certification before construction works commence.

188 It was his assessment that noise from traffic associated with the operation and the maintenance of the WWF would not be a nuisance for residents in the area in that it would be less than 45dBA $L_{eq(24hr)}$.

189 Also it was his assessment traffic noise to the construction site will be heard by neighbours near the roads that access the WWF but will be well within, he said, a reasonable level at all times that is less than 55dB L_{Aeq1hr}.

190 Mr Hegley addressed the proposed consent conditions and we understood there to be a high level of agreement between Mr Hegley and Mr Lloyd, the noise expert for STDC. However there was a point of difference between them. Mr Hegley directed us to paragraph 42 of Mr Lloyd's section 42A report where Mr Lloyd recorded that Mr Hegley's assessment placed no reliance on a relaxation of the 40dB $L_{A90(10min)}$ at baseline noise criterion recommended by NZ S6808 and he considered that this should be reflected in conditions. Mr Lloyd was therefore recommending 40dB $L_{A90(10min)}$ as the noise limit.

191 Mr Hegley told us it was unrealistic to adopt the noise limit set out in NZ S6808 simply because a lower noise level can be achieved. He expressed his view because that approach for noise control is not adopted in any part of either the ODP or PDP it was not warranted. Mr Hegley was of the view that the requirements of NZ S6808 as originally proposed should be reflected in conditions.

192 Turning to the transmission line, Mr Hegley expressed the view that noise from the transmission line in the residential zone will generally achieve noise limits in the ODP and PDP. However he explained that at times the transmission line may not achieve the 40dB L_{Aeq} limit at the boundary of the periods when there are high levels of construction and wind generated noise although he informed us he did not consider noise at those times would exceed 45dB L_{Aeq}. He explained noise at this level would allow undisturbed sleep based on the recommendations of NZ S6802 in the world health guidelines and he further explained this higher level of noise only occurs under very specific and generally rear conditions.

193 Mr Hegley explained the other point of difference between he and Mr Lloyd related to propose condition 36 which requires the assessment position of noise as being the notional boundary for residual dwellings existing or consented or able to be constructed as a permitted activity at the time consent is granted. Mr Hegley explained that what this condition effectively requires is the WWF design noise level to comply at the site boundary regardless of how unlikely of a dwelling to be constructed. There were two properties he said where this circumstance may arise and he identified them as 391 and 395 Rākaupiko road.

194 Mr Hegley explained the effect of adopting the assessment location at the notional boundary of any existing or consented dwellings will not adversely affect any existing property but would enable the WWF to be developed without sterilising land on the WWF project site and thereby reducing the size of the WWF we are WTG's are currently proposed.

195 Mr Hegley pointed out that Mr Lloyd relied on the Mill Creek Environment Court decision to support his recommendation to adopt the site boundary. Mr Hegley however pointed out he was not aware of any decision other than Mill Creek with the site boundary had been adopted. It was his view that condition 36 should continue to apply to those dwelling sites that are existing or consented by way of resource consent or building consent rather than as recommended by Mr Lloyd. We return to this issue later.

Mr Ian Carlisle

196 Mr Ian Carlisle is a chartered professional engineer specialising in traffic and transport engineering for the last 26 years.

197 His evidence described the roading network relevant to the WWF project site particularly for construction traffic and for the delivery of turbines.

198 In terms of construction traffic he informed us an average of 300 vehicle movements per day that have 150 loads are expected over the busiest construction period and approximately 50% of those vehicles will be trucks.

199 The traffic will be associated with wind farm construction, in particular, important pavement aggregate for internal road construction and public road reconstruction, delivery of materials for turbine foundation, transport of turbine components including over dimension and overweight loads from Port Taranaki to the WWF project site in particular the rotor turbines at 60 m long and nacelle at 85 tonnes, delivery of the substation also and overweight load and transmission infrastructure and finally movement of construction personnel.

200 He identified the intersection between State Highway 3 and Peat Road as being one of the key access considerations. This is because of the location of the railway crossing on Peat Road and the limited space between the State Highway 3 limit line and the rail crossing the limit line. He informed us that there is insufficient space to accommodate a vehicle longer than a short wheelbase to track without extending over the railway line or into the State Highway 3 lanes. He recommended construction of additional shoulder works on State Highway 3 to cater for the vehicles making a left turn into Peat Road. He also recommended a left turn shoulder is desirable to provide for left turning trucks to enable turning tracks to clear the rail crossing when a train approaches. He also

recommended specific temporary warning signage on State Highway 3 to alert drivers to the presence of turning construction traffic as well as informing of the activity road users would be able to see in the distance.

201 In his evidence he provided a concept plan which had been prepared in consultation with the New Zealand Transport Authority detailing the above described treatment for the Peat Road intersection.

202 The other recommendation is to allow all movements at the State Highway 3 and Peat Road intersection with the exception of eastbound long length trucks which will be diverted along Ihupuku Road, Waverley Beach Road and Oturi Road. This option will require upgrades to those roads. He recommended that the final route should be considered at the time of detailed design, in consultation with, and the approval of, the road controlling authorities.

203 He told us once construction had been completed traffic movements generated by the ongoing operation of the WWF will be readily accommodated particularly having regard to the proposed road upgrades.

204 He noted that the various traffic management restrictions, mitigation works, consultation and management will need to be confirmed at the time of construction and for this purpose he recommended the preparation and implementation of a construction traffic management plan (CTMP).

205 Finally he recorded in his evidence that he concurred with the conclusion of the STDC's senior roading engineer that all transportation effects will be satisfactorily managed.

Mr Brian Whelan

206 Mr Brian Whelan holds qualifications in business management and finance and has been a commercial pilot since 1980. He has broad experience with the aviation industry supported through academic technical and management activity. He provides advice to airport operators and local authorities regarding the management of the airspace and airfield operations and the development of New Zealand airspace operation model of the New Zealand aviation industry. He deals with aviation safety and risk management analysis work for a variety of clients.

207 He identified for us the location of the Waverley beach airfield situated approximately 1.2 km to the south east of the WWF project envelope. He told us this private airfield is used by residents within that the nearby residential subdivision at Waipipi Beach and is suited for four seat person aircraft. The airfield is also used he said for aerial topdressing. This activity is undertaken

some five days per year. He explained the Waipipi Beach airfield is not certified or regulated by the Civil Aviation Authority of New Zealand (**CAANZ**) because it has no operational information on the airfield. He also drew our attention to the existence location of the Waitotara low flying zone. This is a zone where pilots practice low flying manoeuvres. The zone is operated by the Wanganui Aero Club. He explained he was familiar with the airfields within the South Taranaki District and associated flying conditions by virtue of his previous training at the Wanganui Aero club and employment at Wanganui Aero work and Moller Corporation through the 1980s.

208 He informed us that the aeronautical study by the CAANZ has considered the general aircraft navigation risk presented by the WWF and undertaken a public process for submissions on the WWF Proposal with no submissions received. In accordance with the determination from the CAANZ the outer boundaries of the WWF will be lit with navigation lighting to inform pilots of the potential hazard.

209 He confirmed for us that the Waitotara low flying zone will not be affected by the WWF given it is located approximately six km south-east of the project envelope. He also concluded the Waverley Beach airfield would not be affected by the WWF in particular, it would not represent a physical obstacle to aircraft operations at the air field and its operation would not cause turbulence and wind shear would not be an issue when wind speeds in the area up to 15kn. However aircraft operations at that airfield may be effected when wind speeds are in excess of 20kn. However he noted that this would account for potentially 20% of the time and needs to be considered against the fact that the airfield would remain viable for light aircraft operations and agricultural aircraft operations.

210 In response to the submission of Mr W Dickie he confirmed that the operations of the Waverley Beach airfield would remain viable, particularly for light aircraft. He recorded his agreement with the section 42A officer's conclusion that compliance with the CAANZ rules will be sufficient to mitigate or avoid any potential adverse aviation effects of the WWF.

Ms Mary O'Keeffe

211 Ms O'Keeffe is a consultant archaeologist and has worked as an archaeologist for the last 18 years.

212 She told us that the project envelope for the WWF is extensively modified as a result of land-based iron sand mining previously occurring on the project site. Given this prior use and the use of the EBZ to largely avoid areas of undisturbed ground which could contain intact archaeological sites that the likelihood of finding intact archaeological sites during the construction of the WWF is highly unlikely.

213 She viewed the conditions proffered by the Applicant noting that they had been agreed with HNZPT to address any accidental discovery of archaeological sites.

214 Turning to the transmission line from the WWF to Waverley, she considered the transmission line is located in the area with a low likelihood of encountering archaeological sites. Despite this, she noted the Applicant will apply to HNZPT for authority to modify or destroy any archaeological sites.

Mr Peter Clough

215 Mr Peter Clough is the senior economist with over 25 years' experience of applied economic research and consultancy. He has, over that time prepared a number of economic reports for wind farm generation projects as well as hydro-electric power schemes.

216 Taking into account Part 2 and section 104 of the RMA, in particular those parts of section 5 (2) which include references to enabling and economic well-being through the stimulus to business and incomes from the injection of funds into the local economy and section 7 (b) that references efficient use and development of resources he assessed the economic consequences of the WWF.

217 In his opinion building and operating the WWF will provide, a stimulus for spending and economic activity and the regional economy, supporting jobs, incomes and spending on a wide range of consumption activity during its construction stage and to a lesser extent during its operation.

218 He detailed the current project plan for the WWF entails around $325 million of capital expenditure over a 24 month construction period and thereafter requires operation and maintenance expenditure of about $7.5 million per year. He informed us the construction phase would create about 8200 full-time equivalent jobs and the annual operation could require 8 to 10 full-time equivalents.

219 He detailed that after removing the cost of imported components that non-imported domestic expenditure component is likely to be around $88 million on construction and installation. This translates, he said to a net contribution to regional GDP for Taranaki of $42 million after accounting for indirect flow on and leakage effects. This is equivalent to 0.6% of the Taranaki regional GDP. The model estimates the annual operating and expenditure contributes around $3.3 million to local GDP each year, equivalent to 0.05% of Taranaki's GDP.

220 The construction jobs are equivalent of up to 16% of the current construction labour force in the South Taranaki District and 0.8% of total labour force and flow on effects would stimulate about another 12 to 15 jobs he said. In the operational phase, direct employment of about 8 to 10 people is equivalent to

3% of current employment in electricity, gas, water and waste services. He said the contribution of 0.6% during construction is a substantial and significant contribution.

221 In his opinion, the main economic consequence of the WWF from a resource management perspective is the harnessing of a hitherto free natural resource, wind, to create a valuable commodity, electricity, which would be of value not only to the wind farm operators but also to the wider community.

222 He also noted the consenting of the wind farm does not ensure it will be built. Rather it provides an option to build when conditions and timing are most advantageous. He stated that as a commercial business the Applicant would only proceed with the WWF if it is expected to be worthwhile an efficient use of its own resources.

223 He described the place the WWF would take within New Zealand's electricity system. He explained how the wholesale electricity market is designed for wind generation to be dispatched whenever the wind strong enough to generate allowing to wind back out other higher cost generation.

224 He noted growth in electricity demand has slowed resulting in dampening down the urgency and installing new capacity and he observed that there is an overhang of consented new generation sites unbuilt at present in New Zealand.

225 However in his opinion because supply and demand conditions may change and because a consented site is an option to build the overhang of consent projects is not in his opinion a reason in itself to decline new consents as it is efficient to have a wide choice of potential new projects from which to select the next plant built.

226 He expressed his opinion that the WWF would fit well within the recent national policy and strategic directions as expressed through a range of energy strategies and national policy statements.

227 He considered the WWF was relevant to the national broad strategy toward reducing climate changing emissions which New Zealand has committed to particularly as embodied in the Paris Climate Change Agreement of 2015. He also expressed the view that the WWF can contribute to a strategic interest and diversifying renewable generation away from the current predominance of hydro-generation as thermal generation is withdrawn.

228 He told us the WWF if built would add about 1.5% to New Zealand's current generation capacity. Taking this into account and the current costs for the WWF he told us it would place this project in the middle of the range of long run

marginal cost for wind farms identified by Ministry of Business, Innovation and Employment suggesting that the WWF is competitive with many other prospective wind farms.

229 Taking into account estimates of generation and emission costs for a range of different carbon prices he suggests the WWF would avoid annual cost and New Zealand in the range of $29-$43 million.

Mr Ryan Piddington

230 Mr Piddington is an environmental advisor to the Applicant. He undertook the consultation program with interested parties, stakeholders, tangata whenua, the public generally and the relevant consent authorities.

231 He outlined for us the consultation process and the range of change of the WWF Proposal that resulted from the consultation. Those changes involved increasing the EBZ, development of the ecological mitigation modelling and management plan, greater detail in relation to the management of aquatic flora and fauna as a result of on-site pond dewatering, greater detail in terms of mitigation measures relating to shag and other water bird species, greater detail in relation to bird collision monitoring and review procedures, greater detail in relation to management of any archaeological discoveries, development of measures to ensure appropriate management of Powerco Limited's infrastructure and finally adjustments to the transmission line through the Waverley township.

Mr Mahanga Maru

232 Mr Mahanga Maru provides specialist advice to public sector organisations and private companies in relation to iwi consultation and engagement with respect to natural resources and RMA matters. He has more than 15 years' experience providing specialist advice to clients in various settings including renewable energy. He holds academic qualifications and is a current independent hearings commissioner.

233 His prepared and circulated evidence provided details of his engagement with submitters that raised cultural matters in their submissions. Because agreement was reached between those submitters and the Applicant resulting on those submissions being withdrawn and replaced with a written approval we do not think it necessary to dwell on this evidence. We simply record after he set out the detail of that engagement with those submitters he expressed the view that the consultation undertaken with the submitters met what he described as the Applicant's obligations under sections 6, 7 and 8 of the RMA.

Mr Richard Turner

234 Mr Richard Turner is a senior resource management consultant. He has been employed as a planner and resource management professional for 17 years. He holds a range of related professional qualifications.

235 Mr Turner provided a very fulsome brief which included annexures of some 198 pages. He summarised his prepared brief and presented that summary at the hearing. After detailing the key characteristics of the WWF he stressed that the EBZ will avoid many potential adverse effects of the wind farm. In terms of the range of various environmental assessments that have been undertaken he stressed that they have been assessed from the potential worst-case development scenario and he was comfortable that the proposed consent conditions notwithstanding the envelope approach to development placed appropriate constraints on how the farm may be configured.

236 He drew to our attention to the attractive wind resources the project site possesses and drew to our attention to those parts of the PDP that recognise the potential of the available wind resource along the coast. He also noted the project sites proximity to the National Grid and the project site's good transport access to Port Taranaki and the flat topography of the project site which results in suitable construction conditions.

237 He considered a ten-year consent lapsing period as requested was appropriate because that would provide sufficient flexibility to establish the wind farm within a suitable development window and would take account of preconstruction requirements as they have been set out in the proposed consent conditions.

238 He noted the statutory framework had changed from the time of lodgement of the Application due to decisions on the PDP being released in November 2016. He drew to our attention that the resource consent requirements before the WWF and transmission line held an activity classification of discretionary under the ODP. Under the PDP the most restrictive activity classification was non-complying although he drew to our attention the relevant rule that triggered that activity status is under appeal.

239 He expressed the opinion that the activity status that applies to the wind farm and transmission line under the PDP was somewhat academic because the project is considered as a discretionary activity given that this was the activity status of the resource consent Application at the time of lodgement in accordance with section 88A of the RMA.

240 He further expressed the view that where the relevant objectives and policies in the PDP are not subject to appeal the corresponding objectives and policies in

the ODP should be given very little if any weight. He noted that the weight to be attributed to the provisions of the PDP that are subject to an appeal is his opinion contingent on the scope and theme of the relevant appeals.

241 He set out in detail for us in his view as to the existing environment relying heavily upon the evidence of Mr Lister, Mr Brown, Dr Single and Dr Sanders. We do not need to repeat that again.

242 Having identified the existing environment he accepted that the PDP does not permit any activities with directly comparable visual effects to the wind turbines.

243 However he noted the PDP permits electricity transmission lines of up to 110 kVA and poles up to a height of 25m is a permitted activity in the rural zone. Therefore in his opinion the permitted baseline should be applied with respect to visual and landscape effects of the electricity transmission line between the WWF and the electricity transmission substation at Mangatangi Road, Waverley.

244 His assessment of effects under section 104 (1) (a) RMA takes into account the envelope approach and he points out that the environmental assessments that support the resource consent Application have all been prepared on the basis that the various activities may be located anywhere within the project envelope and electricity transmission corridor.

245 His conclusion in relation to effects was that the construction, operation and maintenance of the WWF will occur in a manner that appropriately avoids, remedies or mitigates the actual and potential adverse effects on the environment. He considered the proposed conditions to be detailed robust and comprehensive. He considered the project site is an appropriate location for a wind farm due to the wind farm resource that is available, its location and productive rural landscape and the low density of dwellings in the surrounding area. He pointed out the EBZ and refinements to it that developed over presentation of the Applicant's case will in his opinion ensure that many potential adverse effects are avoided.

246 He stressed that the wind farm has the potential to generate significant positive effects particular its contribution to meet renewable electricity generation targets established by the New Zealand government.

247 He comprehensively considered the relevant statutory planning documents in terms of section 104 (1) (b) RMA. It was his view that the project aligns well with the overall management outcomes sought by the relevant statutory planning documents in light of the mitigation measures proposed.

248 Turning to Part 2 of the RMA it was his view that the WWF will have significant and demonstrable positive effects in terms of sustaining the social and economic well-being of the local, regional and national community.

249 He noted that extensive consideration had been given to the natural and physical resource values of the project site and the route of the electricity transmission lines. It was his view the number of potential environmental effects have been able to be avoided by designating key areas as part of the EBZ. He acknowledged the WWF will have some effects on the environment but noted considerable effort had been put into avoiding, remedying or mitigating adverse effects as far as practical that the WWF will safeguard the life supporting capacity of air, water, soil and ecosystems.

250 He was of the opinion that the project site is an appropriate location for a wind farm and that its construction, operation and maintenance will promote the sustainable management of natural and physical resources in accordance with Part 2 of the RMA.

251 Turning to the S42A Reports he identified in his evidence points of difference between his view and that of the reporting officers. Those differences related to the EBZ, the fencing of the EBZ, the undergrounding of the electricity transmission line along Swinbourne Street and Fookes Street and the compliance locations for operational noise from WWF. All of these matters are further addressed within our evaluation section.

252 Finally in respect of consent conditions he drew to our attention those proposed conditions of consent that were not agreed with the reporting officer Mr Forrest. We address those issues all those of them that remain as issues later in this decision.

Submitters in support

253 Mr Grenville Gaskell appeared for the NZWEA. The association supported the grant of consent for the WWF.

254 Reasons why the Application should be supported related to the risks for all New Zealand that climate change posed. Mr Gaskell considered that generating energy from renewable resources had to be supported to combat climate change effects.

255 He agreed that electricity demand over recent times had peaked however he made the point with the invention of cars running on electricity and other technological advances involving electricity demand will over time increase.

256 He drew attention to both legislative and policy settings which provided support for renewable energy projects. He drew attention to what he considered to be widened broad benefits for the environment of generating power from wind.

257 He noted that in terms of acoustic issues noise from wind farms had greatly improved so that risk of untoward noise was much reduced.

Submitters in opposition

Sally Sissons

258 Ms Sissons told us she lived at 284 Lower Kaharoa Road Whenuakura, Patea. She identified her property as house number 103 on Mr Lister's plans. She has lived on the property for the last 16 years. She told us she originally bought the property because of its visual outlook of coastal views.

259 She told us she thought as a consequence of checking with STDC that her views would be protected long-term and was concerned to find that was not the case. She talked about the long-term degradation caused by resource based extraction relating to oil and mining.

260 It was her view that the WWF site was unique and should be protected.

261 Turning to the Applicant's visual impact assessment she noted that the closest turbine was some 4.2 km from her property. The assessment classified visual effects as being moderate. In her view that classification ignored the available outdoor areas on her property. She told us she spends a good deal of her time outdoors. The Applicant's assessment however focused on views from her residence.

262 She was not attracted to the Applicant's volunteered proposal of providing mitigation screening of the wind farm on her property. She expressed the point that screen planting was temporary and she was concerned there would be no guarantees it would be replanted. She wanted to enjoy the coastal views and did not want to screen them.

263 She considered the ODP should determine where wind farms should be located and before a consent issued there should be changes to the ODP. She was concerned that the submission period was insufficient and noted in her view an inequality between the resources of submitters and the resources of applicants.

264 In terms of the benefits claimed by the Applicant arising from the WW Proposal she was of the view those employed will not be local. She considered overall there would be little local contribution to the local community and was of the firm view there would be no benefits for the local community.

265 She told us that she does from time to time walk along the beach adjacent to the WWF project site. Being able to walk is influenced by tides. She agreed it is not common to see people walking on that part of the beach adjacent the WWF project site but it does occur.

266 In answer to further questions she told us that she sees people fishing from the groyne at Patea and she considered those people would have a view of the WWF. She thought at least half a dozen people fished in this manner. She told us that walkers frequent the Whenuakura Estuary.

Mr Mike and Mrs Angela Connell

267 In their evidence they detailed their experience with two other wind farms while living elsewhere. They explained they consider they had no option but to leave the then home after occupying if for some seven years and find somewhere else to live. They told us they commenced the search for a new home and community close to medical facilities. They settled on Waverley now finding themselves involved with another wind farm.

268 They object in particular to the turbines, the pylons and transmission lines dominating what they consider to be unique features with amazing cliffs, and most of all the views of Mt Taranaki from their home. They now live on Fookes Street in Waverley and they are concerned that the transmission line proposed in the front of the property will significantly impact on what they describe as fantastic views from the lounge window. They provided a photo of that view with their appreciation of the power poles and transmission line drawn on it.

269 They were also concerned about noise emitted from the transmission line insulators particular consistent hum. They were concerned about the negative impact on property values that the transmission line may cause.

270 They were also concerned about the negative impact and frictional division of the WWF was having on the Waverley community. They sought that the resource consent be declined.

271 We understood the land on which the transmission line was intending to be located was rural land. We were informed that the land adjacent to Fookes Street was in fact reserve STDC owned land, but zoned rural under the ODP and PDP. Mr Mackenzie for STDC informed us that STDC from time to time licensed the occupation of this land. He provided us with copies of license documentation informing us the licence was in the process of being updated. We were interested in this matter because we wanted to understand if there were controls on the use of this land so that the views that the Connells were concerned with

could be impacted upon as a result of for example shelterbelts or trees being planted on this land.

272 In looking at the existing licences and the existing trees and hedges on the reserve land were in fact retained and properly maintained. We observed that the licensee was required to obtain the approval of STDC before correcting or placing any buildings on the land. Importantly we noted that STDC had reserved to itself the free right at any time during the term of the licence to plant trees on any part of the land.

273 The new form of licence also provided for protection of any trees growing on the reserve land without first obtaining consent in writing of STDC. So it seemed to us at a minimum existing trees planted on STDC reserves required consent of STDC for trimming or removal and that under the existing form of licence STDC could plant trees on this reserve land. This circumstance could impact upon existing views along Fookes Street and particularly from existing dwellings.

Robert Hayes

274 Mr Hayes resides at 21 Bear Street in Waverley. He lodged a submission on his own behalf and a second submission on behalf of a cohort of residents of both Swinbourne and Fookes Streets. Essentially the relief they sought was to have the transmission line near the town belt undergrounded. He was concerned that an above ground transmission lines would as he said sully the aesthetic and cultural values of the rural vista currently enjoyed by residents in particular the majestic views of Mt Taranaki.

275 He was also concerned that if in the future the town belt was developed into a recreational facility including a walking or cycling track and/or if it was planted in native bush so as to attract birdlife especially native birdlife there would be adverse impacts of the transmission line.

276 He endorses the assessment of Ms Williams for STDC reporting on landscape effects of the WWF Proposal particularly her assessment that the transmission line particularly within Waverley township be undergrounded. He contended in reaching that conclusion Ms Williams had considered the cost of undergrounding the transmission line and still considered that outcome was justified.

277 Mr Hayes specifically referred to the evidence for the Applicant of Mr John Martin. He firstly pointed out that Mr Martin agreed that undergrounding the transmission line was technically feasible. The only issue identified was to do with cost. Mr Hayes excepted undergrounding would lead to greater cost but took the view the RMA imposes a balance so that an issue should not be decided by cost alone. Also it was his view that the cost of undergrounding the

transmission line is not significant when the total cost of the project is taken into account.

278 He challenged Mr Martin's concern relating to the issue of obtaining other utility providers consents. In this case based on various enquiries he had made informed us that the consent of other utility providers is normally forthcoming with the only issue of concern being whether or not their own infrastructure will be interfered with.

Mr Will Dickie

279 Mr Dickie expressed concern about the lack of engagement he had enjoyed with the Applicant. They also considered it was difficult for the community to engage with an applicant that was well resourced. He was critical that the community was not provided with leadership so it could speak with one voice in relation to the WWF Proposal.

280 He was concerned about the impacts that the WWF would have on the wild scenic beauty of the coastal environment. He did not think the benefits of the project as promoted by the Applicant would be experienced by the local community. He considered labour would be bought from out of town and specialist services that the local community could not provide would be required.

281 He mentioned concerns in relation to shadow flicker and visual impacts on the Waverley Beach subdivision he had been involved with. He noted that was a long term project and was a considerable investment for him and his family. He was concerned that there would be adverse effects on views on properties located within the subdivision and that would cause difficulties in terms of selling the remaining lots.

282 As we understood his evidence he appeared to agree that he did not think there would be an impact on aircraft utilising the airstrip on his property.

Mr Paul Mitchell

283 Mr Mitchell farmed near the WWF project site in his evidence he made it very clear the coastline is highly valued. He was very concerned that granting of consent for the WWF would have negative impacts on the valuation of properties near to the wind farm. He wanted to understand whether or not compensation was available for such losses and how he should go about claiming such compensation. We informed them that loss of value was not a direct impact rather it was a consequence of other direct impacts such as adverse visual impacts or loss of amenity. If he was to seek compensation we informed him it was not our role to provide advice to him on that point.

Mr Nigel and Mrs Diane Alexander

284 Mr and Mrs Alexander opposed the wind farm.

285 We understood that the farm was surrounded by dairy farms. They informed us they had invested in the farm and they were concerned that the existence of the WWF would devalue their land. They contended that outcome should not be allowed. He commented that this is the first wind farm in New Zealand to be built on flat coastal land at a height to get the air needed. Effectively, he said, the Applicant is making a hill to put these things on.

286 They were concerned about the impacts on the farming activity particularly when stock was being moved between the farm and the stockyards located on Peat road. The stock movement we understood to be regular and the Alexanders were concerned the opportunity for stock movement would be limited causing difficulty with the operation of their farm. They said if this occurred it would have financial implications for them. Mr Alexander raised concern about the loss of birds, noting that there used to be a seagull colony on the property. He also said that there is no a shortage of electricity nationally, and a wind farm does not need to be built on this site. His opinion was that electricity would have to be sold at a discount. He wondered who answers to any decisions made and who gets sued.

Mr Allen Stancliff - Fish and Game New Zealand - Taranaki Region

287 Mr Stancliff's evidence address the impact on game birds caused by the reduction in habitat arising through the filling of the existing farm ponds located on the WWF project site when it was developed for a wind farm.

288 In particular he was concerned about the size of the lost habitat. He calculated that the three farm ponds which are to be removed occupied some 3.7 ha of surface area. He told us this was a sizeable habitat for game birds. He told us such habitats were scarce within the Taranaki region. He told us that the three farm ponds that are to be drained and infilled comprise some of the last remaining lacustrine wetlands on the Waipipi Dunes and while they were artificially formed during iron sand mining, the natural wetlands in this area were earlier destroyed during the sand mining processes. His view is the fact that the farm ponds are man-made made does not diminish the actual or potential value as habitat for a range of species.

289 These species of bird that he was concerned about were game birds such as the black swan and mallard duck. He told us these were favoured and valued game birds.

290 To offset this loss of habitat for game birds it was his view this loss should be mitigated by the creation of an equivalent area of open wetland habitat on land outside the project envelope but in a similar coastal location or alternatively by requiring a financial contribution to fund the creation of an equivalent area of wetland habitat on similar locations within the Foxton ecological district.

291 He observed that despite being the statutory manager of game bird species present within the WWF project envelope FGNZ were not included in discussions between the Applicant and DoC. He also drew attention to the points that Mr Piddington made in his evidence on behalf of the Applicant which did not record consultation with FGNZ either before or after submissions were lodged.

292 Mr Stancliff was not satisfied that the proposed conditions relating to the creation or enhancement of foraging habitat to compensate for the loss of farm ponds adequately addressed the needs of FGNZ.

293 He also requested that FGNZ as well as DoC have the opportunity to review and comment on the draft ecological monitoring and management plan proposed by the conditions.

294 It was his view under the RMA that local authorities must recognise and provide for the preservation of the natural character of wetlands and protect them from inappropriate subdivision use and development. He referred to various provisions of statutory planning documents which he said also supported this requirement.

295 He also requested that the game birds species be included in post construction avian mortality monitoring. In particular he wanted the black swan to be monitored. He further detailed the way in which proposed consent conditions should, in his view, be amended to provide for the interests FGNZ.

Department of Conservation (DoC)

296 DoC, through Ms Crossen, presented legal submissions detailing the departments concerns with the Application. The Director-General of DoC opposes the granting of this consent because of concern with the Applicant's assessment of potential adverse effects on resident and migratory bird species, in particular, that it was inadequate.

297 Ms Crossen confirmed the Director-General still considers that the survey work undertaken by the Applicant was limited resulting in a likely underestimation of the number of birds using the project site of the WWF and the likely adverse effects and mitigation and compensation required to address those adverse effects. Given that the Director-General has concerns about the monitoring

undertaken by the Applicant being insufficient, DoC engaged with the Applicant and agreed to a revised set of conditions to address the concerns of the Director-General.

298 Ms Crossen informed us the revised conditions provide for a monitoring process to ensure a robust estimate of how many birds are killed by the operation of WWF. If the number of bird mortalities exceeds that predicted by the Applicant then safeguards are embedded in the conditions which may require the permanent suspension of the applicable wind turbine and other operational constraints, and increase monitoring which could lead to further turbine suspensions as well as increases in compensation payable to enhance the breeding of the birds affected.

299 She informed us the Director-General is confident that the monitoring proposed will reliably detect bird mortalities and the conditions provide STDC with a suite of tools to appropriately respond if there are greater than expected bird mortalities. Furthermore she told us all information on any bird mortality and the applicant's response will be available to the public. So as she put it if consent is granted this wind farm will be under the spotlight.

300 Dr Colin O'Donnell, an ecologist and Dr Lawrence Barea also attended and supported the legal submissions through evidence and by answering questions that we had. In particular the Director-General's alternative approach was explained in that the revised conditions allow for the uncertainty in the Applicant's survey methods and current modelling. The conditions now supported, we were told, include a robust process for ensuring that if more birds use the site and collide with the turbines than predicted by the Applicant this will be detected by the monitoring plan and appropriate measures including suspending the operation of wind turbines and increased payment of compensation if appropriate.

301 The conditions also include the establishment of an expert panel given the uncertainty in the use of the site by both migrant and resident birds, their numbers, and when and where they may use the site. As explained to us the expert panel is critical to ensuring that the conditions imposed are affected in meeting the objectives.

302 It was further explained that a bird collision monitoring plan would be developed to reliably measure the rate of bird mortality from collisions. We were told the Director-General is confident that the bird collision monitoring plan can be relied on as it must be prepared by a biostatistician and an avian expert and incorporate sources of bias.

303 It was further explained that there are thresholds and associated triggers included in the conditions namely an immediate review threshold and a mitigation review threshold. If bird mortality for any listed species meets the immediate review threshold then the applicable wind turbine will be suspended an investigation undertaken and a report of the investigation are provided to STDC including comments from the expert review panel on whether additional non-flat, mitigation or compensation is required. The mitigation of the threshold occurs on the fifth anniversary of the operation of the wind farm and it informs decisions about further monitoring and whether any additional mitigation or compensation is required.

304 It was also explained to us that the Applicant has agreed to provide funding for the Ashburton River / Hakatere shorebird management programme to compensate for the predicted deaths of migrant South Island pied oystercatchers and pied stilts while recognising the benefits of the contribution to other bird species. It was explained to us the funding will enhance the breeding of these birds on one of the South Island breeding rivers. We were told the Director-General supports this as appropriate compensation and that the program will benefit the migrant birds.

305 We were also informed the Director-General's primary concern in relation to freshwater values was the infilling of the ponds at the project site given they provide habitat to both threatened fauna and flora. However it was made clear to us the revised conditions satisfied the Director-General's concerns about the infilling of the ponds at the project site.

SECTION 42A REPORTS - STDC

306 **MR DAVID FORREST,** Planning Consultant for STDC presented and discussed his report on the Application. The critical issues are discussed extensively in our evaluation below so they are not summarised here. Included within Mr Forrest's report were other specialist S42A reports which we now move on to consider.

307 **MS JULIA WILLIAMS**, Landscape Architect of Drakefield Williams Limited presented and discussed her report on the Application with a particular focus on landscape and visual effects.

308 **MS CAROLYN COPELAND**, Senior Roading Engineer for STDC provided an assessment of the traffic and roading issues on local STDC roads in relation to WWF.

309 **MR NIGEL LLOYD**, Acoustical Engineer at Acousafe Consulting & Engineering Limited identified and assessed the noise effects in relation to the activities described in the Application relating to WWF.

310 We traverse the key issues that all of the S42A reports raised within our evaluative sections of this decision.

APPLICANT'S RIGHT OF REPLY

311 The Applicant provided a written right of reply on behalf of the Applicant on Friday 9 June 2017.

312 We consider what we view as the relevant matters arising from that reply within the evaluative part of this Decision.

ASSESSMENT

313 In assessing the Application before us, we have considered the Application documentation and AEE, the S42A Reports and technical reviews, all submissions received and the evidence provided during the hearing and within the Applicant's reply.

314 In making our assessment we are required to consider the actual and potential effects of the Application on the existing environment.

315 We have summarised all the evidence presented at the hearing above. This approach enables us to focus on the principal issues in contention without addressing every point made. However, we record that we have considered all of the matters raised in making this determination.

Status of the Application

316 Earlier in this Decision, we set out our agreement that the status of this Application is discretionary.

317 We agree and we accept the evidence of Mr Turner and the submissions of Mr Welsh in relation to the weighting approach we should give to the ODP and the PDP. We accept the status of the activity does not change as a result of section 88A RMA and we accept we should give greater weight to the PDP provisions the further through the review process they are.

318 If those provisions are free of appeal we should give them greater weight than the equivalent provisions or the provisions they replace within the ODP. However if

the PDP provisions are subject to appeal we should be cautious as to the weight we provide those provisions because the outcome of those appeals are unknown.

319 So this is the approach both to status and the weighting of the district plans we have taken throughout.

Statutory Considerations

320 In terms of our responsibilities for giving consideration to the Application, we are required to have regard to the matters listed in sections 104, 104B, and 108 of the RMA. We note that the version of the RMA we refer to is the version that existed at the time of lodgement of the Application.

321 Pursuant to section 104(1), and subject to Part 2 of the RMA, which contains the purpose and principles, we must to have regard to:

(a) Any actual and potential effects on the environment of allowing the activity;

(b) Any relevant provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or a proposed regional policy statement, a plan or proposed plan; and

(c) Any other matters the consent authority considers relevant and reasonably necessary to determine the Application.

322 Under section 104(2) RMA, when forming an opinion for the purposes of section 104(1)(a) RMA regarding actual and potential effects on the environment, we may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.

323 In terms of section 104(3) RMA, in considering the Application, we must not have regard to (relevantly), any effect on a person who has given written approval to the Application.

324 Under section 104B RMA, we may grant or refuse the Application, and if granted, we may impose conditions under section 108 RMA.

EXISTING ENVIRONMENT

325 First we need to appreciate the existing environment. The Applicant provided a detailed description of the immediate and surrounding residential, open space,

riverine and coastal environments in the Application[14]. We agree with that description and summarise it below. We do not we need to address the issue of the appropriate location of the CPA or the EBZ, which we address later.

Physical Features

Marine terraces

326 The landscape in the vicinity of the project site is characterised by former marine terraces extending up to 20km inland and approximately 200m above sea level. The terraces are a result of tectonic uplift and fluctuating sea levels. From the air the terraces are characterised as manicured flat, to rolling pasture, divided by deeply incised streams and rivers. Former sand mining in the area has also created stepped terraces at the site.[15]

Dunes

327 The coastline adjacent to the site consists of a black sand beach and a group of sand dunes vegetated in a mix of exotic and native species. Ancient sand dunes run inland and should be distinguished from the active coastal dunes.

328 The highest dunes in the area are the Waipipi Dunes which are located inland of Pids Point which sits at the south-east end of the project site. The Waipipi Dunes are identified under the ODP as an SNA[16].

Whenuakura River

329 The Whenuakura River stems from the bush-clad hill country of inland Taranaki and runs across raised marine terraces of the dairy farming country to its lower levels (nearest the site) which consists of a flood plain before entering the sea by way of an estuary behind a shingle spit. The Whenuakura River is identified as an ONC under the PDP and is referred to in the RPS as a coastal area of regional or local significance.

Ecology

330 Indigenous vegetation and ecological values are concentrated mainly in the band of unmodified active dunes adjacent to the coast, around the mouth of the Whenuakura River and in the lower reaches of the Waipipi Stream. Bird diversity is likewise greatest along the coast and amongst the more diverse vegetation and habitat of the active dunes.

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[14] Trustpower Limited, 2016, Resource Consent Application and AEE, Appendix One Isthmus Report, Pages 9-18
[15] Ibid, page 9
[16] South Taranaki District Plan 2004, Schedule 2

Human modification

331 The project site was previously used for extensive iron-sand mining after which the land was levelled and rehabilitated. The result is very minimal soil within the vicinity of the site which is now characterised by sparse pasture and underlying black sand. Artificial ponds and wetlands are also remnant from the iron-sand mining activities.

Land-use patterns

332 The land around Waverley is mostly used for dairy farming although the project site itself is predominantly used for dry stock or run-off grazing due to its sparse pasture. The settlements nearest the project site have been touched on already but include Waverley township, Patea township, Waverley Beach and Waipipi Beach.

Associative Aspects

Tangata whenua

333 The project site sits within the Ngaa Rauru rohe, while the opposite side of the Whenuakura River is within the rohe of Ngati Ruanui. Certain spots within the vicinity of the WWF have statutory acknowledgement in both the ODP and PDP in favour of Ngaa Rauru and Ngati Ruanui, for example the Whenuakura River and Estuary.

Historical

334 The historical associations specific to the project site are largely in relation to the iron-sand mining operation. Industrial ruins are scattered throughout the project site and along the coast towards Waipipi Beach that provide remnants of the previous mining activities. Street names in the recent subdivision at Waipipi Beach reference the historical mining operations.

Recreation

335 Recreational use of the project site and surrounding area is low. There is no practical public access to the coast (only paper roads) other than a long walk from Waipipi Beach. Similarly, access to Whenuakura Estuary requires walking along the beach or crossing over private land. Some off-shore fishing occurs in the South Taranaki Bight 4-5km off shore.

Visual Aspects

Aesthetics

336 Most of the project envelope has rural character and is relatively featureless. The coastline and coastal dunes in the immediate vicinity of the project site could be described as having high landscape amenity and while it has a low level of recreational use it is an area visited by locals seeking quiet solitude.

Views and visibility

337 Visibility of the project site is restricted. The settlement density surrounding the project site is low (being farmland) and the nearest public roads to the site are no-exit roads or paper roads. Most views of the WWF will be able to be screened as a result of the flat topography.

Coastal Environment

338 The project site and part of the transmission line route sit within the CPA designated by the ODP.

339 The PDP delineates the CPA differently to the ODP and as such an evaluation is required on the extent of the existing coastal environment, its natural character and whether there are any identified ONLs/ONFs within or near the project site. We evaluate these matters below.

NATURAL CHARACTER AND COASTAL PROTECTION AREA

340 Notwithstanding the Applicant provided it's view of the existing environment, including the natural character of the coastal environment it remained a key issue for us to determine both the natural character of that coastal environment and the geographic extent of the CPA. We considered it necessary to make findings on these points before we could turn to assess the effects of the activity on those natural character values and on the CPA.

341 So in this section we discuss the higher order statutory documents and how they deal with the coastal natural character.

The CPA

342 Policy 4(b) of Section 2.01.4 of the ODP sets out a requirement to provide a 'Coastal Protection Management Area at the coastal edge to establish environmental standards and a level of certainty for the District'. This is refined in Section 2.15.7 of the PDP that requires the identification of a CPA to recognise

the extent and characteristics of the coastal environment with 'high natural character'. Various policies throughout both District Plans restrict the types of activities that can be undertaken in the CPA.

343 The line was defined on the planning maps based on a study of the coastal environment by Boffa Miskell Ltd[17]. The Decisions version of the PDP includes the explanation that[18]:

> *"A finer scale assessment of the characteristics and extent of the coastal environment as part of assessing a particular site or section of the coast for any resource consent application/notice of requirement/plan change will determine whether such areas are within or outside the coastal environment."*

344 Mr Lister, landscape architect for the Applicant, discussed in his evidence the extent of the coastal environment and the defining of the CPA line. He noted that[19]:

> *"In relatively flat areas, such as that surrounding the project site, there is often no obvious boundary to the coastal environment. Rather, the coastal influences and qualities often gradually diminish inland. However, in this case there is a sharp distinction at the edge of the former iron-sand mining area. The dunes on the seaward side of this boundary have obvious coastal qualities that arise from the significant influence of coastal processes. By contrast, the flat pasture inland of this boundary exhibits few coastal qualities and markedly less coastal influence – with the exception of exposure to the wind."*

345 Mr Lister went on to discuss how he considered the CPA as mapped in the PDP as being a line that "*roughly approximates the boundary between the dunes and iron-sand mined area*".[20] His explanation was that the investigation work undertaken for the PDP was mapped at a scale of 1:50,000, and in his opinion was not accurately ground-truthed through site-specific assessment.

346 During questioning, Mr Lister outlined the process through which the Applicant had been through to more accurately define the CPA. In addition to Mr Lister, it also involved coastal processes expert Dr Single, and ecologist Dr Sanders, who all visited the project site together, armed with digital LiDAR and GPS tracking equipment. In Mr Lister's opinion, the combined assessment these experts have

[17] South Taranaki Landscape Assessment, Boffa Miskell 2014
[18] South Taranaki Proposed District Plan – Decisions Version October 2016, Section 2.15 – Explanation of Policies (Page 68)
[19] Evidence of Mr Lister, Paragraph 35
[20] Evidence of Mr Lister, Paragraph 37

undertaken, together with the available technology, provides a much more accurate delineation of the coastal boundary than that depicted in the PDP planning maps. Both Dr Single and Dr Sanders concurred with Mr Lister, and considered from their respective expertise that the line mapped by the Applicant, and represented in the project as the 'EBZ' was an accurate representation of the coastal environment.

347 Mr Brown provided evidence in regard to his involvement in the PDP process, in particular regard to the coastline from Whenuakura to Waipipi[21]. Throughout his evidence and in our discussions with Mr Brown, it became clear to us that the Boffa Miskell mapping that informed the PDP was undertaken largely as a desktop exercise and at a large scale (as would be expected for a District wide assessment). Mr Brown was of the opinion that the EBZ was an accurate representation of the coastal environment, and was particularly supportive of the multi-disciplinary approach that had been taken to define it.

348 Ms Williams, landscape architect for STDC, was initially critical of the location of the EBZ and considered that parts of the project envelope (where turbines and earthworks might occur) would be inside the coastal environment. However, after hearing the Applicant's verbal statements and questioning and being able to view the further information made available by Mr Lister, Mr Brown and Mr Sanders, she revised her position and stated that the "*EBZ is more rational than the CPA*'. Her ultimate conclusion, through questioning, was that the '*EBZ defines the coastal environment for this Application*".

349 There was no evidence or specific comment on the location of the CPA line, or extent of the coastal environment by any of the submitters.

Evaluation of CPA Line

350 After consideration of the evidence before us, and having undertaken a visit to various parts of the project site armed with a GPS unit (iPad) that accurately demonstrated the location of both the CPA (as defined in the PDP) and the EBZ, we agree that for the purpose of this Application the EBZ accurately defines the coastal environment for the consideration of effects.

351 In coming to this conclusion, we have put weight firstly on the PDP which post-dates the NZCPS and for which a coastal assessment exercise was undertaken in accordance with the NZCPS and the RPS. Secondly, we put weight on the note contained within the PDP that suggests the CPA can be more finely defined on a case by case basis. We consider that a detailed assessment by multiple experts, involving extensive ground-truthing, LIDAR and GPS tools, is to be favoured in

[21] Evidence of Mr Brown, Paragraph 17

respect of this resource consent Application over a District wide, largely desktop review undertaken at a wide scale.

Coastal Natural Character Values

352 The NZCPS[22] and RPS[23] set out matters that may contribute to the natural character of the coastal environment. In summary both documents outline that natural character is a composite of biophysical and experiential aspects and that context is a relevant consideration.

353 Neither the ODP nor the RPS identify areas of ONC however the RPS identifies the Whenuakura River and Waipipi Dunes, which are adjacent to the project site, as high quality or high value areas of the coastal environment.

354 Schedule 8 of the Decisions version of the PDP identifies two areas of ONC in close proximity to the project site:

> *ONC2A: Whenuakura Estuary expresses a relatively unmodified estuary which provides exceptional coastal habitat with significant areas of native vegetation and wildlife.*
>
> *ONC2B: Waipipi Dunes expresses a relatively intact coastal dune system which includes significant areas of native vegetation and wildlife.*

355 Throughout his evidence, and reinforced in questioning, Mr Brown explained that natural character consists of three distinct values – biotic, abiotic and experiential. His summary of each of these values included[24]:

(a) In relation to abiotic values, the Waipipi dunes, cliff-lines and beachfronts either side of that formation, and even the Whenuakura River margins, remain relatively intact and reasonably expressive. Even so, erosion is resulting in very active coastal retreat and this is 'squeezing' the corridor of dunes between both main cliff-lines and the broad band of sand mined pasture within the immediate coastal hinterland.

(b) The areas of biotic value identified by both Dr Sanders and myself are quite scattered and, for the most part, isolated … Indeed, the dominant plant species found across most of the dune terrain is marram grass, which is an exotic species used for coastal stabilisation that outcompetes more local sedges and grasses – like pingao. This is akin to covering a band of coastline in pines, albeit using a species that clearly has a

[22] New Zealand Coastal Policy Statement, particularly Policy 13(2)
[23] Regional Policy Statement for Taranaki 2009, Section 8 Coastal Environment, CNC Policy 1
[24] Evidence of Mr Brown, Paragraph 35

different profile, character and scale.

(c) The experiential nature of this environment shows a rapid tailing off of 'naturalness', wilderness and other related values as one moves away from the CMA. Few parts of the coastal environment are totally, or even substantially, divorced from the farming activity that dominates the coastal hinterland. Consequently, a very real sense of modification, even degradation, permeates most of the coastal environment – with few signs of repair and recovery.

356 Mr Brown concluded with the following ratings[25]:

(a) The Waipipi Dunes and Waipipi Stream Dunes and Main Cliff-lines & Beachfronts – High

(b) The Whenuakura River Margins and Dune Corridor Behind The Cliff-lines and Main Dunes – Moderate

357 Throughout his evidence, Mr Brown referred to the desktop evaluation that informed the PDP, and contrasted his approach to undertaking natural character assessments to that undertaken by Boffa Miskell, before referencing where final agreement had been reached. He concluded[26]:

> *"It is unclear if the process to this point involved any site visits to the Waverley coastline. However, on the 29th of April 2016 I accompanied Mr Girvan (from Boffa Miskell) and others on a day-long site visit to the coastline either side of the Waipipi Dunes and Waipipi Stream, continuing through to the edge of the Whenuakura River. This led to Mr Girvan recommending that the ONC area shown be contracted and split into two smaller ONC areas: wrapped around the Waipipi Dunes and Whenuakura River mouth. This recommendation was accepted by the Hearings Panel and carried through to the Decisions Version of the Plan."*

358 This resulted in the Hearings Panel downgrading the values of the two areas of ONC, outlined earlier in this Decision, adjacent to the project site, from outstanding as originally assessed by Boffa Miskell, to high.

359 Mr Lister largely concurred with Mr Brown's assessment of the natural character values of the coastline. He concluded[27], *"[b]ased on my field observations and review of the expert assessments/evidence on behalf of TWPL, the Waipipi Dune*

[25] Evidence of Mr Brown, Paragraph 36
[26] Evidence of Mr Brown, Paragraph 38
[27] Evidence of Mr Lister, Paragraph 45

area does not have the qualities and characteristics of an ONC area for the following reasons:

(a) *The natural dune field is not intact. It is truncated by the former iron-sand mining area.*

(b) *While the dune vegetation contains indigenous plant assemblages, as explained by the evidence of Dr Sanders, they are within a matrix of rough grazing and weeds – farming operations spill over into the dunes.*

(c) *The natural transition vegetation pattern is absent. Not only is the transition from dune vegetation interrupted by pasture, but the weed species extend the opposite direction into the dunes.*

(d) *The dunes are immediately adjacent to working farmland and are currently grazed by stock. There is no sense of being in a wilderness location."*

360 Dr Sanders didn't specifically discuss natural character values, but it is clear that his evidence has influenced the opinions of both Mr Brown and Mr Lister. Dr Sanders concluded[28]:

> *"In my opinion, most of the vegetation within the ONCs is strongly affected by non-natural processes, namely grazing and weed invasion. My evaluation is consistent with the 1992 Sand dune and beach vegetation inventory of New Zealand which scored dune habitats, vegetation and degree of modification throughout New Zealand. The inventory assigned low scores to the Waipipi Dunes (3 out of 20) and Whenuakura Estuary (6 out of 20)…"*

361 Appendix 1 to Ms Williams' S42A Report provided a similar analysis to the PDP as that given by Mr Brown. She concluded in that report that she supported the June 2016 mapping exercise, but placed importance on the experiential attributes of natural character. She summarised[29]:

> *"Having been into the Waipipi dunes, it is my opinion that given the size of the ONCs, it is quite possible to be within the area and not be aware of the inland farmed areas. At the interface of the duneland and farmland, the difference between the character of the two landscapes is pronounced and the sense of 'otherness' enhanced, although I note Rhys Girvan's caveat that this is dependent on the nature and scale of the neighbouring development."*

[28] Evidence of Dr Sanders, Paragraph 81
[29] s42A report of Ms Williams, Appendix 1 page 17

362 Many of the submitters also talked about their experience along the coastline, including a sense of remoteness and uniqueness.

Evaluation of Coastal Natural Character Values

363 We found Mr Brown's detailed assessment of the values of the natural character of the coastline to be very helpful, particularly in reviewing the differences between his work and that of Boffa Miskell in informing the PDP. However, we are also guided by the thorough process through which the natural character areas of the coastline have been defined, redefined and reshaped within the PDP (partially, it seems, as a result of the input of Mr Brown and Dr Sanders), and the values that have been attributed to these areas as part of this process. We therefore give significant weight to the natural character values and ratings identified in the PDP, recognising both the two ONC areas and the generally high natural character values in other areas along the coastline adjacent to the project site. We recognise that some of the PDP policies in regard to natural character remain under appeal.

364 Further, we also support Ms Williams' view that despite the farming and historical mining processes inland, there remains experiential values both within the ONC areas and along parts of the beach. As we experienced ourselves on our site visit, the beach itself retains a wild nature, emphasised by driftwood, the sound and smell of the ocean, and the presence of the dunes. The difficulty of access further reinforces its sense of remoteness.

365 In this context, we agree with and accept the PDP Hearings Panel summary[30], "[w]*e consider that this area does have 'outstanding' natural character for the reasons highlighted in evidence and consider that the natural character of this area remains exceptional in the context of South Taranaki. In particular, with reference to matters listed in Policy 13 of the NZCPS, we consider that this area exhibits:*

(a) *Predominantly intact natural elements, processes and patterns in the form of unmodified cliffs, mudflats, lagoons, swamp areas and dunes*

(b) *No or negligible apparent development or other human modification*

(c) *Predominantly indigenous vegetation and fauna, including the presence of substantial areas of native dune, swamp and wetland vegetation, including rare and threatened species*

(d) *A strong sense of a remote, wild and scenic coastline"*

[30] Proposed South Taranaki District Plan, Decision Report of Hearing Panel – Coastal Environment, 3rd October 2016, paragraph 48

366 However, we note that the area in question is located outside of the project envelope, either contained within the EBZ which we have determined defines the coastal environment, or beyond the project site.

ACTUAL AND POTENTIAL EFFECTS ON THE ENVIRONMENT

367 Our assessment of actual and potential effects on the environment focuses on the key matters in contention. In general, we adopt the assessment of effects of the S42A Reports.

368 Our following assessment focuses on the key matters in contention during the hearing. In undertaking our assessment of effects we have not aligned each effect with the differing resource consent applications. To do so would unnecessarily lengthen this decision.

KEY ISSUES IN TERMS OF EFFECTS

369 The most contentious issues presented in respect of the WWF are highlighted by the S42A Reports and are discussed at length below. These key issues are:

(a) Effects on coastal natural character values;

(b) Terrestrial natural character values and effects;

(c) Landscape effects including effects on ONFs;

(d) Visual effects;

(e) Noise effects, including operation, construction noise and vibration;

(f) Traffic effects;

(g) Effects of the transmission line;

(h) Effects on avifauna;

(i) Ecological effects;

(j) Heritage and archaeology effects;

(k) Aviation effects;

(l) Construction effects;

(m) Tourism and recreation effects;

(n) Radio and communication effects;

(o) Electro-magnetic effects on human health; and

(p) Positive effects and economics.

EFFECTS ON COASTAL NATURAL CHARACTER VALUES

370 Mr Brown considered that there would be no effects on the abiotic or biotic values of the natural character of the coastline, as no physical works were being proposed within the EBZ. This view was supported by Mr Lister, Dr Sanders, Dr Single and Mr Tate.

371 All of these witnesses also confirmed, through questioning, that even if the coastal environment was determined to be the CPA line as defined in the PDP, rather than the EBZ as we have accepted, the abiotic and biotic values in the project envelope are so low that any effects as a result of the WWF Proposal would be negligible.

372 Dr Fuller confirmed that the areas of the coastline would provide habitat for bird species, and that the presence of birds contributed to natural character. However, he considered that no physical works would disturb habitat within the EBZ beyond that of game birds, and as a result birds would remain present in the coastal environment.

373 Ms Williams confirmed in her S42A report[31], "[e]*ffects on the biophysical components of natural character, that is both biotic and abiotic attributes, will be largely avoided by the location of the project site on a former sand mining area."*

374 In terms of experiential elements, Ms Williams had significantly different views to that of the Applicant's witnesses. Throughout her S42A Report and questioning, Ms Williams asserted that the wind turbines will change the way people experience the coast. She considered that the beach had a sense of remoteness and wilderness that was removed from the modified farming environment, and that the turbines would become a "*prominent backdrop to the coastal environment*".

375 By contrast, both Mr Lister and Mr Brown considered that people experiencing the coast would be very aware of the modified farming environment directly

[31] s42A report of Ms Williams, Paragraph 30

inland. Their respective views are that the turbines will reflect that environment, albeit on a much larger scale, and that this will limit potential experiential effects. Mr Lister agreed that the turbines would influence perceptions of natural character, but considered that they "*will be seen as a part of what is currently working farmland inland of the dunes*"[32], and Mr Brown surmised[33]:

> *"As a result, I accept that the WWF would reduce the inherent naturalness of this environment. However, most of the 48 wind turbines proposed would also sit within part of the coastal landscape that already conveys the strong sense of being a working, functional environment – a place of rural production flanked by more natural coastal margins."*

376 Mr Brown went on to provide a detailed 'statutory assessment', noting that experiential attributes of natural character also include the '*sounds and smell of the sea and their context or setting*'[34]. In this regard, we consider the evidence of Mr Hegley to be relevant, specifically his assessment of noise effects on the beach[35]:

> *"For the worst scenario (highest noise levels) the nearest WTGs will be approximately 230m from the beach (accounting for the EBZ and the setback requirements in the consent conditions). As shown on Figure 9, the noise from the WTG when they are located at the closest point on the beach will result in a level up to 50dB LA90 (10 min) for anyone who may be on the beach."*

377 We note that both the ODP and PDP allow for this level of noise in the rural zone between 7am and 10pm (and 45dBA $_{(LA\ eq\ 15)}$ from 10pm to 7am).

378 We heard evidence from submitters who discussed their experience of the coastline and the value it gave them as local people. Many of the submitters indicated that they did not want to see or hear turbines within the coastal environment, considering that they would be better placed inland. Ms Sisson noted that her '*view along the coast is spectacular'* and she considered that the turbines would diminish her experience of it. Mr Mitchell discussed his enjoyment of the Whenuakura Estuary for fishing and whitebaiting, and how he considered the presence of turbines would diminish that experience.

[32] Evidence of Mr Lister, Paragraph 87
[33] Evidence of Mr Brown, Paragraph 72
[34] Evidence of Mr Brown, Paragraph 82
[35] Evidence of Mr Hegley, Paragraph 86

Evaluation of Effects on Coastal Natural Character Values

379 We agree with the witnesses for the Applicant that the WWF Proposal will have no or negligible effects on the abiotic and biotic values of coastal natural character. As we have already explored, the EBZ effectively defines the coastal environment, and no works are proposed within this area.

380 Even if it were determined that the coastal environment aligned with the CPA as defined by the PDP, we consider that the area between the PDP CPA line and the EBZ is so extensively modified by historical mining activity that there would be limited effects, if any, on abiotic and biotic values.

381 Turning to effects on experiential values, we favour the position of Ms Williams and consider that the wind turbines will affect the wild and remote nature of the coast. We consider that despite the setback provided by the EBZ, the scale of the turbines means they will remain visually prominent. Even when looking away from the project site, it is likely that they will be heard, particularly from the upper parts of the beach furthest from the sea. We conclude that the WWF Proposal will have an effect on the experiential values of the coast.

382 However, we recognise that there are a very limited number of people that access this part of the coastline, and based on the evidence of submitters that a favoured location was the Whenuakura Estuary which is located in a depression to the north of the WWF Proposal. Our review of the maps and evidence put before us is that there are likely to be reduced views of the wind turbines from large parts of the estuary, and that noise effects are also likely to be limited (it is beyond the 45dBA contour predicted by Mr Hegley) and largely within PDP limits.

383 We therefore come to the overall conclusion that effects on coastal natural character will be acceptable within the ONC areas, the coastal environment defined by the EBZ, and the coastal environment as defined by the PDP CPA line. This is largely driven by the avoidance of development works in the EBZ, and as a result the protection of the abiotic and biotic values defined by the PDP. We consider that there will be experiential effects for those who choose, and are able, to access the coastline, but these will be diminished in the Whenuakura Estuary which is more commonly accessed.

384 In this regard, we consider that the WWF Proposal is consistent with the requirements of the NZCPS in regard to Policy 13(1).

TERRESTRIAL NATURAL CHARACTER VALUES AND EFFECTS

385 Section 6(a) of the RMA requires the consideration of coastal natural character as a matter of national importance, but also wetlands, and lakes and rivers and their margins.

386 Dr Sanders provided an overview of the ponds and streams on the site. He indicated that *"the ponds were formed at the site during, or after, the iron sand mining, or in some cases by damming small drains"*.[36] For the avoidance of doubt, he was clear that the ponds were not natural.

387 Dr Sanders then provided a description of Waipipi Stream as the largest watercourse on the project site. His opinion was that the Waipipi Stream is significantly degraded due to ongoing grazing and because existing culverts currently present barriers to fish trying to migrate upstream. Nevertheless, Dr Sanders considered that the ecological values of the stream were worth restoring, largely as mitigation for the loss of the existing farm ponds[37] (as required by Mr Fuller to avoid potential effects on avifauna[38]). As a result, the whole of the Waipipi Stream has been excluded from the project envelope and now sits within the EBZ (and will be fenced). The only works to be undertaken within the stream margins will be the installation of culverts (in accordance with the TRC consents), and enhancement planting. Dr Sanders therefore concluded[39]:

> *"The WWF will have substantial positive effects on indigenous vegetation as a result of fencing and planting along the entire length of the Waipipi Stream and its major tributary drains within the WWF site…"*

388 Neither Mr Brown nor Mr Lister provided any extensive comment on the Waipipi Stream, but through questioning both confirmed that its inclusion within the EBZ and fencing it off from grazing could only be positive in terms of natural character values. Ms Williams provided no specific comment on the matter.

Evaluation of Terrestrial Natural Character Values and Effects

389 We concur with Dr Sanders that the fencing and avoidance of works within the Waipipi Stream, together with the proposed enhancement planting, will result in positive outcomes in regard to terrestrial natural character values.

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[36] Evidence of Dr Sanders, Paragraph 23
[37] Summary Statement of Dr Sanders, Paragraph 19
[38] Evidence of Dr Fuller, Paragraph 155
[39] Evidence of Dr Sanders, Paragraph 97

LANDSCAPE EFFECTS

390 Both the ODP and PDP include objectives and policies in regard to effects on ONFs and ONLs, in response to s6(b) of the RMA. The PDP also includes the following objective:

> *2.16.4 To recognise the qualities and values of other important natural features and landscapes and have regard to their values when undertaking new subdivision, use and development.*

391 The PDP outlines that "*through the resource consent process, the intensity, scale, location and design of a proposed activity or development will be assessed to determine the potential effects on the qualities and characteristics that contribute to the values of the identified area"*.[40]

Effects on Outstanding Natural Features and Landscapes

392 Schedule 8 of the PDP identifies nine ONFs and/or ONLs within the South Taranaki District, with Waverley Beach being the closest to the project site (approximately 5km).

393 Mr Lister provided an analysis of the potential effects of the WWF Proposal on the Waverley Beach ONF in both his landscape and visual assessment report and evidence. He concluded[41]:

> *"The WWF will have no adverse effects on the landscape values of this (or any other) ONF/ONL, and will therefore be consistent with Policy 15(a) of the NZCPS. From many places on the beach below the cliffs the wind farm will not in fact be visible at all (eg from the Cave Bay area). In those places from where the wind farm will be visible, such as the car park area above the cliffs, it will be reasonably distant (>5km), and will appear quite separate and remote from Waverley Beach."*

394 Ms Williams agreed with this statement, concluding "*there are no potential ONF or ONL areas on or in close proximity to the project site*".[42]

395 No submitters provided any evidence in regard to ONFs or ONLs.

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[40] South Taranaki Proposed District Plan – Decisions Version October 2016, Section 2.15 – Explanation of Policies (Page 73)
[41] Evidence of Mr Lister, Paragraph 101
[42] s42A report of Ms Williams, Paragraph 30

396 We concur with Ms Lister and Ms Williams that the Waverley Beach ONF is distant enough from the project site not to be adversely affected by the WWF Proposal. We confirmed on our site visit that there would be visibility of the turbines from the car park adjacent to the ONF and from locations close to the water on the beach, however we agree that WWF will appear separated and somewhat remote, and that the qualities of the ONF will not be affected.

Other Landscape Effects

397 Mr Lister provided an assessment of the existing landscape into which the wind farm is proposed, and considered that "*it is hard to imagine a more favourable site for a wind farm with respect to avoiding or minimising effects on the landscape*". [43] His opinion was based on the following considerations[44]:

(a) The site is flat and therefore earthworks requirements are relatively limited;

(b) The natural features within the site (the remaining coastal dunes and Waipipi Stream) are contained within the EBZ and entirely excluded from the project envelope;

(c) It is a 'working' landscape characterised by productive rural activities;

(d) The site is modified by former sand mining;

(e) There is a relatively low density of nearby dwellings;

(f) The effects are reversible; and

(g) The wind turbines are a representation of natural processes, helping their 'fit' into a coastal landscape.

398 Mr Lister pointed out that perceptions of wind farms vary, and that "*there is a wide spectrum of attitudes towards wind farms than some other forms of infrastructure*".[45] We heard from many submitters who both liked and disliked wind turbines, depending on the setting of the wind farm and the proximity to their home or landscape in which they live and/or work.

399 Mr Lister also provided observations on the scale of wind turbines, noting that it is difficult to gauge wind turbine height. In questioning, he considered that few

[43] Evidence of Mr Lister, Paragraph 67
[44] Evidence of Mr Lister, Paragraphs 67, 72 and 73, and Landscape and Visual Assessment, Proposed Waverley Wind Farm, Prepared by Isthmus, 11 March 2016, Paragraph 93.
[45] Evidence of Mr Lister, Paragraph 69

people would be able to distinguish between one of the proposed turbines at up to 160m in height and others throughout New Zealand at 120-140m in height. In his view, the wind turbines would appear "i*n scale with the landscape as a whole"*, visually anchored by the horizontal scale of the landscape.[46]

400 Ms Williams concurred with the findings of Mr Lister in regard to potential landscape effects. She referenced the modified site and working landscape characterised by productive rural activities. She also noted that, post construction, existing farming activities will continue on the project site.

401 Local resident submitters opposing the wind farm cited the perceptual qualities of the landscape and what it meant to them. Ms Sisson considered that the turbines would not "*blend into a flat landscape"*, and Mr Mitchell valued the rural farming activity within the landscape, considering that this landscape didn't need to become all about energy generation.

Evaluation of Other Landscape Effects

402 We agree with the evidence put forward by both Mr Lister and Ms Williams that the landscape provides an appropriate setting for the WWF Proposal. Notwithstanding potential experiential effects on natural character values (as we addressed earlier), we consider that the overall landscape effects are acceptable given its modified nature.

403 We make this determination in the knowledge that for some people, particularly the submitters who provided evidence, the WWF Proposal will (for them) adversely alter the character of the landscape in which they live and/or work. However, we recognise that this would be the case no matter where the wind farm would be located.

VISUAL EFFECTS

404 Section 7(c) of the RMA requires the particular regard to the maintenance and enhancement of amenity values.

405 In regard to Rural Amenity and Character, Section 2.1.9 of the PDP states:

> *Ensure that new land use activities are of a nature, scale, intensity and location consistent with maintaining the character and amenity of the rural environment, and avoids or mitigates potential reverse sensitivity effects.*

[46] Landscape and Visual Assessment, Proposed Waverley Wind Farm. Prepared by Isthmus, 11 March 2016, Paragraph 97

406 Section 2.03.01 of the ODP sets the objective of protection and enhancement of the '*rural character and amenity values'* of the rural zone.

'Worst Case Scenario' Assessment

407 At paragraph 77 of his evidence, Mr Lister discussed the Applicant's approach to seek resource consent for a project envelope, rather than fixed turbine locations, which potentially provides a degree of uncertainty in regard visual effects. He outlined that his approach to assessment was to consider 'worst case scenarios' where the wind turbines are tightly clustered together at the eastern, western and northern ends of the project. However, he considered that these were 'fanciful', as the WWF would most likely be laid out relatively evenly across the project envelope in order to make best of the wind resource. This was also confirmed by Mr Delmarter during questioning.

408 The purpose of the clustering exercise was because Mr Lister recognised that turbine 'stacking' – where turbines are located one behind the other, and there is a degree of blade crossover – is a potentially adverse visual effect. Mr Lister also alluded to the visual effects created by a greater density of turbines. In assessing various clustered layouts, as well as considering the most likely arrangement that would be constructed, Mr Lister considered that he was confidently able to provide a conservative visual effects assessment.

409 Mr Lister also confirmed that whilst he considered that peoples' perception of wind turbines varied considerably, he had undertaken his assessment on the basis that all visual effects are adverse.

410 Ms Williams commented during questioning that she agreed with the approach taken by Mr Lister, and that the clustered arrangements did give rise to more significant visual effects from certain locations.

Evaluation of 'Worst Case Scenario' Assessment

411 Having reviewed the various photo-simulations provided, and based on our questioning of Mr Lister, we are confident that the visual assessment he has provided is based on the worst case scenario.

Use of Photo-simulations

412 Mr Lister attached to his landscape and visual assessment a series of photo-simulations that depicted the wind turbines in each of the various scenarios outlined above. In paragraph 101 of his assessment he described how to use the simulations in order to achieve a correct scale.

413 Ms Sissons raised concerns about the accuracy of photo-simulations, and the reliance on their use. She had concerns about photographs not showing a realistic depth of field, and that they didn't represent the reality of standing in an environment.

414 Ms Williams outlines similar caveats to the use of visual simulations in paragraph 17 of her S42A Report.

Evaluation of the Use of Photo-simulations

415 We accept that photo-simulations have a variety of limitations, including the depiction of depth of field. Nevertheless, we found the simulations useful to understand the location of the proposed wind farm in relation to other features within the landscape, to help us understand the scale of the turbines, and to consider the effect of stacking as identified by Mr Lister. We confirm that we have used the simulations with caution, and have relied more heavily on the written and verbal evidence that has been provided by the relevant witnesses.

Visual Amenity Effects from Public Viewpoints

416 Annexure Three of Mr Lister's evidence provided a detailed assessment of the likely visual effects from public locations, using the photo-simulation locations as representative viewpoints. He provided a summary of his assessment in paragraph 76 of his evidence, where he included the following observations:

(a) Most public views are from several kilometres away;

(b) The roughly similar elevation between public viewpoints and the project envelope reduces potential dominance, and increases the screening potential of vegetation in the landscape;

(c) Even where such vegetation does not completely screen the wind farm, it can contribute to perspective depth and a sense of separation between the viewer and the WWF;

(d) The most sensitive public viewpoints are likely to be coastal… there will be only a 'moderate' degree of effect because the WWF will be reasonably distant from these locations; and

(e) The wind turbines will be most prominent as a backdrop to the coast immediately opposite the project envelope and from the Whenuakura Estuary. Nevertheless, the wind turbines will be set back from the coast, and the base of the wind turbines will be inland of the dunes which will help to create perspective depth and therefore increase the sense of separation.

417 Mr Lister did not provide individual ratings on the significance of effects, but concluded that he considered the project site "*being an appropriate location for a wind farm"*, and that the potential visual effects (together with natural character and landscape) "*will be largely avoided and otherwise remedied and mitigated.*" In coming to this conclusion, Mr Lister also referenced the potential reversibility of the WWF Proposal (the ability to remove wind turbines in the future), and the positive effects of locating a wind farm within the wind resource.

418 Ms Williams did not provide any opinion in regard to visual effects from public locations in her S42A Report, but during questioning she confirmed she was comfortable with the assessment Mr Lister had provided.

419 None of the submitters directly responded to the potential for visual effects from public locations, although many talked about the undesirability of seeing turbines from the estuary and the beach (as we have covered above).

Evaluation of Visual Effects from Public Locations

420 During our site visit we visited a many of the viewpoint locations where photo-simulations were provided, including VP01 from Waverley Cemetery; VP03 from Waipipi Beach Subdivision; VP04 from Stewart Road; VP05, VP06 and VP07 from State Highway 3; and VP10 from Patea Beach lookout. Together with our traverse around many of the roads to reach these locations, we considered that we developed a good understanding of the landscape in which the WWF is proposed, the likely visibility of the WWF Proposal, and the types of effects and mitigation discussed by Mr Lister.

421 We agree with Mr Lister's assessment of the WWF Proposal in regard to visual effects from public locations. Broadly, we find that from the more significant roads in the vicinity of the WWF, namely State Highway 3, overall the potential visual effects will be less than minor. For roads closer to the WWF Proposal, including local arterial routes such as Waverley Beach Road (particularly travelling towards the coast), visual effects will be higher. However, we note that in most instances views of the WWF Proposal will be intermittent as a traveller weaves around topography, and where intervening landforms and vegetation screen or partially screen views. We found few opportunities to safely stop for the purposes of looking at a wider view of the landscape.

422 For some minor local roads in close proximity to the project site, including Stewart Road and Peat Road, visual effects may be significant from some locations. We recognise that the people most likely to be using these roads will be locals, who may also experience visual effects from their own properties. These roads may also be used for stock droving, resulting in slower speed of

movement and therefore greater opportunities to experience the visual effects of the wind turbines.

423 We agree with Mr Lister's findings that the WWF will be somewhat distant from the Patea Beach lookout. Although the wind turbines will clearly be visible, and perhaps more prominent than suggested by the photo-simulation (VP10), we also noted other elements in the surrounding landscape that attracted our attention, including the old wave barriers, wharf structures and the railway line. We consider that the visual effects from this location will be acceptable.

424 As we explored in the natural character section above, we consider that the turbines will become prominent visual elements when viewed from the beach adjacent to the project site. However, we respect Mr Lister's opinion that, whilst "*visual effects are not a function of numbers of viewers*"[47], there are few people that access this part of the beach. Access to this part of the beach is difficult, and requires a walk of several kilometres.

425 We understand that some submitters access the Whenuakura Estuary for fishing and white-baiting. Although the river is located in a depression in the surrounding landform, we accept that there will be views of some wind turbines from this location, and that they may be visually prominent. However we accept Mr Lister's argument that, in this location, the setback of the turbines (which is further from the estuary than from other parts of the beach) will result in a reduced level of visual effects.

426 Overall, we conclude that whilst there will be locations in close proximity to the WWF Proposal where visual effects will be significant, we recognise this is the nature of a wind farm. It is not an activity that can be easily screened, and inevitably there will be public locations where the turbines become the most prominent element in the view. In this case, we consider that there are relatively few locations where this will in fact be the case, and many (if not all) of these locations are frequented by only a few people. On this basis, we determine that the potential visual effects of the WWF Proposal, when experienced from public locations, are acceptable.

Provision of Mitigation Planting

427 The Applicant has proposed to provide 16 properties with landscape mitigation in the form of planting on private properties, in order to assist with the mitigation of visual effects. Principally this is covered by conditions 99-107 which were offered by the Applicant on an Augier basis. Mr Lister and the Counsel for the

[47] Evidence of Mr Lister, Paragraph 76.4

Applicant pointed to several other wind farm applications in New Zealand where a similar mitigation approach had been provided.

428 Mr Lister, and other witnesses for the Applicant, discussed the proposed offer, emphasising that it was up to individuals to determine whether they wished to take it up. Understanding that there may be people not wishing to undertake planting on their own properties to mitigate the effects of the WWF Proposal, Mr Lister confirmed that for the purposes of his assessment, in accordance with his worst case scenario approach, he had assumed that no mitigation planting would be provided.

429 Many of the submitters we heard from indicated that they did not have an interest in taking up the offer. They discussed their enjoyment of the existing view from their properties, and the sense of open space.

430 Ms Williams shared similar concerns as the submitters in regard to the use of mitigation planting, stating during questioning that it can be "*more problematic than the cause of effects*". However, she accepted that Mr Lister had undertaken his assessment on the basis that no mitigation was in place, and she considered Mr Lister's assessment was a conservative one.

Evaluation of Provision of Mitigation Planting

431 We respect the opinions of submitters in terms of their reluctance to 'self-mitigate' potential visual effects on them, and we recognise it is important for us to consider this in our overall evaluation of the WWF Proposal. On this basis we confirm we have taken the same approach as Mr Lister in that our findings are on the basis that no mitigation planting was being offered.

432 However, we also welcome the offer by the Applicant to provide the mitigation option, and their willingness to extend the number of properties it will apply to following discussions had during the course of the hearing. We think that once the resource consent process has been completed, some submitters may change their mind and seek to take up the offer. We have therefore retained the Augier condition.

Visual Amenity Effects on Private Properties

433 Mr Lister provided a detailed and extensive assessment of potential visual effects on every dwelling within 5km of the project envelope. He outlined that his findings were "*based on a road-side assessment together with a desk-top analysis*"[48]. He considered his approach to be best practice, and acknowledged that visual effects will be experienced from other parts of people's properties

[48] Evidence of Mr Lister, Paragraph 80

than just their dwellings. He used a seven point rating scale from 'very low' to 'very high'. Mr Lister explained during questioning that visiting every location in every property was not practicable to achieve, and would not necessary provide any more accuracy to his findings.

434 Overall, Mr Lister concluded that one dwelling will experience very high visual effects, and 13 will experience high visual effects[49]. During questioning, Mr Lister discussed his assessment approach in more detail, and reinforced his conservative approach using a worst case scenario methodology. He was open about the fact that some dwellings would experience high or very high visual effects, and that the submissions from the occupants of these dwellings indicated that such effects would be adverse to them.

435 Ms Williams was initially critical of Mr Lister's assessment approach, considering[50]:

> *"The visual effects of the wind farm for residents cannot be fully assessed without further detail on the impact of the windfarm on residential amenity based on observations within the property and the resident's identified valued views."*

436 However, after hearing the questioning of Mr Lister and hearing the submitters concerns, she accepted the approach Mr Lister had taken, and the ratings he provided for each dwelling.

437 All of the submitters in close proximity to the WWF raised potential visual effects as a key concern. They all considered that the presence of wind turbines in the view would be an adverse visual effect.

438 Ms Sissons talked about the view from her house, and from her property. She indicated that whilst she wasn't opposed to concept of wind energy, nor the look of wind turbines, she considered that the flat nature of the site would create increased visual effects in close proximity to where she lived.

439 Mr Dickie owns a large farm, directly adjacent to the eastern and north-eastern boundary of the project site. He identified several properties on his farm that Mr Lister identified as having potentially high or very high visual effects. Mr Dickie also was the owner of the Waipipi Beach subdivision, approximately 3km to the east of the project site, and has an office on State Highway 3 near Waverley where he employs several people. Mr Dickie considered that the turbines are 'visually not attractive', and that the view of the WWF would change the way he, and other local people, experience the landscape in which he lives and works.

[49] Evidence of Mr Lister, Paragraph 81
[50] s42A report of Ms Williams, Paragraph 68

440 Mr Mitchell owns a farm to the west of the project site. He talked about his enjoyment of living and working in a rural, coastal environment. He told us that he can see the existing wind monitoring masts from his kitchen window, and therefore he was likely to see turbines from inside his property.

441 Mr Alexander owns a farm to the north of the project site. He explained that he had lived in this part of the country all of his life, and that his farm once used to extend as far as the coast – across the project site where the WWF is now proposed. He talked about his enjoyment of views across the countryside, and considered that the turbines would be a visual intrusion.

Evaluation of Visual Amenity Effects on Private Properties

442 We understand the concerns of submitters in regards to the potential changes to views from private properties the WWF will create. All of the submitters talked about the strong emotional connections they have to the place in which they live and work, the energy they have spent in developing their properties so that they can best enjoy it, and their concerns regarding the sight of turbines in a place they cherish. We have not underestimated the significance of these concerns.

443 Whilst our site visit did not involve visits to individual properties, we were able to obtain a good appreciation of the proximity and orientation of dwellings relative to the WWF Proposal during our helicopter flight around the vicinity of the site. We took care to ensure that we flew around and over those properties in close proximity to the site, and particularly those identified by Mr Lister as likely to experience high or very high visual effects.

444 We found the assessment provided by Mr Lister to be very helpful. However, for the purposes of our overall evaluation, we considered it necessary to convert the ratings scale used by Mr Lister into one more broadly used across our decision. On this basis, we have made the following conversions:

(a) There is no 'Nil' rating;

(b) Very-Low translates to 'Deminimus' or 'Less than Minor';

(c) Low translates to 'Minor';

(d) Low-Moderate, Moderate and Moderate-High translate to 'More than Minor'; and

(e) High and Very High translate to 'Significant'.

445 On this basis, we find that there are 15 properties that will experience significant adverse visual effects, these being (relating to Mr Lister's property listing):

Mr Lister's ID Number	Address	Council Property Number	Legal Description
53	64 Rāngikura Road, Waverley	100480	Section 473 Okotuku District
54	77 Rāngikura Road, Waverley	13385	Part Lot 1 DP 8422
55	120 Rāngikura Road, Waverley	1004080	Section 474 Okotuku District
56	169 Rāngikura Road, Waverley	13386	Lot 4 DP 8422
57	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 2 DP 3378
58 (1)	28 The Lookout, Waipipi Beach, Waverley	1002343	Lot 28 DP 401250
58 (2)	46 The Lookout, Waipipi Beach, Waverley	1002361	Lot 46 DP 401250
92	264 Rākaupiko Road, Whenuakura	11496	Lot 1 DP 2986
93	285A Rākaupiko Road, Whenuakura	11495	Lot 2 DP 2532
96	371 Rākaupiko Road, Whenuakura	1003270	Lot 1 DP 450630
97	391 Rākaupiko Road, Whenuakura	15925	Lot 1 DP 89217
98	395 A and 395B Rākaupiko Road, Whenuakura	1003868	Lot 2 DP 4749
109	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 2 DP 33878
110	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 1 DP 401177
155	147 Stewart Road, Waverley	1003937	Lot 2 DP 19485

446 We note that property 61 – 330 Peat Road have given their written approval to the Application, and therefore we do not count these in the list of properties affected.

447 In addition to the 15 significantly affected properties, we find that there are at least 40 dwellings that will experience more than minor adverse visual effects, understanding that some of these properties (such as those within the Waipipi Beach subdivision) may include more than one dwelling.

Shadow Flicker Effects

448 The Applicant provided, as part of the AEE, a Shadow Flicker Assessment authored by Garrad Hassen Pacific Pty Ltd ('DNV GL'). DNV GL are a Norwegian firm with an office in Victoria, Australia, and provide expert advisory services to

the maritime, oil & gas and energy industries[51]. Neither us nor STDC had reason to contest the expertise of the authors, or the content of the Shadow Flicker report, and therefore we did not seek the attendance of the report author at the Hearing.

449 The report concluded[52]:

> *"The analysis shows that six of the houses identified by Trustpower have the potential to be affected by shadow flicker, however none of this subset of houses are predicted to experience more than the recommended limit of 30 theoretical or 10 probable shadow flicker hours. Furthermore … all of the houses are located a significant distance (approximately 1400m or more) from the turbines that are causing the flicker. These distances will further reduce the effects of shadow flicker due to the reduction in shadow intensity with distance. Thus DNV GL concludes that the impact of shadow flicker on the houses considered in this report from the Waverley wind farm will be minor."*

450 We discussed with the Applicant's Counsel the lack of any standard for shadow flicker hours in New Zealand. We understand that it is common practice in the wind farm industry in New Zealand to adopt the Australian standard, this including the recommended limit of hours which the DNV GL report refers to.

Evaluation of Shadow Flicker Effects

451 We accept the findings of the Shadow Flicker assessment provided by the Applicant, and consider that in the absence of any New Zealand standard that it is appropriate to refer to the Australian recommendations.

452 On this basis, we find that there will be six properties potentially affected by shadow flicker, these being:

Mr Lister's ID Number	Address	Council Property Number	Legal Description	Theoretical Hours per Year	Probable Hours per Year
57	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 2 DP 3378	25.4	7.9
98	395 A and 395B Rākaupiko	1003868	Lot 2 DP 4749	0.8	0.2

[51] www.dnvgl.com/about/index.html
[52] Shadow Flicker Assessment for the Proposed Waverley Wind Farm, prepared by DNV GL 22nd February 2016, Section 5 page 11.

	Road, Whenuakura				
109	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 2 DP 33878	24.3	7.5
110	Unnumbered dwelling, Waipipi Road, Waverley	1003937	Lot 1 DP 401177	20.5	6.3
155	147 Stewart Road, Waverley	1003937	Lot 2 DP 19485	5.0	1.2

453 All of these properties are below the quoted Australian recommendations for maximum exposure levels per year. We therefore find that the effects of shadow flicker from the WWF will be less than minor.

Landscape and Visual Effects Resulting from Construction

454 Mr Lister provided a brief outline of the potential temporary landscape and visual effects during construction of the WWF[53]. He considered *"the construction yard, concrete batching plant, earthworks, and operation of cranes"*. He concluded that due to the generally low visibility of the ground of the project envelope (due to the relatively flat site, and intervening landforms and vegetation), visibility of construction will also be limited.

455 In her report, Ms Williams considered that construction effects would be low (in regard to landscape and visual effects), with exception of the concrete batching plant[54]. However, after hearing discussion with Mr Lister, and others, about the location of the batching plant, she determined that the effect on landscape and visual amenity from construction would be low.

Evaluation of Landscape and Visual Effects Resulting from Construction

456 We recognise that there will be visibility of the activity of construction, not just brought about by activity on the project site, but also as a result of increased movement of vehicles along local roads (including vehicles not normally seen in this area – such as long vehicles carrying turbine blades). The cranes used for the construction of turbines will also be an activity that captures viewer attention.

457 Nevertheless, we find that in the context of a productive rural landscape and the relatively limited time period for construction (approximately 24 months) the

[53] Evidence of Mr Lister, Paragraphs 102-104
[54] s42A report of Ms Williams, Paragraph 73

construction of the WWF will result in less than minor landscape and visual effects.

NOISE EFFECTS

458 Mr Hegley, for the Applicant, provided a detailed assessment of noise effects as part of the AEE, and presented further evidence during the hearing. He also provided additional information to some questions we raised during the hearing, and which we formalised into a minute after adjournment.

459 Pages 3 to 5 of Mr Hegley's report[55] helpfully set out various technical descriptions in regard to his assessment. Of particular relevance to us was the concept of the 'notional boundary', defined by a line located 20m from the façade of any rural dwelling, or the legal (site) boundary if this is closer to the dwelling.

460 Mr Lloyd, for STDC, provided a peer review of Mr Hegley's report and attended the hearing on 24th and 25th May 2017.

461 Various references to the ODP and PDP noise limits are included in both Mr Hegley and Mr Lloyd's reports. Section 10.02.1 of the ODP is the most relevant section for the consideration of acceptable limits in terms of the WWF activity, as follows:

> *(i) Noise generated by any activity (except those that are exempt under 10.01.4) in the Rural Zone shall not exceed the following limits when measured at the boundary of any other Rural Zoned site:*
>
> *7am to 10pm – 55dBA L_{10}*
>
> *10pm to 7am – 45dBA L_{10}*
>
> *10pm to 7am – 75dBA L_{MAX}*

462 Mr Hegley pointed out that the PDP adopts similar noise levels, although the L_{Aeq} value (a continuous steady noise level) is used rather than the L_{10} level (the sound level that is equalled or exceeded for 10% of the measurement time – or the average maximum sound level)[56]. As we understand, there is no appeal against the PDP noise limits, however there is an appeal in respect to where noise is measured from.

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[55] Waverley Wind Farm Assessment of Noise Effects, Hegley Acoustic Consultants, February 2016.

[56] Waverley Wind Farm Assessment of Noise Effects, Hegley Acoustic Consultants, February 2016, Section 2, page 14

463 Mr Hegley and Mr Lloyd both referred to NZS6808:2010, a standard that "*provides suitable methods for the prediction, measurement, and assessment of sound from wind turbines".* We understand that this was developed according to typical, strict New Zealand Standards methodologies, and is widely used for the assessment of wind farm noise effects. Mr Hegley stated that NZS6808:2010 recommends the following noise limits for wind farms[57]:

> *As a guide to the limits of acceptability at a noise sensitive location, at any wind speed wind farm sound levels ($L_{A90\ (10min)}$) should not exceed the background sound level by more than 5dB, or a level of 40dB $L_{A90\ (10min)}$, whichever is the greater.*

464 We understand that, in this case, a noise sensitive location would be a dwelling, although Mr Lloyd also suggested it might include a future dwelling[58], which we turn to in more detail below.

Notional or Site Boundary

465 Both Mr Hegley and Mr Lloyd agreed that, for the most part, it was acceptable to adopt the notional boundary as the location for measurement of noise of the WWF. They stated that while this does not comply with the PDP standards for noise, it is consistent with NZS6808 which is a more appropriate assessment approach for wind farms.

466 A matter of difference between the two noise witnesses developed in regard to two currently vacant properties where a dwelling could be constructed as a permitted activity.

467 The properties in question were 391 and 395 Rākaupiko Road. Initially there was disagreement between Mr Turner (planner for the Applicant) and Mr Forrest (planner for STDC) in regard to the interpretation of the CPA rules (which would have triggered the requirement for a Resource Consent to construct a dwelling) and the number of properties on which a permitted dwelling would be able to be constructed. However, after caucusing during the course of the hearing, both planners confirmed that these two properties (and only these two) would be able to construct dwellings under the PDP provisions as a permitted activity. However, both planners considered the likelihood of development was low, due to issues with servicing the properties.

468 Mr Lloyd's view was as follows[59]:

[57] Waverley Wind Farm Assessment of Noise Effects, Hegley Acoustic Consultants, February 2016, Section 2, page 16
[58] s42A report of Mr Lloyd, Paragraph 41
[59] s42A report of Mr Lloyd, Paragraph 25

> *"Given that construction of dwellings is a permitted activity in the Rural Zone, then applying the receiver location at the site boundary gives some certainty to the applicant (and neighbours to the site) as to where the noise limits apply."*

469 Essentially, he was of the view that because there was no dwelling on these sites (even though one could be constructed), there was no notional boundary, and therefore the site boundary should apply.

470 Mr Hegley, and the Applicant, contested this approach. Mr Hegley stated:

> *"In both cases the common site boundary is the rear boundary of the rural site and the 40dB LA90 (10min) only extends a short distance onto the rear of these properties leaving the majority of the front section available to construct any new dwelling. Thus, the effect of adopting the assessment location at the existing dwelling … will not adversely affect any existing property but will enable the WWF to be developed without sterilizing land (and hence the size of the WWF) where WTGs are currently proposed."*

471 During questioning, we asked Mr Hegley to provide more detail in regard to the potential reduction in the wind farm size if we were to adopt Mr Lloyd's site boundary approach. Following the hearing, he provided a report indicating that up to eight wind turbines may have to be removed from the WWF Proposal[60].

472 We note that landowner of the two properties in question (we understand it to be a single party who owns both) did not submit on the WWF Proposal, despite the opportunity to do so following its public notification.

Evaluation of Notional or Site Boundary

473 We place some weight on the fact that there was no submission from the landowner of the two properties. As a result, we have no way of knowing the likelihood of the land ever being developed, the location of any dwelling if it were to be constructed, or whether noise effects are even of concern.

474 Having reviewed the noise contours provided by Mr Hegley, we also accept that only a part of the site would be affected by noise from the wind farm that is potentially greater than the 40dB $L_{A90\ (10min)}$ that the standard recommends (on the basis that we do not have a background noise assessment).

[60] Supplementary Statement of Evidence of Mr Hegley (dated 9 June 2017), Paragraph 6

475 On this basis, we find it acceptable to apply the noise limit at the notional boundary across all properties, regardless of whether they have an existing dwelling or not.

Operational Noise Effects

476 Mr Hegley did not undertake a background noise assessment prior to the preparation of his report. Rather, he relied on a report prepared by Malcolm Hunt Associates on behalf of Allco Wind Energy New Zealand Limited, in 2007[61]. He notes that these assessments "*were not undertaken strictly in accordance with the requirements of NZS6808, but were considered suitable for use … as general guidance"*.

477 In his report, Mr Hegley provides a rationale as to why an up to date background assessment was not necessary[62]. Principally, he considers that the WWF can comply with the NZS6808 standard without needing to utilise the 'background plus 5dBA' option. The Applicant also proposes to undertake a background noise assessment prior to construction of the WWF Proposal, to ensure that the recommendations set out in the standard can be complied with. Mr Hegley confirmed that he had undertaken his noise level predictions in accordance with best practice, including NZS 6808:2010 and also ISO 9613 (Acoustics – Attenuation of Sound during Propagation Outdoors).

478 Mr Lloyd was critical of the lack of an up to date background noise assessment, particularly given that the one supplied was over 10 years old and undertaken prior to the issue of the NZS 6808:2010 standard[63]. He pointed out in his report that there have been advances in the way in way noise is reported, including separating out night-time background monitoring, and a reviewing variations between upwind and downwind monitoring. He remained critical of the approach during questioning, where he stated that he had never been involved in a wind farm case where an up to date background noise level had not been established.

479 Mr Lloyd also referred to specific properties where it would have been useful to have an understanding of background noise levels[64]. Of concern to us was the lack of background sound information at two dwellings that we considered might be susceptible to noise effects (dwellings 61 and 110). We since note that written approval for the Application was received from the owner of dwelling 61, however the owner of dwelling 110, submitter Mr Dickie, remained concerned about potential noise effects.

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[61] Evidence of Mr Hegley, Paragraph 31
[62] Waverley Wind Farm Assessment of Noise Effects, Hegley Acoustic Consultants, February 2016, Section 3, page 19
[63] s42A report of Mr Lloyd, Paragraph 37
[64] s42A report of Mr Lloyd, Paragraphs 40 and 41

480 As a result of there being no background noise level assessment, Mr Lloyd recommended that we adopt an approach of limiting the noise limit of the wind farm to 40dBA $L_{A90\ (10mins)}$. He reaffirmed that position during questioning, where he indicated that *"the higher level (background plus 5dBA) was not a target, and if it was demonstrated that the proposal could achieve better outcomes, then these should become the limit"*.

481 Mr Lloyd also raised concern about the so-called 'GP van den Berg' phenomenon, whereby variations in wind currents cause there to be high wind at blade level, but calm and quiet wind at receiver (ground) level[65]. However, following discussions throughout the hearing, Mr Lloyd accepted that this phenomenon was unlikely to be present in this case.

482 Other than the matters just outlined, Mr Lloyd did not indicate any disagreement with the methodology used to predict noise levels from the WWF, and did not challenge any of the noise contours. We took this to mean he accepted the predictions put forward by Mr Hegley.

483 A number of submitters raised concerns about potential operational noise effects. Whilst some of the concerns were specific to noise within their dwelling (such as the written submission from Mr Honeyfield), others were also concerned about hearing the turbines while outside on their properties (such as Mr Alexander). Ms Sisson and Mr Dickie both talked about their concerns about hearing the turbines. We took from all the submitters that hearing the wind turbines would be considered an adverse effect.

Evaluation of Operational Noise Effects

484 We found the lack of an up to date background noise assessment disappointing, and it made it more difficult for us to undertake our overall evaluation. We would have benefited from understanding the level of noise currently experienced in locations close to the WWF Proposal, particularly at property 110 (where the EBZ was adjusted for noise effects reasons), and locations on the beach (for the assessment of natural character effects).

485 We also have support for Mr Lloyd's recommended approach to adopt the single 40dBA $L_{A90\ (10mins)}$ limit, rather than the 'or greater' approach set out in NZS 6808:2010, given that Mr Hegley has indicated the WWF Proposal can comply with this. Given the statements from submitters, all local people who will have to live and work with the WWF on a daily basis, we anticipate that they would be appreciative of lower sound limits.

[65] s42A report of Mr Lloyd, Paragraph 30

486 However, we accept that the proposed conditions will require a background noise assessment to be completed prior to construction. We adopt the advice provided by Counsel for the Applicant that NZS 6808:2010 provides for a background plus 5dBA limit, that this standard has been robustly developed, and is widely used across other wind farm proposals in the country. We also put some weight on the fact that the PDP limits provide for greater volumes of noise than the 40dBA $_{LA90\ (10mins)}$ standard.

487 We therefore find that compliance with either of the two recommendations within NZS 6808:2010, that being 40dBA $_{LA90\ (10mins)}$ or the background noise level plus 5dBA, is appropriate for this proposal. We have assurance from the conditions that this will be complied with, as failure to do so will require the shutting down of wind turbines until compliance can be achieved. The conditions also require the measurement of background noise prior to construction, and the ongoing measurement of noise at several noise sensitive locations. We have amended the offered and recommended conditions to make it clear that the background noise level plus 5dBA option could only be used where background noise testing has been undertaken in accordance with NZS 6808:2010 prior to the erection or operation of the turbines. We have also amended the conditions for compliance testing to require testing after the commissioning of the first and the last turbine.

488 On this basis, we find that the operational noise effects of the WWF Proposal will be acceptable.

Special Audible Characteristics and Vibration Effects

489 Several submitters, and Mr Lloyd, drew our attention to a phenomenon known as 'Special Audible Characteristics', or as referred to by Mr Hegley as 'Low Frequency Noise'.

490 Mr Hegley considered that modern wind turbines no longer produce low frequency or tonal noise[66], and he did not see any need to be concerned about this particular effect. Mr Lloyd agreed.

491 Mr Hegley also considered that there was no cause for concern about vibration[67], and this was not disputed by any other party.

[66] Evidence of Mr Hegley, Paragraph 83
[67] Evidence of Mr Hegley, Paragraph 85

Evaluation on Special Audible Characteristics and Vibration Effects

492 We accept the undisputed evidence of Mr Hegley and consider that there will be negligible special audible characteristics and/or vibration effects created by the wind farm.

Construction Noise Effects

493 Mr Hegley provided an overview of construction noise effects, and set out predictions for a variety of construction activities. This included:

(a) During piling for the wind turbine foundations, based on the noisiest option available to the Applicant, that noise levels (as measured at the closest dwelling) will be up to 62dBA Leq and 74dBA Lmax;

(b) The concrete batching plant will produce 37dBA L_{eq} at the closest dwellings; and

(c) The 400t crane used to lift turbines into place will produce 29dBA L_{eq} and 37dBA L_{max} during construction of the towers.

494 Mr Hegley predicted that noise levels during construction will comply with the limits set out by NZS6803:1999 (Acoustics – Construction Noise) for rural areas[68].

495 Mr Lloyd considered that NZS6803 can be relied upon to manage and control construction noise[69]. On this basis he considered that construction noise will be acceptable.

496 Both Mr Hegley and Mr Lloyd discussed the noise effects of construction traffic, both concluding that it will be negligible.

497 No other parties provided any evidence on construction noise effects, or contested the evidence provided by Mr Hegley and Mr Lloyd.

Evaluation of Construction Noise Effects

498 We accept the evidence of both the noise witnesses that construction noise can be managed under NZS6803:1999, and a condition is provided in this regard.

499 On this basis, we find that the construction noise effects generated by the WWF Proposal will be less than minor.

[68] Evidence of Mr Hegley, Paragraph 61
[69] s42A report of Mr Lloyd, Paragraph 33

TRAFFIC EFFECTS

500 In the Application, the Applicant identified that there would be construction and operational traffic effects arising from the wind farm and the transmission line. These are relevant matters to consider under the ODP and PDP provisions.

501 Mr Carlisle's overall conclusion is set out in paragraphs 142 to 146 of his statement of evidence dated 5 May 2017. In summary, he concludes that:

(a) The site is well served by its proximity to the state highway network;

(b) There are appropriate traffic measures to be implemented to ensure safe operation of construction traffic;

(c) Any adverse effects to and from the project site will be appropriately managed;

(d) The upgrades recommended for specific roads will result in long-term benefits to safety and efficiency for all road users;

(e) The recommended Construction Traffic Management Plan (**CTMP**) will facilitate the movement of construction traffic, and minimise adverse safety and efficiency effects on the road network;

(f) The CTMP with the upgrade works will help to ensure continued safe and efficient vehicular access and movement throughout the district, resulting from the construction and operation of the wind farm;

(g) The matters raised in submissions will be appropriately addressed through the recommended conditions of consent; and

(h) The potential adverse effects are able to be avoided, mitigated or minimised to an acceptable level and the WWF Proposal can be constructed with only minor effects on the convenience and safety of other road users.

502 In her S42A Report dated 10 April 2017, Ms Copeland advised that "*the application and the Traffic Assessment Report accompanying it is generally appropriate and sufficient to address any potential significant adverse effects on Transportation.*" She then in paragraph 24 of the same report, sets out STDC's position as road controlling authority, that subject to the recommendations in the Applicant's Traffic Assessment Report being implemented, all transportation effects in respect to the subject roads being fully dealt with, subject to conditions.

Construction traffic effects

503 Mr Alexander, a submitter from Peat Road, expressed concerned about the potential interference of construction traffic with stock movements. We queried this concern with Ms Copeland, who advised us that she considered the CTMP adequately addresses Mr Alexander's concerns, particularly as it requires that any disruption to farming operations is minimised and that a copy is provided to all landowners/occupiers along the construction route prior to construction works commencing (conditions 47 and 50). The submission from Mr Dickie also raised concerns about movements on rural roads and at a dangerous railway crossing. Mr Dickie did not expand on these points during the hearing.

504 We queried Mr Carlisle about potential health and safety effects arising from large loads accessing the site, along the entire route from the New Plymouth port. Mr Carlisle advised that the Applicant will need to get other authorities for movement of large loads along the roading network, and that these authorities would ensure that any potential health and safety effects are addressed. Ms Copeland did not advise us any differently.

505 We also queried Mr Carlisle on potential health and safety effects arising from large vehicles using the State Highway 3 / railway crossing intersection with Ihupuku Road. Mr Carlisle advised that the Applicant has considered a number of options to ensure the safety of both vehicles associated with the site development and other road users, and that these will be finalised through the CTMP, and obtaining appropriate approvals from STDC and NZTA in their roles as road controlling authorities. The Applicant would also liaise with KiwiRail as part of the development of the CTMP. Ms Copeland did not advise us differently.

506 In the closing statement, the Applicant provided an updated set of recommended conditions. This included amendments to conditions 47 and 48 to include reference to:

(a) Include reference to rail operations in respect of minimising disruption; and

(b) Include KiwiRail as a party to have communication arrangements with.

507 In closing, Counsel for the Applicant concluded that "*Ms Copeland and Mr Carlisle largely concur with one another. In fact, in the context of the resource consent Applications, there is no disagreement*". [70]

508 One matter that was not fully resolved when we adjourned the hearing was Ms Copeland's recommendation for a new condition which read:

[70] Paragraph 8.1 of the applicant's closing statement

> *"Prior to the commencement of the construction works authorised as part of this resource consent, the consent may need to enter into a road maintenance agreement with the South Taranaki District Council (as Road Controlling Authority) for any roads that are expected to experience an increase in traffic volumes of 150% of more and continue for the period of that increase in traffic volumes".*

509 Ms Copeland offered this draft condition in response to her concern about appropriate sharing of the costs for road maintenance resulting from any deterioration.

510 The Applicant's position on this suggested condition is that it is a matter relevant to the Local Government Act 2002, rather than the RMA, and as such, it is not appropriate to condition a requirement to enter into an agreement required under another legislative framework. Counsel recommends the following as a recast advice note:

> *"Prior to the commencement of the construction works authorised by this resource consent, the consent holder may need to enter into a road maintenance agreement with the South Taranaki District Council in its capacity as Road Controlling Authority for any roads that are expected to experience an increase in traffic volumes of 150% or more and continue for the period of that increase in traffic volumes".*[71]

511 We also queried the Applicant on the appropriate location of signage advising of the visibility of the WWF, and the timing for its erection. We also queried whether its erection was a matter that the consent holder could control, as it would need to be authorised by NZTA. The Applicant's position was that the appropriate location would need to be agreed with the NZTA, STDC, and the consultative group, and they also acknowledged that it could only be erected with NZTA approval. They offered an amended recommended condition in their closing statement, which included that it would be erected at least 10 working days prior to commencement of construction.

Evaluation of Construction Traffic Effects

512 In respect of Mr Alexander's concerns, we consider that clause (e) of condition 47, requiring that disruption to farming operations be minimised, and clauses (e) and (i) of condition 48, requiring traffic management measures in respect of stock crossings and communication arrangements with affected residents, will address his concerns.

[71] Paragraphs 8.3 – 8.5 of the applicant's closing statement

513 In respect of the recommended condition by Ms Copeland, we agree with the Applicant that this is a matter that sits outside of the RMA, and is best addressed through an advice note.

514 We also consider that the amended conditions offered by the Applicant will ensure that any potential health and safety effects in respect to the transporting of heavy loads and the railway crossing will be able to be appropriately managed.

515 We consider that the amended signage condition provides greater certainty and clarity.

516 Overall, we find that any construction traffic effects can be managed through the recommended conditions of consent, as offered by the Applicant.

Operational Traffic Effects

517 As outlined earlier, there was no dispute between the Applicant and STDC on operational traffic effects. Mr Carlisle advised that once the WWF is constructed, that there will be only eight to ten staff expected to work on site to maintain it, and less than 20 light vehicle movements per day. There may also be on occasion some heavy vehicle access, which may include the occasional overweight or over-dimension part.

518 As outlined above, both the submissions from Mr Alexander and Mr Dickie raised traffic effects, but neither submitter expanded or expressed concern with operational traffic effects.

Evaluation on Operational Traffic Effects

519 We find that any operational traffic effects will be minimal, and able to be appropriately managed through consent conditions.

EFFECTS ON AVIFAUNA

520 Given the nature of a wind farm, there are potential adverse effects on avifauna, arising from birds striking the turbines and blades. The Application was accompanied by a report prepared by Dr Stephen Fuller of Boffa Miskell[72], an ecologist with experience in avifauna studies, and the Application as lodged included a suite of conditions covering bird collision monitoring. This report and the advice we received before and during the hearing is that the site is located

[72] Waverley Wind Farm Assessment of Potential Collision Risk to Birds dated February 2016.

within migratory flight paths and is also habitat to some bird species which are classified as being threatened or at-risk under New Zealand's threat classification system.

521 DoC's submission raised a number of concerns about bird strike and mortality rates. The FGNZ submission sought that gamebird species be included in the post construction avian mortality monitoring and sought that an addition area of compensation for the loss of gamebird habitats on the site; points that they re-iterated at the hearing. Mr and Mrs Alexander also raised concerns about impacts on bird life, and in particular, a seagull colony on the project site. Te Kaahui o Rauru and Te Runanga o Ngaati Ruanui also raised concerns regarding impacts on particular avifauna; however, these submissions were subsequently withdrawn, and Te Kaahui o Rauru also provided their written approval.

522 In the time between the close of submissions and the pre-provision of evidence, the Applicant had clearly undertaken extensive engagement with DoC, demonstrated through the updated suite of conditions, covering:

(a) An Ecological Monitoring and Management Plan (**EMMP**), which includes compensation for the loss of habitat from the farm pond through the creation and enhancement of a new foraging habitat for shags and other water bird species;

(b) Offsite compensation in the form of a $25,000/annum contribution to the Ashburton River / Hakatere Shorebird Management Programme, and a one-off contribution of the same amount to the same programme when electricity is first generated from the site;

(c) The establishment of an expert panel to provide advice, oversight and assistance to STDC and consent holder in respect of bird collision monitoring;

(d) The requirement for a bird collision monitoring plan;

(e) Undertaking and reviewing bird collision monitoring;

(f) Review and immediate review thresholds; and

(g) Mitigation Review thresholds.

523 We were advised by Counsel for the Applicant that the Applicant has already entered into the necessary agreement for the Shorebird Management Programme.

524 DoC appeared at the hearing, confirming that the concerns set out in their submission had been addressed through the revised conditions offered by the Applicant. The Department did express concern of the adequacy of the survey work undertaken by the Applicant; however, they were satisfied that the conditions would overcome this concern. We note that Counsel for the Applicant refuted this concern in the closing statement.

525 We questioned the Applicant and the Department on the Ashburton River / Hakatere Shorebird Management Programme, as to how it compensated for the potential loss of migratory birds from the WWF. In particular, we raised how it met Policy C2 of the NPSREG, which requires that "*when considering any residual environmental effects of renewable electricity generation activities that cannot be avoided, remedied or mitigated, decision-makers shall have regard to offsetting measures or environmental compensation including measures or compensation which benefit the local environment and community affected [emphasis added].*"

526 We were advised that the breeding grounds for the migratory birds are located in the South Island, in locations such as the Ashburton River, and the compensation is effectively provided through providing a good breeding location to compensate for any losses. We also questioned how many of such breeding programmes existed, and were advised by the Department that there were a number in operation. We were also advised that these Programmes are located predominantly on Crown or Council land, rather than relying on private owner willingness.

527 Mr Fuller's opinion is that with the comprehensive proposed mitigation, monitoring and reviews, that the effects of the WWF on the species identified as being of significance (threatened or at-risk) will be low to neutral; noting that will some mortality will occur to individual birds, it will be fully mitigated through agreed programmes and conditions. He also concludes that there would be no adverse effects on indigenous birds arising from the transmission line.

528 We heard no specific evidence on this matter from the Alexanders, beyond the reiteration that there is a seagull colony nested on the project site. In response to this, Mr Fuller's advice is that this is a southern black-backed gull colony[73], a species which has flourished with the settlement of New Zealand, is very abundant, and is not threatened. He also notes that the post construction mortality monitoring at West Wind demonstrated that this species has high avoidance rates and a low rate of collision.

[73] See paragraph 167 of statement of evidence of Stephen Fuller dated 5 May 2017.

529 In his statement presented at the hearing, Mr Stancliff for FGNZ states the he supports the conditions agreed between the Applicant and DoC, but note that they were not party to those discussions. We have set out Mr Stancliff's concerns about the extent of offsite compensation earlier in this Decision.

530 Mr Stancliff stated that he accepted that proffered conditions 76(a) and 77[74] as addressing the concern that gamebird species be included in post construction avian mortality monitoring. FGNZ were concerned in particular that black swans may be susceptible to bird strike, given their size and flight style. At the hearing, Mr Stancliff also raised whether black swans should be included in the bird collision monitoring table.

531 In response, in closing, Counsel for the Applicant stated that the Applicant is not prepared to extent the avifauna monitoring further, noting that any game bird deaths will be recorded in accordance with the conditions, but no mitigation is proposed nor required for death of gamebirds.

532 In his S42A Report, Mr Forrest set out his position that the conditions agreed between the Applicant and the DOC are appropriate, and that no further conditions are necessary to manage the potential effects of wind farm activities on avifauna. In respect of the FGNZ submission points, Mr Forrest's opinion is that the offset conditions proposed by FGNZ are not necessary, noting that these ponds are on private land, not available for public access, are not outstanding natural features nor identified wetlands.

Evaluation of Effects on Avifauna

533 It is clear that the Applicant had given effects on avifauna significant consideration, both in preparing the Application and working with DOC to agree on an extensive suite of conditions, which includes monitoring, reviews, mitigation, compensation, and avoidance.

534 In respect of the compensation through the Shorebird Management Programme, we consider that this meets the relevant criteria under Policy C2 of the NPSREG, given that the additional input into the breeding programme is intended to result in an increase in migratory birds which will pass near or through the project site. We have amended the proffered conditions relating to the programme, to require that should the Ashburton River/ Hakatere Shorebird Management Programme discontinue, that funding is specifically provided to another Shorebird Management Programme.

[74] Conditions 77 and 78 of the latest set of conditions included in the closing statement.

535 We are satisfied that this suite of conditions will ensure that any potential adverse effects on bird mortality are effectively avoided, remedied, mitigated, or compensated.

536 During the hearing, we questioned the Counsel for the Applicant on the ability to bind the expert panel through conditions. We accept the advice from Counsel that such a condition is appropriate, given that the Panel is an appointment made by STDC through the consent conditions.

537 We find that the concerns of FGNZ regarding the monitoring of bird strike are addressed by the conditions, and agree with the Applicant that there is no mitigation requirement for black swan deaths. In particular, Mr Stancliff acknowledged that there are not threatened or at-risk species, and are in fact, game birds. We also concur with the advice from Mr Forrest and the Applicant that there is no need for additional offsite compensation for the loss of habitat for game birds arising from the removal of the ponds on site. We address wider ecological effects elsewhere in this decision.

ECOLOGICAL EFFECTS

538 In the Application, the Applicant identified that there would be potential ecological effects arising from the wind farm and the transmission line. These are relevant matters to consider under the ODP and PDP provisions, along with the RPS, the NZCPS and section 6(c) of the RMA where these involve significant habitats of indigenous fauna and areas of significant indigenous vegetation. This section of our decision focuses on ecological effects other than effects on avifauna, which we address separately.

539 Dr Sanders' for the Applicant conclusions in respect of ecological effects are as follows:

"…the actual or potential adverse effects the WWF on terrestrial and freshwater values, are appropriately avoided, mitigated or remedied by the various measures set out in the proposed conditions. This is in large part because the establishment of the EBZ has taken a conservative approach in excluding from the project envelope any known or potentially valuable terrestrial vegetation or habitat.

Whilst there will be a net loss of 3.7ha of ponds habitat on site, my overall assessment is that this loss will be compensated for by a substantial improvement in the quality of freshwater habitat within the site as a result of rehabilitation of the Waipipi Stream, and by conservation measures at off-site

locations. The proposed measures will, in my opinion, result in a net benefit to terrestrial and freshwater values within the project site, and probably also in freshwaters upstream of the site, as a result of improved fish access."[75]

540 As noted earlier in this Decision, the Applicant had already obtained resource consents from the TRC, which included surface water take from the three farm ponds and the reclamation of the three farm ponds, the construction and maintenance of culverts, and the discharge of stormwater to land and water. Potential effects on ecology were also addressed through these consents, and we note that conditions 2 and 3 of the Regional Council 10287-1.0 consent granted 19 October 2016 set out the requirements for the EMMP. This requires that the following objectives are achieved:

(a) *"restore the ecological and amenity values of the Unnamed Stream 9 (Waipipi) within the project site boundaries of the Waverley Wind Farm;*

(b) *Translocation of aquatic plants and native fish from the farm ponds to be drained and infilled;*

(c) *Destruction of all pest fish in the ponds to be drained; and*

(d) *Minimising sediment discharge to the Unnamed Stream 9 (Waipipi) and its tributaries."*

541 By the end of the hearing, the only submitter with concerns about ecological effects was Mr Stancliff for FGNZ, in respect of the level of offset compensation for the loss of the three ponds on the project site. The other submitters who had raised ecological concerns, being DOC, Te Kaahui o Rauru and Te Runanga o Ngaati Ruanui, had either had their concerns satisfactorily addressed (DOC) or had withdrawn their submissions (Te Kaahui o Rauru and Te Runanga o Ngaati Ruanui). Further, Te Kaahui o Rauru had also given its written approval.

542 Mr Stancliff sought that the area of offsite compensation for the loss of habitat be increased from 2.6 hectares to 3.7 hectares to compensate for the loss of the other two ponds on the project site, and that the FGNZ be included as parties to review the draft EMMP which would include compensation details. The rationale for the additional area being that wetlands are recognised as a nationally threatened ecosystem, and that while these are artificial ponds, there would have been a wetland in place prior to the iron sand operation occurring. In closing, Counsel for the Applicant responded to this point, advising that the east and west ponds do not provide habitat for fish, and that there is no requirement to compensate for the infilling of the two ponds.[76]

[75] Paragraphs 108 and 109 of statement of evidence of Dr Mark Sanders dated 5 May 2017.
[76] Paragraph 7.6 of the Closing Statement.

543 DoC appeared at the hearing, confirming that the concerns set out in their submission had been addressed through the revised conditions offered by the Applicant. In particular, Counsel for the Department stated that *"the Director-General's primary concern in relation the freshwater values was the infilling of the ponds at the site, given they provide habitat to both threatened fauna and flora. Revised conditions have been agreed between the Applicant and the Department's technical experts and the Director-General considers that these appropriately manage the adverse effects".*[77]

544 STDC did not have any specific expert addressing ecological effects. Mr Forrest in his S42A Report focussed on terrestrial ecological effects, noting that the Ryder (2016) report on terrestrial ecological values focusses on vegetation, bats and lizards. His conclusions in terms of ecological effects were:

> *"…the potential for adverse effects on the ecology of bats and lizards is deemed to be negligible and that no mitigation or monitoring is therefore necessary. I have no reason to not concur with this assessment and the measures proposed to enhance the Waipipi Stream and the wetlands."*[78]

545 The S42A Report also included recommended amended to condition 57 of the conditions as originally offered by the Applicant. This amendment sought the boundaries of the EBZ be permanently fenced with a permanent stock proof fence, rather than temporarily as sought by the Applicant. We note that this amendment was recommended by Ms Williams[79] to protect the areas identified as having ONC in the PDP.

546 The Applicant addressed this fencing through the hearing, outlining their reasoning why this amendment should not be accepted:

(a) That the WWF would not alter the current permitted farming activity on the site; that is, there is already stock entry into this area and the farming activity is beyond the scope of this consent;

(b) Permanent fencing is not necessary to avoid remedy or mitigate potential effects of the WWF on terrestrial or freshwater ecological values; and

(c) The exclusion of stock may not be beneficial; given the role they play with weed control.[80]

[77] Paragraph 20 of Legal Submissions on behalf of the Director-General of Conservation dated 25 May 2017.
[78] Section 7.2.4 of Section 42A report.
[79] Paragraph 61 of her s42A report dated 21 April 2017
[80] Paragraphs 105 – 107 of the Statement of Evidence of Dr Mark Sanders dated 5 May 2017

547 In the hearing, Ms Williams advised us that she accepted that fencing did fall outside her scope of expertise and that she deferred to Dr Sanders on this matter. Mr Forrest concurred that the fencing need only be temporary in nature.

548 We queried the Applicant on the "doubling-up" of the EMMP conditions between the recommended conditions for this consent, and what had already been granted by TRC. Specifically, we noted that the TRC consents deal with aquatic ecology effects. The Applicant considered that it was appropriate that an integrated approach be taken, and Mr Sutherland for STDC stated his acceptance of the recommended condition. Mr Sutherland advised that he would liaise with TRC over the content of the EMMP.

Evaluation of Ecological Effects

549 We accept the expert evidence of Dr Sanders. It was clear from our site visit that the project site had been significantly modified in the past and that there was little indigenous biodiversity within the project envelope.

550 In respect to the loss of the ponds, we accept and prefer Dr Sander's evidence to Mr Stancliff's that the compensation offered will adequately and appropriately mitigate any potential terrestrial or aquatic biodiversity effects.

551 We consider that the WWF Proposal will result in improved ecological outcomes, particularly with the fencing of and planting around the Waipipi Stream and the wetlands identified as EV1 and EV3 of the Ryder assessment (2016), which will lead to their restoration, including the provision of suitable habitats for lizards.

552 While TRC approved reclamation consent already addressed aquatic ecology, we accept there is a need to take an integrated approach to the EMMP and accept for the most part the condition as offered by the Applicant. To ensure the consistency with the TRC required EMMP, we have amended offered condition 64 to require that the EMMP submitted to STDC addresses consistency with the TRC EMMP.

553 In all, we find that any potential adverse ecological effects will be appropriately avoided, remedied, mitigated or offset through the offered conditions of consent. Further, we consider that the project will result in improved ecological outcomes through the measures offered by the Applicant.

HERITAGE AND ARCHAEOLOGICAL EFFECTS

554 The earthworks involved with the construction of the wind farm and the installation of the new transmission line have the potential to result in effects on

archaeological sites. The only submission raising concerns about archaeological effects was that of HNZPT, who withdrew their submission on 12 December 2016. In the letter withdrawing their submission, HNZPT included the agreed conditions to be inserted into the consent conditions. These conditions are included in the Applicant's proffered conditions.

555 The Applicant's AEE was accompanied by a report prepared by Ms Mary O'Keeffe, an experienced consultant archaeologist trading as Heritage Solutions. Ms O'Keeffe has a history with the project site, having been involved since the earlier wind farm proposal in 2006. Paragraphs 6 to 9 of Ms O'Keeffe's executive summary in her evidence dated 5 May 2017, sets out her opinion that:

(a) The project envelope for WWF is extensively modified as a result of the previous iron sand mining;

(b) The EBZ will avoid areas of undisturbed ground which could contain intact archaeological sites;

(c) The transmission line route is located in an area with low potential of encountering archaeological sites;

(d) The likelihood of finding intact archaeological sites is highly unlikely;

(e) Conditions have been offered and agreed with HNZPT to address the potential accidental discovery of any archaeological sites; and

(f) The Applicant is taking a precautionary approach by applying to HNZPT for an archaeological authority to modify or destroy archaeological sites.

556 STDC did not engage a heritage expert to review the Application. Mr Forrest advised in his S42A report that he accepts the conclusions of the Heritage Solutions Report contained in the AEE (which we note are the same as included in the evidence presented to us before and at the hearing).

Evaluation of Archaeological Effects

557 It is clear from visiting the project site that it has been heavily modified, both through historic iron sand mining and its current use, and we agree that it would be unlikely to contain any unidentified intact archaeological sites. So we agree with the Applicant's assessment of the likelihood of discoveries so that the risks of damage to artefacts and the like during construction are low, accordingly the effects on archaeology are low.

558 Taking into account that risk finding we consider that the precautionary approach proposed by the Applicant, which includes the EBZ and the accidental

discovery protocol suite of conditions, and agreed with HNZPT, is appropriate to manage any potential archaeological effects.

559 We find that any potential archaeological effects can be managed through the recommended conditions of consent.

AVIATION EFFECTS

560 Mr Whelan reported that WWF had the potential to create adverse effects on aviation, and in particular that WWF would present a hazard for general aircraft navigation. However, Mr Whelan considers that these effects would be mitigated by the implementation of medium density aviation obstacle lights on turbine nacelles which would alert pilots of the potential hazard.

561 Mr Whelan also recognised that adverse effects on aviation would further be alleviated by the fact that Waverley Beach Airfield is the only airfield within reasonable proximity (1.2 kilometres to the south-east of the project envelope) to WWF. Waverley Beach Airfield is a private airfield used by residents within the Waipipi subdivision and suited to four seat piston aircrafts. Mr Whelan explains that Cresco aircrafts are also used at the airstrip for agricultural work in the area, operating 4-5 days per year and making up of the majority of the aircraft movements at the airstrip. Due to the low levels of operational activity, Waverly Beach Airfield does not meet the definition of 'Airfield' under Civil Aviation Authority New Zealand rules and is therefore not regulated.

562 Mr Whelan considered that WWF will not represent a physical obstacle to aircraft operations at the Waverley Beach Airfield and that turbulence and wind shear will not be an issue when wind speeds in the area are up to 15 knots. He explained that aircraft operations at Waverley Beach Airfield may be affected when wind speeds are in excess of 20 knots but this would account for potentially 20% of the time. Mr Whelan also made clear that Waitotara Low Flight Zone (located approximately 6 kilometres south-east of the project envelope) would not be affected by the wind farm given its distance from the project envelope.

563 Mr Whelan was of the view that compliance with Civil Aviation Authority New Zealand rules will be sufficient to mitigate any potential adverse aviation effects and he did not consider there was any need to move the location or alignment of the Waverly Beach Airfield or to provide for a reduced project envelope.

564 This view was supported by Mr Forrest who considered that compliance with Civil Aviation Authority rules will be sufficient to mitigate or avoid any potential adverse aviation effects.

Evaluation of Aviation Effects

565 We agree with the expert witnesses that the implementation of medium density aviation obstacle lights together with compliance of Civil Aviation Authority Rules are sufficient to mitigate any adverse effects on aviation.

CONSTRUCTION EFFECTS

Potential Geotechnical effects

566 Due to the project site's proximity to the inferred active Waverley Fault Zone, Mr Tate considered that liquefaction, caused by a seismic event, would be the most significant geotechnical constraint for WWF. Loss of ground support and/or lateral spreading of the ground in a seismic event could also cause constraints.

567 Mr Tate also reported that as a result of the non-cohesive sands comprising the near surface soils at the site, that foundation stiffness beneath the proposed turbines was also likely to cause constraints.

568 Mr Tate considered that the potential geotechnical effects could be mitigated by protecting and supporting the turbines through the use of shallow pads or piles following ground improvements such as densification or solidification, noting in particular that ground improvements through densification would be preferable to piles.

569 Mr Tate explained that slope instability would be limited due to the flat topography of the site and the fact that all possible turbine locations are set back from any steeper slopes within the site.

Engineering/construction effects

570 Mr Tate further assessed the potential adverse effects that could arise from construction and considered that overall the site was a favourable location for the construction of the required 25-30km of tracks as well as the turbines due to the flat topography and that as a result only small quantities of earthworks will be required. Mr Tate stated:

"[d]etailed design that is sympathetic to existing topography will further reduce potential earthwork quantities across the project envelope and the potential for construction-related effects".

571 The Applicant has put forward an Earthworks and Construction Management Plan (**ECMP**) to follow throughout construction in order to address any potential adverse effects that might arise as a result of construction works.

572 Mr Tate reported on the erosion and sediment and dust and stormwater control practices that would need to be carried out during the construction phases. Mr Tate considered that these particularly erosion and sediment control practices would follow TRC guidelines and also noted that such effects would be limited due to the flat topography of the site and the low flow velocities of stormwater run-off which would result in suspended material settling quickly.

573 Dust can be a nuisance to personnel and neighbours and can contribute to sediment loads. Mr Tate observed given the presence on the site of larger sand particles as the principal element those particles will not be as readily transported by air compared with finer silt soils found elsewhere in the Taranaki region.

574 After identifying construction activities likely to generate dust which include vehicle movements, removal and replacement of topsoil, excavation loading of vehicles track construction, foundation construction, concrete batching activities Mr Tate expressed the view that all of these issues can be appropriately provided for in a dust management plan which would form part of the overall ECMP. He drew our attention to the point that the Applicant had already secured an air discharge consent for the discharge of come contaminants to air from the TRC (resource consent 10283.1).

575 The types of control or appropriate measures dealing with dust and include ensuring track services remain damp, controlling site vehicles speed, staging earthworks to both isolate and reduced areas of exposed with and stabilising entry points to the site and fill disposal sites. He noted that stockpiles have the potential to create dust and stockpiles and wetting stockpiles covering them or shielding them and reducing height are all appropriate measures to reduce dust. Water for dust suppression is the key dust control measure. Mr Tate pointed out water is readily available from the three farm ponds on site and he reminded us that the Applicant has a resource consent for the abstraction of water for construction purposes from the farm ponds and from the groundwater granted to it by the TRC (Resource consents 10284.1 and 18286.1).

576 Overall Mr Tate considered that any engineering, geotechnical, erosion, sediment, stormwater and dust effects can be appropriately avoided, remedied and mitigated and that construction of WWF can be undertaken using widely accepted

engineering and construction practices inclusive of erosion and sediment control during construction.

Evaluation of construction effects

577 Mr Forrest within his section S42A Report expressed confidence that the measures proposed by the Applicant and reinforced by the proposed conditions of consent will be sufficient to manage the effects of land disturbance activities on water quality and quantity ecological values within the project site and its surrounds. We agree with that assessment.

578 Construction effects as addressed within this section of our decision were not a feature of submissions or evidence presented on behalf of the submitter group.

579 We agree with Mr Tate that any construction effects such as the site geotechnical constraints, erosion and sediment, dust, and stormwater can be appropriately avoided, remedied or mitigated by adhering to the practices and controls set out in the ECMP and implementing Mr Tate's recommended mitigation techniques which we are satisfied are expressed in the conditions.

CULTURAL EFFECTS

580 By the time the hearing commenced, all but one of the submitters who had raised cultural concerns had withdrawn their submissions and provided their written approval to the Application. Ngati Ruauni withdrew their submission and gave written approval prior to them appearing before us. Therefore, in making this Decision, there are no live submissions which raise cultural effects.

581 We heard from Mr Maru that the Applicant had been undertaking ongoing engagement with the submitters who had raised cultural effects and they had agreed a way forward leading to the withdrawal of their submissions and in some cases, written approvals. We note that many of the conditions offered by the Applicant include the involvement of Ngaa Rauru Kitahi and Ngati Ruanui which reflects the engagement and agreement that we have been informed has been reached with both iwi.

Evaluation of cultural effects

582 We are satisfied that there are no outstanding cultural effects.

TOURISM AND RECREATION

583 The Applicant's Recreation & Tourism Assessment Report (**TRC Tourism 2016**) included at appendix 11 of the AEE concludes that any actual or potential effects on the proposed activities on recreation and tourism can be adequately mitigated by means of conditions proffered by the Applicant.

584 The report recommends keeping the community and recreational groups informed during construction and operation of the WWF. It also notes that the CTMP will provide some traffic related mitigation applicable to recreation and tourism users in the general facility of the WWF.

585 We did not receive any evidence or information from submitters that the WWF was likely to cause adverse effects on either recreation or tourism. Based on the information we received opportunities for recreation other than passive recreation such as walking and fishing were limited in close proximity to the WWF. We did receive some information from submitters they would when conditions were favourable walk the beachfront adjacent the WWF. We received information as well relating to fishing activities detailing sea and river fishing predominantly white baiting. However in our view these recreational opportunities were appropriately described as limited.

586 The same could be said for tourism opportunities are in proximity to the WWF. Based on the information we received we concluded there were limited tourism opportunities. It may be in the future that the WWF becomes a tourism opportunity in its own right.

587 We note Mr Forrest agreed with the Applicant's assessment of environmental effects in relation to both recreation and tourism and he concurred with the conclusion of the Applicant's assessment that any actual or potential effects of the proposed activities on recreation and tourism can be adequately mitigated by means of the conditions of consent.

Evaluation of tourism and recreation effects

588 In our view, the opportunities for tourism and recreation in proximity to the WWF are relatively limited. It follows the effects of the WWF on such activities will be limited.

589 The only limited exception is that during the construction phase of the WWF tourists using the roading network may have their travel delayed due to construction traffic from utilising that same roading network. However in our view given the Applicant is addressing construction traffic effects on the roading

network through a construction traffic management plan we are satisfied those effects such as they are will be adequately mitigated.

590 In our view we agree with the Applicant's assessment of environmental effects relating to recreation and tourism and support Mr Forrest's conclusions. In our view such effects will be less than minor and in any event effects of the proposed activities on recreation and tourism can we think the more than adequately mitigated through consent conditions.

EFFECTS ON RADIO AND COMMUNICATION SERVICES

591 The Applicant provided a detailed assessment report by Rodgers Hulston and White included as Appendix 13 to the AEE within the Application. That report after describing the nature of the effect on such services that wind farms can generate which is an interference effects concluded that the risk of any adverse effect is the on the site was low, very low or no risk at all.

592 The main point the assessment identified was a moderate risk of Maritime VHF radio coverage from the Kuranui radio repeater being effected. However the report writers concluded this is an unlikely appearance and in any event the is available coverage from other Maritime NZ repeaters in the area.

593 There were no submissions raising effects on radio and communication services. Mr Forrest in his evaluation of this issue considered that no particular measures or conditions are required to manage effects on radio and communication services because the Rodgers report concludes the risk of adverse effects such as interference occurring are very low or there is no risk at all.

Evaluation of effects on radio and communication services

594 We accept the findings of the Rodgers report and agree with Mr Forrest evaluation and include given the risk of interference the effects on radio communication services are either very low or there is no risk at all there are no resource management effects deserving of consideration within conditions.

595 We note that an offered and recommended condition provides that if any complaints are received relating to impaired television and radio reception, the Applicant will investigate and if impaired undertake the best practical measures to provide both reasonable television and radio reception.

ELECTRO-MAGNETIC EFFECTS ON HUMAN HEALTH

596 The Application at section 4.16 records all electro-magnetic fields from the wind farm and transmission line will comply with relevant limits as set out in 2010 International Commission on Non-Ionizing Radiation Protection Guidelines (**ICNIRP**).

597 Compliance with these guidelines according to the Applicant will ensure that there will be no risk to public health and safety from electromagnetic fields. The Application records that the design of the WWF and the transmission line is such that neither will have any biological or health effects from electromagnetic fields and further there are no specific design or mitigation requirements other than compliance with the ICNIRP guidelines.

598 Electromagnetic effects on human health was not a matter raised within submissions.

Evaluation of electro-magnetic effects on human health

599 Mr Forrest agrees that compliance with the guidelines will ensure there is no risk to public health and safety from electro-magnetic fields. We also agree.

POSITIVE EFFECTS - ECONOMIC EFFECTS

600 In his opening at paragraph 6.25, Mr Welsh referred us to the Environment Court decision in Genesis[81] for the purpose of identifying for us the positive effects that the Court identified arising from a proposed wind farm. He contended these positive effects were also applicable to the WWF. We agree. Those positive effects identified by the Court in Genesis are:

(a) Electricity is a vital resource for New Zealand. There can be no sustainable management of natural and physical resources without energy, of which electricity is a major component;

(b) New Zealand needs a more diverse electricity generation base, to avoid for example, over-reliance on hydro which is susceptible to dry years; in any event new large hydro options are limited;

(c) More thermal generation will have adverse effects, including contributing to climate change and depleting fossil fuels;

(d) As a matter of national energy policy set in accordance with relevant

[81] *Genesis Power Limited v Franklin District Council* [2005] NZRMA541

legislation, New Zealand is pursuing options for renewable energy;

(e) Wind is a source of renewable energy which is plentiful but which is best able to be utilised only in certain locations;

(f) Benefits of renewable energy include:

(i) Security of Supply – this is achieved through adding to and diversifying New Zealand's generation base;

(ii) Reduction in greenhouse gas emissions – this is achieved through meeting New Zealand's need for electricity without emitting greenhouse gases during operation, that would otherwise be emitted through coal or gas operation;

(iii) Reduction in dependence on the national grid – wind energy farms may be installed relatively close to the source of electricity demand, thereby minimising load on the national grid and delaying the need to transmission upgrades;

(iv) Reduction of transmission losses – the further the distance the greater the loss of electricity through dissipation;

(v) Reliability – wind is a relatively reliable resource, with a typical annual wind variation of 10% compared to double that for rainfall, and a relatively reliable economic resource. Once a wind farm is built, it has no ongoing fuel price issues, and the cost of producing electricity from the wind depends primarily on the average, annual wind speed;

(vi) Development benefits – wind energy initiatives result in industry development, profitable business opportunities and regional development; and

(vii) Contribution to New Zealand's renewable energy target.

601 Another important point Mr Welsh made, and we agree, is that the Court in Genesis made the following observation about those positive effects at paragraph 64 of its decision, noting that:

> *"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 [adverse] effects."*

602 Later in this Decision, we carry out that weighing up exercise placing the above described benefits, and others we refer to below, against the more site-specific potential adverse effects, which in this case, relate to visual adverse effects for some nearby properties.

603 We also observe and accept that the benefits of renewable energy generation are reinforced in the NPSREG.

604 Mr Clough provided expert evidence on whether WWF would have any adverse effects on the economy and considered that overall, WWF will have a positive economic affect.

605 Mr Clough reported that although WWF will provide an initial injection of funds into the local economy (mostly through the construction phase and to a lesser extent during operation), the main economic consequence of WWF will be the harnessing of a free and natural resource to create a valuable commodity.

606 Mr Clough pointed out that the WWF Proposal is consistent with recent national policy and strategic directions, mentioning the New Zealand Government's preference for expanding renewables' share of total generation.

607 Mr Turner agreed that WWF will have significant and demonstrable positive effects in terms of sustainable economic wellbeing through assisting with security of supply and New Zealand Government's strategic targets for renewable generation.

608 Mr Clough went on to state that WWF is likely to contribute 0.6% of the Taranaki Regional GDP and that although the ongoing contribution during the operational phase of the wind farm is minor, this is still a positive contribution to the local economy.

609 Overall, Mr Clough considered that by granting the consents for the WWF, significant economic benefits for the national electricity system and New Zealand community will result.

610 Mr Forrest supported the view that the WWF Proposal provides an opportunity to increase the renewable energy generation assets of New Zealand and as a result, WWF will have considerable positive and environmental effects at a national level. Mr Forrest further agreed that WWF will create not insignificant positive economic effects at a regional level during construction phase of the wind farm.

611 So, in summary, the significant positive effects and benefits identified by Mr Clough include:

(a) Generation of approximately 490GWh of renewable electricity a year;

(b) Potential avoidance of approximately 337,000 tonnes of carbon dioxide emissions a year;

(c) Construction of the WWF will generate $325 million of capital expenditure over a two-year timeframe. This will contribute $82 million expenditure into the regional economy, adding $40 million in net value-added;

(d) Construction of the WWF will employ between 80-100 people over a two-year period. When operating, the WWF will employ eight to ten people. Operation/maintenance spending will contribute approximately $3.3 million to the local economy in value-added per year.

612 The WWF also includes a number of important ecological enhancement and mitigation measures:

(a) Fencing and enhancement planting of nearly five kilometres of the Waipipi Stream and tributary drains (equating to 13ha of fenced riparian areas and the planting of 32,500 native plants);

(b) Fencing of ecologically significant wetlands in the south east portion of the project-site;

(c) Infilling farm ponds to displace water birds from the project site and therefore minimise/avoid bird mortality effects and off-site habitat enhancement for displaced birds;

(d) On-site translocation of native fish and plants from the ponds to be infilled; and

(e) Annual contributions to the Ashburton River/Hakatere Shorebird Management Programme of $25,000 a year, and a one-off contribution of $25,000.

Evaluation of Economic Effects

613 We agree with the expert witnesses that overall, WWF will create positive economic effects for Taranaki and New Zealand.

CONSULTATION

614 Mr. Ryan Piddington reports that the Applicant undertook a comprehensive consultation process, engaging environmental and engineering staff as well as

external technical experts to ensure a thorough consultation with all parties that had an interest in or could potentially be affected by the WWF. Mr Piddington contended that the consultation process has provided the Applicant with a strong and informed appreciation of the interests and concerns of the potentially affected parties.

615 Mr Piddington explained that the WWF Proposal was amended to reflect the concerns/issues raised by third parties and to include mitigation measures that would be undertaken by the Applicant to manage potential adverse effects.

Evaluation of Consultation

616 We concur with Mr Piddington that a thorough consultation process has been undertaken by the Applicant and that this has been reflected in the WWF Proposal and ongoing discussions between the Applicant and interested third parties. We are of the view that the Applicant has endeavoured to address all concerns raised by third parties and any potential adverse effects that could arise as a result of WWF. The Applicant has put forward a number of mitigation measures to manage these adverse effects.

EFFECTS OF TRANSMISSION LINE

617 Concerns with the proposed new transmission line were raised in submissions, with some submissions solely focussed on the line. These concerns centred on the visual impact of the line and the disturbance of views to Mount Taranaki from the Waverley township. The submission of Mr and Mrs Connell of 43 Fookes Street also raised concern with the possible humming of insulators in moist weather conditions. The submission from Mr Hayes also expressed concern that the line would preclude future use of the Waverley town belt for recreational development. Ms Lister raised concern about risks to people and animals from the line. It was not clear from her submission what these risks were. Some of the submissions also raised concerns about the impact of the line on the value of their residences. We note that Mr Hayes was attributed to two submissions; one being his own submission, and the other being a submission accompanied by the signatures of 20 other persons. The submissions from residents within the Waverley township mainly sought that the transmission line be placed underground.

618 Mr and Mrs Bremer raised concern relating to the environmental and aesthetic effects of the line running through their property, as well as damage and disruption to farming activities during construction.

619 We note that between the time of lodgement of the Application and the hearing commencing, the Applicant amended the Application to limit the height of the transmission line around the perimeter of the Waverley township to a maximum of 14m (excluding the earth extension). The Applicant also proposed more detail about the location of the poles within the road reserve along Fookes and Swinbourne Streets[82].

Application of the "permitted baseline"

620 The permitted baseline refers to the discretion provided under s104(2) of the RMA to disregard any adverse effects of an activity that are otherwise permitted by the ODP.

621 Mr Turner's position was that the "*transmission line only requires resource consent because it would potentially not comply with the night-time noise standards that apply at the property boundary at all times*"[83].

622 Mr Turner's advice was that the permitted baseline should be applied in respect to the visual and landscape effects of the line between the WWF and Mangatangi Road for the reason that the PDP permits transmission lines up to 110kV as a permitted activity in the Rural Zone[84]. His advice was that the poles and structures (including earth wires) proposed by the Applicant are the same type of structures and activities anticipated by the PDP, and would be below the permitted height limit.

623 Based on this advice, we asked Mr Turner and Mr Forrest to caucus on whether the permitted baseline should apply to the visual and landscape effects arising from the transmission line. Their advice back to us was that:

(a) The PDP provisions should be treated as operative;

(b) The only reason the line requires consent is because of the non-compliance with the noise standard; and that means that the line is a restricted discretionary activity; and

(c) Any landscape and visual effects arising from the transmission lines are within the permitted baseline.

624 In the Applicant's closing statement, Counsel advised their position that *"there is no legal impediment or policy reason for not applying the permitted baseline to the transmission line. Whilst resource consent is needed for the transmission*

[82] Additional material provided April 2017.
[83] Paragraph 35 of statement of evidence dated 5 May 2017
[84] Paragraph 54 of statement of evidence dated 5 May 2017

line, the adverse visual effects which are of concern to the submitters in Waverley all fall squarely within the baseline".[85]

625 Both planners agreed that the relevant rule in the PDP is Rule 14.1.3, and that this restricted discretionary activity rule contained a range of matters of discretion.

626 We did not receive any evidence from other parties to the hearing in respect of the permitted baseline.

Evaluation of the permitted baseline

627 After considering the evidence before us, we find that the application of the permitted baseline test under s104(2) of the RMA is appropriate to consider, and that it is appropriate to disregard any adverse effects of the proposed transmission line that the plan otherwise permits.

Visual and landscape effects of the transmission line

628 Mr Forrest's S42A recommendation was to underground the transmission line, based on the report prepared by Ms Julia Williams. Ms Williams recommended that the line either be undergrounded or relocated to a different route around the Waverley township, for the reason that the transmission line *"will affect the residential character of Waverley township and the landscape amenity of its residents where the transmission lines run along the residential edge of the town beside the recreation reserve land known as the Waverley Town Belt".*[86] Mr Forrest did not support the re-routing of the line, for the reason that it *"may have an adverse impact on adjoining rural residents who are not currently affected. If that were the case, a further resource consent application would be necessary to establish the transmission line over an alternative route".*

629 Mr Lister discussed the impact of the transmission line on landscape and visual amenity in evidence and during the hearing.

630 In respect of landscape, Mr Lister's position was that the revised design would mean that the transmission line would not appear out of place within the existing character of Waverley streets[87] and that the line would not look out-of-place in the rural landscape, with lines being a regular feature of such landscapes[88].

631 Mr Lister's position on visual amenity effects was that:

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[85] Paragraph 13.1 of closing statement dated 9 June 2017

[86] Paragraph 71 of the assessment prepared by Ms Williams dated 21 April 2017
[87] Paragraph 108 of statement of evidence dated 5 May 2017
[88] Paragraph 106 of statement of evidence dated 5 May 2017

(a) The switchyard would have no adverse visual effects beyond the project site, as it would be in an unobtrusive location with low visibility;

(b) The line would be visible from the dwelling at 169 Rāngikura Road as it follows Dryden Road, with any effects being "moderate-low";

(c) The line would run parallel to the railway line between Dryden Road and the property at 1506 SH3, and that any effects would be "moderate" to "moderate-low", taking into account its association with the existing railway line infrastructure, and mitigation through distance and vegetation screening;

(d) Any effects from the line's position within 1506 SH3 would be "low" because of the combination of revised pole design and separation;

(e) There would be "low" to "moderate" effects in respect to the properties along Fookes and Swinbourne Streets.

632 In respect of the properties along Fookes and Swinbourne Street, Mr Lister described the more detailed design that had been undertaken in respect to both the height and placement of poles. In respect of the placement, he advised that "*the locations were chosen to reduce visual impacts, for instance by placing poles opposite property boundaries to the extent that this could be achieved with the need to also achieve a reasonably consistent spacing".*[89]

633 Mr Lister then set out his understanding, based on the evidence of Mr Turner, that:

> *"110kV transmission lines up to 100 MVA23 per circuit are permitted activities in the rural zone under the Operative Plan and the Proposed Plan – which includes the outside of Swinbourne and Fookes Streets. I understand that the only difference between a permitted 100 MVA line and the proposed 130 MVA line might be wires ('conductors') of slightly greater diameter which are likely to be indistinguishable. The proposed line would therefore have no adverse visual amenity effects if compared against such permitted activities."*[90]

634 Ms Williams remained of the view that the scale and form of the lines would mean that it will have effects on landscape character for the residents along Fookes and Swinbourne Streets.

635 We were also advised on the Waverley town belt. Mr McKenzie for STDC advised that there the land in question is owned by the Council, vested as reserve and is

[89] Paragraph 114 of statement of evidence dated 5 May 2017
[90] Paragraph 115 of statement of evidence dated 5 May 2017

leased to parties. Mr Forrest subsequently advised us that the land is zoned Rural, where permitted activities include new buildings and trees. We were not advised of any specific controls relating to the town belt.

636 We queried Mr Hayes about whether he had considered the ODP or PDP rules. He stated that he hadn't, but that STDC had an overall discretion.

637 Mr Forrest amended his position in the S42A Report to no longer support the undergrounding of the lines, based on the permitted baseline approach to landscape and visual effects.

638 We queried the Applicant through the hearing whether it would be possible for further refinement of the placement of the poles to occur in consultation with residents along Fookes and Swinbourne Streets and whether alternative placements had been considered.

639 Mr Martin advised us of the impacts of changing the location of any poles and the flow on impacts this would have in terms of entry into the Mangatangi Road site and potentially the height of poles. He also advised of the complexities of co-locating the line onto the existing lines located on the residents' side of the streets.

640 In the closing statement, Counsel for the Applicant did not support that approach as any further refinement of pole locations may result in consequential changes that may affect other residents, and that infrastructure cannot be designed by delegating decision making to a residents' group. Counsel's final position is that *"electricity transmission lines are an expected and permitted feature of this environment, and the visual effects of the proposed line aligns with the nature and scale of effects permitted by the applicable plans".*[91]

Evaluation of visual and amenity effects

641 We are sympathetic to the submitters that for some their outlook to the rural area and to Mount Taranaki will be impacted by the location and height of the transmission lines and the associated poles. This impact was clear from our site visit. It is unfortunate the Applicant was not willing to further engage with the residents with the placement of the 14m high poles in proximity to the residential properties; however, we understand and appreciate the constraints associated with placement and the Applicant's position on this.

642 After considering the evidence before us, we accept the Applicant's position that any visual and landscape effects arising from the entire route of the transmission line are within the permitted baseline; that is, while the matters of discretion

[91] Paragraph 13.5 of closing statement dated 9 June 2017

contained in the PDP are broad, if it was not for the occasional non-compliance with the noise standard (which we address next), the transmission lines would be a permitted activity under the PDP.

Noise effects of the transmission line

643 We were advised that the transmission line would on some occasions not comply with the noise standard in the PDP because of a "corona" effect caused by particular atmospheric conditions; but that otherwise it would comply with the noise standards contained in the ODP and PDP. We were subsequently advised that the PDP provisions should be treated as operative in respect to noise measurement.

644 Mr Lloyd advised us that the corona noise effects could arise when there were foggy conditions after long and dry periods and resulted from moisture reacting with dust on the lines. Otherwise, Mr Lloyd was satisfied that the transmission lines would comply with the noise standards in the PDP.

645 There was disagreement before and during the hearing between Mr Hegley and Mr Lloyd on where noise from the transmission line should be measured to and from in respect to residential properties.

646 Mr Lloyd's final position was that the condition offered by the Applicant should read as follows:

> *"Noise from the operation of the transmission line shall not exceed 45 dB $L_{Aeq\ (15\ mins)}$ when measured at, or within, the notional boundary of any rural zoned dwelling in existence or authorised by a resource consent or building consent at the date of issue of this resource consent (excluding dwellings on properties where the property owner has provided their written approval) or at, or within, the boundary of any Residential Zoned site."*

647 The final condition offered by the Applicant read as follows:

> *"Noise from the operation of the transmission line shall not exceed 45 dBA $L_{Aeq\ (15\ mins)}$ when measured at, or within, the notional boundary of any rural zoned dwelling in existence or authorised by a resource consent or building consent at the date of lodgement of the resource consent applications for the Waverley Wind Farm (excluding those dwellings where the property owner has provided their written approval and where this approval has been provided to the Group Manager – Environmental Services, South Taranaki District Council) or at, or within, the boundary of any residential zoned site.*

Except where otherwise expressly provided for, noise shall be measured in accordance with the requirements of "NZS6801:2008 Measurement of Sound" and assessed in accordance with the requirements of "NZS6802:2008 Assessment of Environmental Sound".

648 We did not receive any expert evidence from other parties to the hearing.

Evaluation of noise effects

649 We accept the generally agreed position of Mr Hegley and Mr Lloyd, and the generally agreed condition as being the most appropriate approach for noise measurement to ensure compliance with the PDP standard. Overall, we conclude that any noise effects arising from the transmission lines will be less than minor in nature, noting that any potential adverse noise effects arising from corona effects would only be very occasional. We consider that certainty of the timing in respect of a rural dwelling in existence authorised by a resource consent or building best sits with the date of notice of the decision under s114 of the RMA and we use this timing through conditions on both the wind farm and the transmission line.

Other effects

650 Mr Martin also advised that the KiwiRail line corridor along which the line would be located is designated, and that the line would also comply with Work Safe Act requirements in respect to safety and design, so that there would be no impediment to the Bremer's access under the proposed line. There was no evidence presented to contest Mr Martin's position, and so we accept that.

651 We have addressed other effects that may arise from the construction and operation of the transmission line elsewhere in this decision and do not repeat them here.

652 Overall, we find that the conditions offered by the Applicant will appropriately avoid, remedy or mitigate any adverse effects arising from the proposed transmission line.

RELEVANT STATUTORY PLANNING DOCUMENTS

653 We set out the relevant statutory planning documents earlier in the Decision. In summary, we agree with Mr Turner and Mr Forrest that these are:

(a) The NZCPS;

(b) The NPSREG;

(c) The RPS;

(d) The ODP; and

(e) The PDP (decisions version).

654 The relevant statutory planning framework and relevant provisions within that framework have been thoroughly identified and explored within the Applicant's AEE and within the evidence of Mr Turner and legal submissions of Mr Welsh. We have also referred to relevant planning provisions when we had been identified and evaluating the effects.

655 While we have undertaken a careful review of those documents we will keep our reference to the relevant document brief. We also note there was a very high level of agreement between the reporting officers in relation to relevant planning provisions and the Applicant's relevant experts. Consequently we will not repeat all the analysis we have received in full but instead will as best we are able summarise the main points and comment on what we think are the most relevant matters.

NZCPS

656 We agree with Mr Turner given our findings on the EBZ in particular that the EBZ best defines the coastal environment that the NZCPS remains relevant.

657 We also agree with Mr Turner that the key outcomes sought by the NZCPS are that are relevant to the WWF are:

(a) safeguarding the integrity, form, functioning and resilience of the coastal environment and sustaining its ecosystems[92];

(b) the preservation of the natural character of the coastal environment and the protection of natural features and landscape values[93];

(c) recognising the role of tangata whenua as kaitiaki and providing for tangata whenua in the management of the coastal environment[94];

(d) the maintenance and enhancement of public open space and recreational opportunities[95];

[92] Objective 1
[93] Objective 2
[94] Objective 3
[95] Objective 4

(e) ensuring that coastal hazard risks take account of climate change[96]; and

(f) enabling people and communities to provide for their social and economic well-being.[97]

658 We agree with Mr Turner and as supported by Mr Forrest that the WWF aligns well with the outcomes sought by the NZPCS and it certainly cannot be said to contravene the outcomes sought.

659 Primarily we reach this conclusion because the EBZ has been developed so that the WWF will avoid areas within the largely unmodified coastal dunes that are of ecological significance in accordance with policy 11 which seeks to protect indigenous biological diversity in the coastal environment. In addition key wetland sites and the Waipipi Stream will be fenced off from stock and provide long-term protection of the ecological values.

660 Also given we accept the opinions of Mr Fuller and the evidence put forward by DoC we are satisfied that the effects of the WWF on the threatened and or at risk birds, which reflects policy 11(1) will be low to neutral and in any event will be fully mitigated or compensated through the proposed conditions of consent. We accept the evidence of Mr Fuller that the effects of the WWF on the national populations of New Zealand pied oystercatcher and pied stilt will be negligible.

661 In addition, given the compensatory measures agreed between the Applicant and DoC we consider that the WWF will contribute to the protection of indigenous biological diversity and the avoidance of adverse effects on threatened and at risk species in line with policy 11(1).

662 With respect to the preservation of natural character we agree with the opinions of Mr Brown and Mr Lister that while the WWF will have an influence on the characteristics and qualities that compromise the natural character of the coastal environment the degree or extent of those effects are limited by a number of factors. We agree that WWF will have little real impact on public perception of Waverley's coastal environment because of the extent to which it is physically closed and visually screened by existing farms. We also accept Mr Brown and Mr Lister's view that the areas of modification and productive activity ultimately restrict the degree to which the WWF might diminish the natural qualities of the coastal environment.

663 In terms of the directive policy 13(a) that the adverse effects of activities on areas of outstanding natural character be avoided we accept that the classification of the Whenuakura Estuary and Waipipi Dunes as an outstanding

[96] Objective 5
[97] Objective 6

area is under appeal. Nevertheless we accept the views of Mr Brown and Mr Lister that the WWF will not adversely affect the biotic and abiotic characteristics that contribute to the qualities of both of these outstanding areas (as outlined in the PDP). We therefore agree with Mr Lister that the WWF is consistent with policy 13(1). We note that there will be some experiential effects on these ONC areas, but consider that these effects are on values that do not contribute to the outstanding quality of the ONC areas.

664 Policy 15 is concerned with achieving no adverse effects on ONFs and ONLs. Mr Lister considered that the WWF will not compromise the characteristics and qualities of Waverley Beach being the nearest ONF/ONL. We agree and consider that the WWF Proposal is consistent with policy 15.

665 Because of the agreement reached with Te Runanaga O Ngati Ruanui Trust and the withdrawal of other submissions raising potential cultural effects we are satisfied that appropriate regard as required has been given to objectives 3 and policy 2.

666 Objective 4 policy 18 and 19 of the NZCPS concern themselves with effects on open space qualities and amenity values of the coastal environment. This is primarily addressed through the evidence of Mr Lister, Mr Brown and Mr Hegley who all acknowledge there will be the potential for adverse effects on amenity values along the coastal environment related to the visual prominence and noise of the turbines. We accept the Applicant's proposition that the number of people using the coastal environment adjacent to the project site will be small and the potential noise effects of the WWF will be masked by sea conditions along the coastline.

667 Currently there is no formal or direct public access via the WWF project site to the coastal environment. We were told that access will only be restricted during construction. We were further told once construction is completed the existing public access opportunities across the project site provided by the owners will be able to continue subject to health and safety considerations. The Applicant told us it was committed to making provision for more formal public access to be provided to the coast through its easement agreement with the land owners. We see this as being consistent with policy 19 (3).

668 Objective 5 and policy 25 concern themselves with potential coastal hazard risks. We are satisfied based on the evidence we have received that potential coastal hazard risks have both been identified and have taken account of climate change.

669 Objective 6 and policy 6 concern themselves with utilisation of renewable resources that exist across parts of the coastal environment. We see that the

WWF will certainly be supportive of this objective and policy and we accept the evidence of Mr Delmarter and Mr Clough in that regard.

670 Objective 6 and policy 6 also concern themselves with ensuring development occurs in appropriate places and forms within the coastal environment. The functional need for the WWF to be located adjacent to the coastal environment given the wind resource is accepted. We also agree with the opinions of Mr Lister and Mr Brown that the WWF is an appropriate location for a wind farm because of the expense of scale of the landscape, the surrounding productive farmland, and the low density of dwellings in the area around the project site. In addition we accept the EBZ will ensure that adverse effect is on significant biophysical values in the coastal environment will be avoided.

NPSREG

671 The sole objective of this national policy statement seeks to provide for the development and operation of new and existing renewable electricity generation activities such that the proportion of New Zealand's electricity generated from renewable energy sources increases to levels that meets or exceeds the government's national target for renewable electricity generation.

672 Mr Turner in his evidence carefully assessed policy A which deals with the governments national target of 90% of New Zealand's electricity being generated from renewable sources by 2025, policy B(c) which will require significant development of renewable electricity generation activities, and policy C1 that recognises the practical and locational constraints associated with the development of renewable electricity generation activities. We agree with and adopt his analysis and conclusions that the WWF is consistent with these stated objectives and policy directives.

673 Policy C2 requires that we have regard to any offsetting measures or environmental compensation when considering any residual effects associated with renewable electricity generation activities that cannot be remedied or avoided. We agree with Mr Turner that the proposed financial contribution to the Ashburton River/ Hakatere shorebird management programme and the proposal to create or enhance foraging habitat to shag and other water bird species constitutes compensation measures which should be given appropriate regard in accordance with this policy. In our view we consider that the WWF is consistent with policy C2.

RPS

674 The RPS was made operative in 2010 and provides a strategic direction that the regional Council and local authorities will take to achieve the purpose of the

RMA. As with the ODP the RPS was prepared prior to the NZCPS and NPSREG coming into force. So it does not reflect the specific policy direction provided by the higher order statutory documents to promote the sustainable management of natural and physical resources.

675 The key outcomes sought by the RPS are identified by Mr Turner in his evidence and he details the evidence he relies upon to support his opinion that the WWF is consistent and or supportive of the objective and policy base of the RPS.

676 We agree Mr Turner that the Application subject to the proposed conditions would achieve the objectives and policies of the RPS and we accept and adopt his analysis and conclusions.

PDP (decisions version)

677 We have already agreed with the approach taken by Mr Turner to give those objectives and policies that are not subject to appeal greater weight with the corresponding provisions and the ODP being given extremely limited or effectively no weight.

678 As Mr Turner points out the key outcomes sought by the PDP (decisions version) mirror almost verbatim the objectives and policies of the NZCPS and the RPS. This being the case we agree that many of the conclusions will forward by Mr Turner in relation to these higher order statutory planning documents also apply to the PDP (decisions version).

679 We agree with Mr Turner that the WWF, subject to the qualifications we make below aligns well with the objectives and policies of the PDP (decisions version). In particular:

(a) We accept the evidence to the effect that the existing working character of the surrounding landscape increases the extent to which the WWF can coexist with productive rural activities in accordance with policy 2.1.11;

(b) We accept that there will be adverse effects on the amenity values for many properties, whose current views and outlook will be adversely affected to either a significant or more than minor degree by the WWF. The landscape mitigation offered by the Applicant may provide mitigation for some of these properties should the owners wish to take it up. But, we have not relied on this mitigation as some land owners, for good reason, as we heard during the hearing, may refuse to accept it. To that end, the WWF Proposal is inconsistent with policy 2.1.8. We return to this in our Part 2 assessment;

(c) We are satisfied that other amenity effects, such as noise, shadow flicker

and vibration, will be avoided, remedied or mitigated by the construction and operation of the WWF being managed in accordance with the applicable national and international standards as well as through the spatial separation provided by the EBZ. This accords with policy 2.1.8;

(d) In accord with objectives 2.7.5 and 2.7.7 the state highway and local road networks will be able to accommodate the loads and number of vehicles required to enable the construction of the WWF so that these objectives will be achieved;

(e) Archaeological sites such as they are identified on planning maps will be protected by the EBZ in accordance with objective 2.11.3;

(f) Policy 2.9.11 to restrict the development of energy resources activities within the CPA except where activities do not adversely affect the special values and qualities of this environment. We accept the WWF will not adversely affect the characteristics and qualities of the two ONC areas or the SNAs identified in the CPA primarily due to the use of the EBZ. We accept then the project is in accordance with policy 2.9.11;

(g) Policy 2.9.16 to recognise the potential available wind resource along the coast and South Taranaki. The establishment of the WWF recognises that the available wind resource and also recognises the locational and technical constraints associated with large scale renewable electricity generation activities;

(h) Policy 2.9.22 considers environmental compensation measures where adverse effects cannot be practically avoided remedied or mitigated with the project site. In the main we accept the project site itself does not raise issues but we agree particular in relation to the compensation paid for bird strike risk critically for native species the WWF satisfies this policy;

(i) Policy 2.10.4 seeks to avoid remedy or mitigate potential adverse effects of electricity transmission lines. We accept as a result of the route that has been selected and the specific design measures for the route along Swinbourne and Fookes Street this aligns with policy 2.10.4. In addition much of the length of the electricity transmission line route is to be located in utility corridors in accordance with policy 2.10.8. Further, we note that with the exception of noise which may be generated from time to time by certain atmospheric conditions, the proposed transmission lines are a permitted activity under the PDP.

(j) Policy 2.15.8 to ensure that adverse effects on the identified characteristics and qualities of the two ONC areas namely the Waipipi

Dunes and the Whenuakura Estuary are avoided. For reasons already advanced we are satisfied that will occur so that the proposal is in accordance with policy 2.15.8.

680 Matters pertaining to the protection of cultural and spiritual significance totangata whenua have been addressed particularly through agreements resulting in submissions raising cultural issues being withdrawn and in some cases replaced with written approvals.

681 Also for reasons already advanced we are satisfied that areas of significant indigenous vegetation and significant habitats of indigenous fauna will be protected and indigenous biodiversity will be maintained and enhanced. This is particular through the fencing of the Waipipi Stream and protection of the wetland areas.

682 We are also satisfied that potential coastal hazards had been appropriately identified and measures had been taken to ensure that adverse effects are avoided or minimised particularly hazards associated with wind erosion.

683 We are also satisfied that the WWF Proposal satisfies those policies and objectives relevant for the assessment of large scale renewable electricity generation activities and wind farms.

ODP

684 We agree with Mr Turner that the outcomes sought by the ODP are very similar to those in the PDP (decisions version). The ODP seeks to enable development within the rural and coastal environment, and recognises that some infrastructure may have an operational need to locate in potentially sensitive areas. However the ODP establishes a clear framework that seeks to maintain or protect amenity, natural character, rural character, and cultural values through the avoidance, remediation or mitigation of potential adverse effects.

685 We agree, subject to the reservations we have expressed regarding policy 2.1.8 of the PDP with Mr Turner that his analysis of the PDP (decisions version) equally applies to the ODP and we accept that the measures proposed by the Applicant in order to avoid or mitigate the potential effects of the WWF results in an outcome that the wind farm and the transmission line can be established in a manner that is broadly consistent with the overall intent of the ODP.

OTHER MATTERS

686 Both Mr Turner and Mr Welsh identify a number of other matters requiring consideration in accordance with section 104 (1) (c) RMA. They are the New Zealand Energy Strategy 2011 – 2021, the Ngaa Rauru Kitahi Puutaiou Management Plan, the Ngati Ruanui Environmental Management Plan and the two statutory acknowledgements for the Whenuakura River.

687 We accept these are relevant other matters. It was Mr Turner's opinion that the WWF is either consistent with or does not raise any additional matters to those already acknowledged in relation to the relevant statutory planning documents. In particular he noted in relation to the Whenuakura River statutory acknowledgement area that the WWF will not affect the use, ecology or functioning of the river. He drew our attention to the abstraction of groundwater from the aquifer adjacent to the river noting that that activity has been determined by the TRC to have measurable effect on the aquifer when it determined issuing a consent to abstract groundwater met the purpose of the RMA.

688 We also agree with him that the EBZ has been designed or has the effect to ensure the project avoids the river it and intact dunes. These being areas where there may be connections with cultural sites associated with the occupation of the river. We also agree that the WWF will not impact on the wider ecological values of the river estuary taking into account the evidence of Dr Sanders and Mr Fuller.

689 So in conclusion we adopt Mr Turner's opinion that the Application subject to the proposed conditions will satisfy the objectives purpose and requirements of these other matters.

PART 2 OF THE RMA

Section 6 RMA

690 There are six matters of national importance as stated in section 6 of the RMA of relevance to this Application. They are 6(a), (b) (c), (d), (e) and (f).

691 Dealing with 6(a), which requires recognition and provision for the preservation of the natural character of the coastal environment, wetlands, lakes and rivers and their margins and the protection of them from inappropriate subdivision, use and development, we accept that the WWF will have an influence on the characteristics and qualities that complies the natural character of the coastal environment.

692 However, because we accept primarily the opinions and assessments of Mr Lister and Mr Brown, we agree that such effects are limited by a number of factors particularly that WWF will have little real impact on public perception of Waverley's coastal environment because of the extent to which it is physically enclosed and visually screened by existing farms.

693 We do accept, as promoted by Mr Brown and Mr Lister that the existing areas of modification and productive activity both on the WWF project site and nearby restrict the degree to which the WWF might diminish the natural qualities of the coastal environment.

694 With respect to the natural character values of the waterbodies with in the project site, the Waipipi Stream, which is currently degraded, will certainly be improved by the imposition of the conditions proposed by the Applicant. There are a number of other restorative measures proposed and we agree that they will enhance the natural character of the stream and the two wetlands within the EBZ. So we conclude section 6(a) matters will be recognised and provided for.

695 Turning to section 6(b) we are satisfied that the WWF will not affect the protection of any ONFs/ONLs within the South Taranaki District. Neither the project site nor the transmission line are identified as an ONF/ONL and further the project site itself will not, we have found, affect the landscape values of the nearest features and landscapes. In this way the matters of national importance provided for in section 6(b) will be recognised.

696 As to section 6(c) which deals with the protection of significant indigenous vegetation and significant habitats of indigenous fauna such areas are identified by the relevant statutory planning documents adjacent to the project envelope. Essentially due to the EBZ these areas will be recognised and provided for.

697 Given the project envelope itself has negligible or low ecological values primarily being pasture the WWF itself will have negligible ecological effects. Protection of significant indigenous fauna is recognised and provided for through the assessment that important New Zealand native species will be negligibly affected by the WWF. However the compensatory measures proposed by the Applicant will, we agree contribute protection of significant indigenous fauna so in that way the protection of significant habitats of indigenous fauna will be recognised and provided for.

698 Section 6(d) recognises and seeks to provide for the maintenance and enhancement of public access to and along the coastal marine area lakes and rivers. Public access to the coastal marine area will be improved once the WWF is operational subject to safety and health requirements. In this way section of the matters will be both recognised and provided for.

699 Section 6(e) relates to the relationship between Māori and their culture and traditions associated with their ancestral lands, water, sites, wahi tapu and other taonga. In our view based on the Applicant's evidence, s6(e) matters have been recognised and provided for through consultation and discussions which have culminated in the withdrawal of cultural submissions which have in some cases been replaced with written approvals under s 104(3)(a)(ii) RMA and private agreements. We think we can safely assume those outcomes would not have resulted if the matters within s6(e) had not been recognised and provided for and we are satisfied they have been.

700 Section 6(f) deals with the protection of historic heritage from inappropriate subdivision use and development. We have accepted that both the project envelope and electricity transmission line are both in locations where the likelihood of encountering archaeological sites is low. Nevertheless through the proffering of appropriate conditions to address potential accidental discovery of archaeological sites we consider section 6 (f) matters are appropriately recognised and provided for.

Section 7 RMA

701 We have had particular regard to the matters in section 7 of the RMA. Section 7 (a) and (aa) requires us to have particular regard to kaitiakitanga and the ethic of stewardship. The relationship with relevant iwi has been evidenced by consultation, negotiation and ultimately agreement, including by way of conditions of consent. To us this demonstrates how tangata whenua interests and any cultural impacts of the WWF Proposal has been provided for.

702 Section 7(b) is concerned with the efficient use and development of natural and physical resources. The WWF will enable the generation of approximately 490 GW hours of electricity per annum from the wind resource that exists at the project site. We have been told it will contribute to the displacement of CO2 producing energy sources. As well is that the placement of the wind turbines will coexist on the project site with existing agricultural activities continuing. For these reasons we conclude the WWF will result in the efficient use and development of natural and physical resources.

703 Section 7(c) is concerned with the maintenance and enhancement of amenity values. The main tool used by the Applicant to both minimise and vindicate potential amenity effects is the setbacks provided through utilising the EBZ, controls on shadow flicker and controls in relation to noise and the offer of landscape mitigation. The range of management plans will also assist during the construction phase to maintain the amenity values. However we acknowledge that the WWF Proposal will for some residents result in a reduction in amenity values as a result of predominantly visual effects. We accept that the erection of the WWF

will result in a significant change to the appreciation that many have through their visual outlook across the site and the amenity they enjoy on their properties because of this.

704 In respect of the transmission line route selection and the design of the transmission line itself have we accept been undertaken to avoid the potential for disturbance to the amenity enjoyed individuals and the local community. We acknowledge and accept that from a proposal of this size there will be a change in amenity for some individuals. We are also mindful of and have, what we consider is appropriately, applied the permitted baseline in considering the difference between what is permitted as-of-right through the District Plans and what is proposed.

705 Section 7 subsections (d)(f) and (g) relate to the intrinsic values of ecosystems, the quality of the environment, and the finite characteristics of natural and physical resources. Again we consider utilisation of the EBZ retains the intrinsic values of ecosystems and maintains the quality of the environment and pays particular regard to the finite characteristics of natural and physical resources. The evidence we received and accepted from Dr Sanders, Mr Lister, Mr Brown and Mr Fuller demonstrates to us that particular regard has been given to the intrinsic values of ecosystems and the maintenance of the quality of the environment. Examples of this are collision monitoring conditions and the fencing of the Waipipi Stream. In all, we find that apart from the potential effects on avifauna, which is to be mitigated and compensated, there will be positive ecological outcomes arising from WWF.

706 Section 7(i) is concerned with the effects of climate change. They are addressed in the evidence of Dr Single and he provided us with details in relation to the coastal environment activities as influenced by climate change. As we understood his evidence the effects of climate change through the likes of coastal flooding and/or sea level rise is not considered to be a potential hazard for the WWF. We accepted those views.

707 Section 7(j) provides we should give particular regard to the benefits to be derived from the use and development of renewable energy. We earlier accepted the evidence of Mr Delmarter and Mr Clough when they detailed their opinions about the level of benefits the WWF will contribute to local regional and national communities through the provision of additional generation capacity. We also accept likely benefits include assisting New Zealand in being able to displace or replace CO2 to limiting sources of electricity generation.

Section 8 RMA

708 In achieving the purpose of the RMA, we have taken into account as required by section 8 RMA, the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). We agree with Mr Turner that the Applicant is not a person exercising functions and powers under the RMA for the purpose of these resource consent Applications. Nevertheless the Applicant, through its actions, in particular through consulting with and ultimately reaching agreement with the iwi assist us in being assured that the principles of the Treaty are appropriately taken into account when we exercise our functions and powers on behalf of the STDC under the RMA.

Section 5 RMA

709 In light of the contrasting decisions in Davidson and Envirofume cases dealing with Part 2 we have accepted the approach advanced by Mr Welsh and supported by Mr Turner and considered the WWF against the relevant matters under Part 2 of the RMA.

710 The purpose of the RMA is to promote the sustainable management of natural and physical resources. That is, 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 well-being and for their health and safety while:

(a) sustaining the potential of natural and physical resources 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.

711 In our view the WWF will enable the wind resources of the South Taranaki coastline to be utilised in a manner that will provide for the social and economic well-being for people and communities at a local, regional and national scale. We consider that the mitigation measures proposed included in the consent conditions will ensure that, for the most part, the well-being of people having direct relationships with the local area will continue to be provided for. Matters we identify as important in achieving that outcome are the EBZ, compliance with noise standards, provision of landscape mitigation and limits regarding shadow flicker. For some residents, we accept that there will be a loss in amenity arising from the WWF. We have carefully considered this impact on their amenity alongside the

benefits accruing from the WWF Proposal and the mitigation and compensation offered by the Applicant.

712 In our overall judgement, we consider that given the satisfaction with the relevant section 6 RMA matters of national importance and the other relevant section 7 RMA other matters, the granting of this consent is preferable to refusing it because of the loss of amenity values for some properties. Further, we are mindful that the amenity that would be lost for any of the effected properties, is not their entire area of outlook; that is, no party would have to be subject to their entire outlook and amenity being lost.

713 We consider the WWF will sustain natural resources and the life supporting capacity of water, soil and ecosystems. This is primarily achieved through the adoption of the EBZ which will ensure that all important areas within the wind farm project site are protected. Other mitigation measures proposed including fencing of streams and transfer of fish and plants are also important in this regard. We are satisfied both through the monitoring proposed and also through the compensatory conditions that national populations of native bird species will be appropriately provided for. The removal of farm ponds will also help ensure the life supporting capacity of resident bird populations within the project site as removal will promote establishment of alternate habitats off-site.

714 Finally the range of measures we have included within Annexure A and B which are the relevant conditions for each of the consents will avoid remedy or mitigate adverse effects on the environment to the appropriate level.

CONSIDERATION OF CONSENT DURATION

715 The Applicant seeks a 10 year lapse period. It also seeks to personalise the grant of consent request a condition specifying that the consent may only be exercised by the consent holder, its successor, or any other person acting under the prior written approval of the consent holder.

716 The Applicant explains this condition is required because it does not own the land upon which the WWF will be constructed and operated.

717 Mr Forrest in his section S42A Report considers these matters and agrees that it is appropriate and reasonable that any land use consent be granted specifically to the Applicant however he differs from the Applicant in terms of reasons. Mr Forrest contends the more important reason to personalise the consent is that the Applicant has undertaken considerable consultation with affected parties and submitters in good faith and has agreed to either put in place measures to meet

or ameliorate submitter's concerns some of which are secured by consent conditions but some have been secured by agreement with individual submitters outside the RMA process. So it is Mr Forrest's view if the consent were not specific to the Applicant or a success or approved by the Applicant then these side agreements may be in jeopardy.

718 In our view there is some force in Mr Forrest's opinion. We agree it is appropriate that a condition specifying that this consent may only be exercised by the consent holder or its successor or any person acting under the prior written approval of the consent holder. Our reasons are similar to those advanced by Mr Forrest but we also think appropriate reasons are the fact that the Applicant has undertaken and paid for all the investigative and preliminary assessments for this particular proposal. Also such a condition recognises the reality that the Applicant does not own the land upon which the WWF is intended. So the usual approach under the RMA of a land use consent attaching to and running with the land is not appropriate. Condition 3 provides for this certainty.

719 As to the lapse date we agree a 10 year lapse date is appropriate for the reasons set out within the AEE at page 6 and for the reasons advanced both in submissions and evidence to us. This is a significant project of some scale. Construction of the wind turbines includes settling on a specification and then ordering and having wind turbines manufactured offshore and being delivered to the project site. Many of the conditions also involve monitoring being undertaken in advance of construction works. So this project phase alone could take considerable time. An appropriate period of time should be allowed and what is appropriate is influenced by how much time would be utilised in giving effect to the project in an orderly way.

720 A 10 year lapse period also builds and a degree of flexibility allowing the Applicant to take the benefit of the most favourable economic and an electricity demand circumstances.

721 Our final reason the is a 10 year lapse period is consistent with a range of other consented wind farm applications.

CONCLUSION

722 On the basis of the evidence before us and for the reasons set out above, we consider that the purpose of the RMA can best be achieved by granting the resource consents relating to the construction and operation and maintenance of

the WWF and for the related transmission line sought with the imposition of consent conditions.

723 We accept the Applicant's evidence that the WWF will have significant and demonstrable positive effects in terms of sustaining the social and economic well-being of the local regional and national community.

724 Also we accept the Applicant has given extensive and robust consideration to the natural and physical resource values of the project site in developing and designing the WWF and also in designing and selecting the route of the electricity transmission line.

725 We accept the WWF and to a lesser level the transmission line will have some effects on the environment. However in our view the Applicant has demonstrated through its evidence and through the proposed conditions how those effects can be appropriately avoided remedied or mitigated as far as practicable.

726 In our view and based upon all of the evidence we have heard from both Applicant submitters and section 42A officers it is our view the project site is an appropriate location for a wind farm and that the construction and operation and maintenance of the WWF and its transmission line will promote the sustainable management of natural and physical resources in accordance with Part 2 of the RMA.

727 Overall it is our decision that the WWF and the transmission line aligns well with and is broadly consistent with the relevant objectives and policies of the NZCPS, the NPSREG, the RPS, the ODP and finally the PDP.

CONDITIONS

728 There was considerable discussion about conditions during the course of the hearing. The reporting officers and submitters and the Applicant all contributed to that conversation.

729 Also we record Mr Turner and is evidence provided us a very valuable and fulsome critique of the conditions detailing the particular purpose each condition was directed at achieving.

730 We have carefully considered and reviewed the conditions and we are satisfied that, with our amendments, they serve an appropriate resource management purpose, that they are certain and clear and that they will ensure that the actual and potential adverse effects of both the wind farm and the transmission line are appropriately avoided remedied or mitigated in accordance with the expert advice we have received.

731 The conditions have been **attached** to this decision in **Appendix A** (conditions relating to the construction, operation and maintenance of WWF) and **Appendix B** (conditions in relation to the transmission line). They are documented separately reflecting the separate resource consent applications that have been made by the Applicant and that the actual and potential environmental effects associated with these activities and there are so shattered works are different.

DECISION

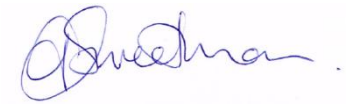
732 For the reasons outlined above, it is the decision of the STDC, pursuant to sections 104, 104(B) and 108, and subject to Part 2 of the RMA, to GRANT the following resource consents:

Land use consent: RML16030.1 for the construction operation and maintenance of the Waverley Wind Farm as described in the Application by Transpower Limited (now Tararua Wind Power Limited) dated 14 April 2016 (all held on STDC file RML16030) subject to the conditions set out in Appendix A attached to and forming part of this decision; and

Land use consent: RML16030.2 for the construction, operation and maintenance of a single circuit 110 KV transmission line between the Waverley Wind Farm and an electrical substation on Mangatangi Road Waverley as described in the Application by Transpower Limited (now Tararua Wind Power Limited) dated 14 April 2016 (all held on STDC file RML16030) subject to the conditions set out in Appendix B attached to and forming part of this Decision.

Dated this 7th day of July 2017

Paul Rogers (Chair)



Gina Sweetman

Shannon Bray

APPENDIX A

CONSENT AUTHORITY:	South Taranaki District Council
CONSENT HOLDER:	Tararua Wind Power Limited
CONSENT TYPE:	Land Use Consent
ACTIVITY AUTHORISED:	The construction, operation and maintenance of the Waverley Wind Farm
SITE LOCATION:	Peat Road and Dryden Road, Waverley
CONSENT DURATION:	Unlimited

GENERAL

1 The construction, operation and maintenance of the Waverley Wind Farm shall be undertaken in general accordance with the information provided in *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 and any other documentation relevant to the resource consent applications, including responses to requests for further information from the South Taranaki District Council in accordance with Section 92 of the Resource Management Act 1991 (all held on South Taranaki District Council file RML16030). In the event of any conflict or discrepancy between these documents and the conditions of this resource consent, the conditions shall be determinative.

2 Pursuant to Section 125(1) of the Resource Management Act 1991, this resource consent shall lapse if not given effect to within 10 years of the commencement of this resource consent.

3 Pursuant to Section 134(1) of the Resource Management Act 1991, this resource consent may only be exercised by the consent holder, its successor, or any person acting under the prior written approval of the consent holder.

4 The consent holder shall ensure that all contractors engaged to undertake activities authorised by this resource consent are made aware of the conditions of this resource consent relevant to their work area and the measures required for compliance with the conditions.

5 The consent holder shall notify the Group Manager - Environmental Services, South Taranaki District Council as to the commencement date of construction works authorised as part of this resource consent, at least 15 working days before such works commence.

6 The consent holder shall at all times construct, operate and maintain the Waverley Wind Farm in accordance with all management plans submitted to, and certified by, the Group Manager - Environmental Services, South Taranaki District Council as part of the conditions of this resource consent.

WIND FARM AND TURBINE CHARACTERISTICS

7 The maximum number of wind turbines in the Waverley Wind Farm shall not exceed 48.

8 The maximum wind turbine height (to the vertically extended blade tip) shall be 160 metres above finished ground level.

8A. The minimum height of the vertically extended blade tip of any wind turbine shall not be less than 30 metres above finished ground level.

9 All wind turbines utilised within the Waverley Wind Farm (including any replacement wind turbines that are installed during the life of the wind farm) shall be of a similar size and type and have three blades. For the avoidance of doubt the wind turbines shall not be stall regulated.

10 Lattice style pylon towers shall not be used for the wind turbine structures.

11 All wind turbines and turbine blades used within the Waverley Wind Farm shall be finished with the same industry standard low reflectivity finishes and in an off-white colour.

12 Each wind turbine may include one externally housed transformer unit located adjacent to the base of the turbine. The maximum height of any externally housed transformer unit shall be 2.5 metres above finished ground level and the maximum building footprint shall not exceed 25 m^2.

13 All wind turbines, turbine platforms, hard stand areas and externally housed transformer units authorised as part of this resource consent shall be located within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental*

Effects" dated 14 April 2016. However, no wind turbines, turbine platforms, hard stand areas or externally housed transformer units shall be located within the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017.

14 Wind turbines within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 shall be spaced so that an ellipse drawn around each wind turbine and orientated to the prevailing wind at 315 degrees from due north, with the long axis being four times the diameter of the rotor and the narrow axis being 2.5 times that diameter, does not overlap the ellipse drawn around any other wind turbine identified in the final turbine layout for the Waverley Wind Farm required in accordance with Condition 26.

15 No wind turbines, turbine platforms or externally housed transformer units (but excluding hard stand areas) shall be established on any road reserve within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, except where the approval of the Group Manager – Corporate Services, South Taranaki District Council has been provided in writing.

16 All wind turbines shall be set back at least one blade length from the project site boundaries and Environmental Buffer Zone, as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 and the figure by Isthmus Group dated April 2017, so that wind turbine blades do not encroach the airspace outside the project site boundaries and the Environmental Buffer Zone.

SUPPORTING INFRASTRUCTURE

17 The maximum number of wind monitoring masts in the Waverley Wind Farm shall not exceed 6, including the three wind monitoring masts already erected within the project site boundaries as at the date of granting this resource consent.

18 The maximum height of each wind monitoring mast shall be 110 metres above finished ground level or the hub-height of the installed wind turbines, whichever is the greater.

19 The maximum height of the concrete batching plant shall be 10 metres above finished ground level and the maximum working area associated with the concrete batching plant shall not exceed 7,500 m^2. The concrete batching plant shall be decommissioned and removed from the project site within six months of completion of construction works for the Waverley Wind Farm.

20 The maximum height of the operations and maintenance building shall be five metres above finished ground level and the maximum building footprint shall not exceed 600 m^2.

21 The maximum height of the electricity substation / switchyard building shall be five metres at finished ground level, with gantry structures and lighting / lightening arrestors not exceeding 22 metres in height. The maximum building footprint of the electricity substation / switchyard, inclusive of car parking, shall not exceed 10,000 m^2.

22 During the construction of the Waverley Wind Farm the maximum width of the internal access road network within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 shall not exceed 10 metres, with an additional one metre shoulder on either side. All internal access roads shall be rehabilitated to a maximum width of five metres, with an additional 0.5 metre shoulder on either side, within 12 months of completion of construction works for the Waverley Wind Farm.

Note: For the purpose of this condition and other conditions relating to the completion of construction works, completion of construction works means the issuance by the consent holder of a construction completion certificate under a construction contract to the wind turbine supplier or similar. A copy of any construction completion certificate should be provided to the Council.

23 All supporting infrastructure to the Waverley Wind Farm authorised as part of this resource consent shall be located within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016. However, no supporting infrastructure to the Waverley Wind Farm shall be located within the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017.

24 Notwithstanding Condition 23 above, culvert crossings (both new and replacement) and associated internal access roads (including underground 33 kV transmission lines and fibre optic cabling) may be constructed, operated and maintained within the Environmental Buffer Zone at the six locations identified in Section 3.6.4 of "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016.

PLANS

25 At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Group Manager - Environmental Services, South Taranaki District Council with a set of final design drawings for the Waverley Wind Farm. The final design drawings shall, as a minimum, include:

(a) The layout and spacing of the wind turbines;

(b) The specifications of the wind turbines, turbine platforms, foundations and hard stand areas;

(c) The location and specifications of all supporting infrastructure;

(d) The layout and pavement composition of the internal access road network;

(e) The location of all fill disposal sites; and

(f) The location of the Cultural Cautionary Zone.

26 Within 40 working days of construction of the Waverley Wind Farm being completed (or after each stage, if the Waverley Wind Farm is constructed in stages), the consent holder shall provide the Group Manager - Environmental Services, South Taranaki District Council, Ngaa Rauru Kiitahi and Te Runanga o Ngati Ruanui Trust with a set of as-built plans for the following:

(a) All wind turbines, turbine platforms and foundation areas;

(b) The internal access road network;

(c) All fill disposal sites;

(d) All permanent supporting infrastructure site; and

(e) Engineering survey plans and sections of major earthworks.

EARTHWORKS AND CONSTRUCTION

27 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Earthworks and Construction Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 27(a) to (g). The Earthworks and Construction Management Plan shall be prepared by an experienced and appropriately qualified person and shall provide for the following objectives:

(a) Minimise the volume of earthworks required for the construction of the Waverley Wind Farm;

(b) Maximise the effectiveness of erosion and sediment control measures associated with earthworks by minimising sediment generation and sediment laden runoff;

(c) Minimise the overall area of disturbance so as to reduce the potential impact on any vegetation, streams, wetlands and potential archaeological features within the project site boundaries;

(d) Ensure control and / or mitigation of the adverse effects of any dust emissions;

(e) Minimise the effects, and introduction, of weeds;

(f) Ensure that fill disposal sites are contoured to reflect the surrounding sand dune landforms; and

(g) Rehabilitate and re-vegetate worked areas so that they are returned to pasture or their existing vegetative cover.

28 In order to achieve the objectives established in Condition 27 above, the Earthworks and Construction Management Plan shall, as a minimum, address the following matters:

(a) An explanation of how the Earthworks and Construction Management Plan shall be implemented and the associated roles, responsibilities and contact details for the principal persons responsible for management during the construction period;

(b) A clear description of the planned staging of works and the description of earthworks in each stage, including detailed site plans;

(c) Detailed measures for groundwater control and subsoil drainage;

(d) Detailed measures for the draining and infilling of ponds;

(e) Confirmation of the volumes of cut, fill and unsuitable material;

(f) The location and design of fill disposal sites within the project site boundaries;

(g) The engineering controls, supervision and certification that will be applied to each stage of development;

(h) The specific erosion and sediment control measures that will be applied to each stage of earthworks;

(i) The engineering and management procedures for material sources, use, disposal and treatment, stockpiling, fill placement and disposal of unsuitable materials;

(j) The specific dust control measures that will be applied to each stage of earthworks and fill disposal sites;

(k) The measures to contain / manage contaminant runoff and stormwater runoff from the concrete batching plant;

(l) The measures to ensure that worked areas are rehabilitated and re-vegetated as soon as practicable following earthworks, including:

  (i) The identification of the vegetation or pasture types and re-vegetation material and techniques to be used for rehabilitation purposes;
  (ii) The programme and timing of re-vegetation and maintenance activities so that stabilised surface coverage of 80% is achieved;
  (iii) The retention of surface cover in order to reduce the effects from sediment-laden stormwater runoff;
  (iv) Contouring of side-throw material and grading out or feathering of any cut / fill batters to merge with the landform contours, where appropriate; and
  (v) The identification of weed management activities to be undertaken.

(m) Details on the frequency of inspections and monitoring of all stormwater, dust, erosion and sediment control measures throughout each stage of

construction works, including details of the experienced and appropriately qualified person responsible for inspections and monitoring.

29 All earthworks required for the construction of the Waverley Wind Farm shall be undertaken in accordance with the Taranaki Regional Council's "*Guidelines for Earthworks in the Taranaki Region, 2006*."

30 No earthworks or construction works authorised as part of this resource consent shall occur within the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017, except where necessary to give effect to Conditions 24 and 64(d).

NOISE

Construction and Maintenance Noise

31 Noise from all construction and maintenance works associated with the Waverley Wind Farm (excluding the operation of the concrete batching plant) shall be measured and assessed in accordance with the requirements and limits of "*NZS6803:1999 Acoustics – Construction Noise*."

32 At least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Noise Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 32(a), (b) and (c). The Construction Noise Management Plan shall be generally in accordance with Section 8 and the relevant annexures of *"NZS6803:1999 Acoustics – Construction Noise",* which detail the relevant types of construction to which the Construction Noise Management Plan is to apply, and the procedures that will be carried out to ensure compliance with the standard. The objectives of the Construction Noise Management Plan shall be to ensure construction works are:

(a) Designed and implemented to comply with the requirements of *"NZS6803:1999 Acoustics – Construction Noise"*, as measured and assessed in accordance with the long term noise limits set out in the standard;

(b) Implemented in accordance with the requirements of Section 16 of the Resource Management Act 1991, so as to adopt the best practicable option to ensure the emission of noise from the project site does not exceed a reasonable level; and

(c) Implemented so that, where practicable, heavy vehicle movements do not occur between the site and State Highway 3 between 10 pm and 7 am (unless necessary for the completion of delivery of project components or over-sized loads to the site).

33 In order to achieve the objectives established in Condition 32 above, the Construction Noise Management Plan shall include those matters set out in Section 8 and Annex E of "*NZS 6803:1999 Acoustics – Construction Noise"* and shall, as a minimum, address the following matters:

(a) The operating hours for the construction works and any time restrictions on the operation of heavy vehicles, machinery and equipment;

(b) Details on the machinery and equipment to be utilised during the construction works, and any required mitigation measures associated with the operation of the machinery and equipment;

(c) Predictions of sound levels from the machinery and equipment to be utilised during the construction works;

(d) Details on the noise monitoring programme to be undertaken during the construction works;

(e) The procedure for the reporting of any exceedances of *"NZS6803:1999 Acoustics – Construction Noise"* to the Group Manager - Environmental Services, South Taranaki District Council; and

(f) The procedures for the reporting and logging of noise related complaints, including the need for additional monitoring following the receipt of noise complaints.

34 The Construction Noise Management Plan shall be prepared by an appropriately qualified and experienced acoustical consultant.

34A. Noise generated from concrete batching within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, shall not exceed the following limits when measured at the boundary of any rural zoned site (excluding those properties where the property owner has provided their written approval and where this approval has been provided to the Group Manager - Environmental Services, South Taranaki District Council):

7.00 am to 10.00 pm	55 dBA $L_{Aeq\ (15\ mins)}$

10.00 pm to 7.00 am	45 dBA $L_{Aeq\ (15\ mins)}$
10.00 pm to 7.00 am	75 dBA L_{max}

Except where otherwise expressly provided for, noise shall be measured in accordance with the requirements of *"NZS6801:2008 Measurement of Sound"* and assessed in accordance with the requirements of *"NZS6802:2008 Assessment of Environmental Sound"*.

Operational Noise (Non-Wind Turbine Related)

35 Noise generated from all other activities within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, other than wind turbine operation and construction activities, shall not exceed the following limits when measured at, or within, the notional boundary of any dwelling in existence or authorised by a resource consent or a building consent at the date of notice of the decision on the resource consent applications for the Waverley Wind Farm under s114 of the Resource Management Act (excluding those dwellings on properties on which wind turbines are to be located, or where the property owner has provided their written approval and where this approval has been provided to the Group Manager - Environmental Services, South Taranaki District Council):

7.00 am to 10.00 pm	55 dBA $L_{Aeq\ (15\ mins)}$
10.00 pm to 7.00 am	45 dBA $L_{Aeq\ (15\ mins)}$
10.00 pm to 7.00 am	75 dBA L_{max}

Except where otherwise expressly provided for, noise shall be measured in accordance with the requirements of *"NZS6801:2008 Measurement of Sound"* and assessed in accordance with the requirements of *"NZS6802:2008 Assessment of Environmental Sound".*

Operational Noise (Wind Turbines)

36 The wind turbines shall be designed, constructed, operated and maintained so that sound levels from the Waverley Wind Farm comply with the requirements of *"NZS6808:2010 Acoustics – Wind Farm Noise."* For the avoidance of doubt, this condition shall require the wind turbines to be designed, constructed, operated and maintained so that the Waverley Wind Farm sound levels ($L_{A90\ (10\ min)}$) shall not exceed the background sound ($L_{A90\ (10min)}$) plus 5 dBA or a level of 40 dB ($L_{A90\ (10\ min)}$), whichever is the greater. The background sound plus 5dBA shall only be used where a background noise survey has been undertaken in

accordance with *"NZS6808:2010 Acoustics – Wind Farm Noise"* by an appropriately qualified and experienced acoustical consultant and has been submitted in advance for the Group Manager-Environmental Services, South Taranaki District Council for endorsement acting in a technical certification capacity.

Wind farm sound shall be measured and assessed in accordance with *"NZS6808:2010 Acoustics – Wind Farm Noise"* within the notional boundary of any residential dwelling in existence or authorised by a resource consent or building consent at the date of notice of the decision on the resource consent applications for the Waverley Wind Farm under s114 of the Resource Management Act (excluding dwellings on properties on which wind turbines are to be located, or where the property owner has provided their written approval and where this approval has been provided to the Group Manager – Environmental Services, South Taranaki District Council).

Note: For the avoidance of doubt, and for the purpose of compliance with Condition 36, the "Reference Test Method" shall be adopted for testing whether the Waverley Wind Farm has tonal special audible characteristics, as prescribed as Annex C to ISO 1996-2:2007, in accordance with Appendix B of "NZS6808:2010 Acoustics – Wind Farm Noise."

37 Prior to the installation of any wind turbine authorised as part of this resource consent, the consent holder shall submit a Noise Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 37(a) and (b). The objectives of the Noise Management Plan shall be to ensure:

(a) The operation of the Waverley Wind Farm complies with the requirements of Condition 36 of this resource consent; and

(b) Operational noise from the Waverly Wind Farm is managed in accordance with the requirements of Section 16 of the Resource Management Act 1991, so as to adopt the best practicable option to ensure the emission of noise from the project site does not exceed a reasonable level.

38 In order to achieve the objectives established in Condition 37 above, the Noise Management Plan shall, as a minimum, address the following matters:

(a) An assessment of background sound levels in accordance with the requirements of *"NZS6808:2010 Acoustics – Wind Farm Noise"* prior to the commencement of any construction work;

(b) Wind turbine selection, having regard to the sound power level predictions

obtained in accordance with Section 6.2 and the special audible characteristics in Clause 5.4.1 of "*NZS6808:2010 Acoustics – Wind Farm Noise";*

(c) Procedures for ensuring compliance with the noise conditions of this resource consent, including noise compliance testing, methods for addressing non-compliance, designated contact persons, and complaints procedures;

(d) Procedures for addressing turbine malfunctions that cause material noise effects beyond typical operational noise;

(e) Procedures for ensuring that the best practicable option is adopted to ensure the emission of noise from the operation of the Waverley Wind Farm does not exceed a reasonable level;

(f) Requirements for post construction noise monitoring and assessment; and

(g) Provisions regarding the review, and updating, of the Noise Management Plan.

39 The Noise Management Plan shall be prepared by an appropriately qualified and experienced acoustical consultant.

40 The consent holder shall pay all reasonable costs associated with acoustic compliance testing or assessment undertaken in accordance with this resource consent.

Pre-Instalment Assessment

41 Prior to the installation of any wind turbine authorised as part of this resource consent, the consent holder shall provide the Group Manager - Environmental Services, South Taranaki District Council with an Acoustics Emissions Report to certify that the wind turbines will comply with the requirements of Condition 36 of this resource consent.

42 Prior to the installation of any wind turbine authorised as part of this resource consent, the consent holder shall provide a Noise Prediction Report to the Group Manager - Environmental Services, South Taranaki District Council to certify in accordance with *"NZS6808:2010 Acoustics – Wind Farm Noise"* (in particular Sections 8.1 and 8.4.2). The Noise Prediction Report shall:

(a) Demonstrate, based on the sound power levels for the selected wind turbines, that the limits in Condition 36 of this resource consent can be complied with; and

(b) Include the finalised 35 dBA contour for the Waverley Wind Farm.

Background noise surveys

43 Prior to the commencement of construction works authorised as part of this resource consent (other than geotechnical or other exploratory surveys), the consent holder shall engage an appropriately qualified and experience acoustic consultant to undertake pre-installation background noise surveys at positions identified by the consent holder in consultation with the Group Manager – Environmental Services, South Taranaki District Council. Pre-installation background sound level measurements shall be made at all assessment locations required by Condition 36 that are within the 35 dB ($L_{90\ (10\ min)}$) wind farm noise contour predicted by the Noise Prediction Report (required by Condition 42). The assessment locations may be grouped as described by Section 7.1.5 of *"NZS 6808:2010 Acoustics – Wind Farm Noise"*. The surveys shall be undertaken, and results assessed, in accordance with Sections 7 and 8.2 of *"NZS6808:2010 Acoustics – Wind Farm Noise".* The results of the survey shall be provided to the Group Manager – Environmental Services, South Taranaki District Council for endorsement acting in a technical certification capacity prior to the commence of construction works authorised as part of this resource consent (other than geotechnical or other exploratory surveys).

Note: For the avoidance of doubt, the previous background sound monitoring undertaken by Malcolm Hunt Associates in 2007 is now out of date and should not be used in any way as part of the pre-construction background noise surveys.

Compliance Testing

44 A compliance assessment report shall be prepared in accordance with Section 8.4.1 of *"NZS6808:2010 Acoustics – Wind Farm Noise"* by a suitably qualified independent person agreed to by the South Taranaki District Council and shall be submitted to the Group Manager – Environmental Services, South Taranaki District Council for certification within three months following the date any wind turbine first generates electricity and again within three months of electricity being generated from the last turbine to be commissioned. Measurement positions used for compliance testing shall include (but not be limited to):

Site #61 – 330 Peat Road
Site #110 – 247 Waipipi Road
Site #54 – 564 Waverly Beach Road
Site #98 – 395 Rākaupiko Road

Alternative positions shall be selected if the owner / occupiers do not allow noise monitoring to take place at any of these sites. Any alternative position shall be agreed to by the Group Manager-Environmental Services, South Taranaki District Council, prior to undertaking the noise monitoring.

Peer Review

45 The consent holder shall provide the results of long term monitoring undertaken in accordance with Condition 44 of this resource consent to the Group Manager – Environmental Services, South Taranaki District Council in the event that this is required for the peer review of any of the management plans or reports identified in the above conditions. The Group Manager – Environmental Services, South Taranaki District Council may have any plan or report reviewed by an independent expert at the consent holder's cost. In addition, the results of the long term monitoring shall be provided to Ngaa Rauru Kiitahi and Te Runanga o Ngati Ruanui Trust.

TRAFFIC

46 The routes, vehicle types, traffic movements and traffic generation related to the Waverley Wind Farm shall be in general accordance with those described in the Transportation Assessment by Traffic Design Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016.

Construction Traffic Management Plan

47 At least 30 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Traffic Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 47(a) to (g). The objectives of the Construction Traffic Management Plan shall be to:

(a) Ensure all specific legislative requirements (e.g. statutes, regulations and / or bylaws) and consent conditions in relation to construction traffic are adhered to;

(b) Encourage a culture of road safety awareness and commitment;

(c) Ensure best practice in transport safety;

(d) Ensure emergency services are not obstructed;

(e) Minimise disruption to the surrounding community, farming operations, rural services and rail operations;

(f) Minimise traffic generation; and

(g) Encourage the participation of the surrounding community in maximising safety and minimising disruption.

48 In order to achieve the objectives established in Condition 47 above, the Construction Traffic Management Plan shall, as a minimum, address the following matters:

(a) The construction programme and the associated traffic volumes estimated for each construction phase;

(b) Driver protocols aimed at ensuring safe driving practices and full compliance with the law, including speed limits, appropriate following distances, observing engine braking restrictions, and affording priority to other traffic;

(c) The details of the intended traffic arrangements and provision for the delivery of over-dimension and over-weight loads to the Waverley Wind Farm;

(d) The nature and timing of road / intersection improvements to be implemented;

(e) The traffic management measures to be implemented at intersections, level crossings, stock crossings and access points to local properties;

(f) The timing of construction traffic to minimise disruption to, and potential safety issues for, the operation of school bus services;

(g) Requirements for the monitoring of construction traffic;

(h) Signage to warn drivers approaching the Waverley Wind Farm;

(i) Communication arrangements with affected residents, South Taranaki District Council, New Zealand Transport Agency, KiwiRail, schools, emergency services and other key stakeholders, including provision of prior notice of traffic arrangements and any road closures; and

(j) The ongoing review and evaluation of the contents of the Construction Traffic Management Plan throughout the period of construction works.

49 The Construction Traffic Management Plan shall be prepared by a suitably experienced and qualified traffic engineer and in consultation with the New Zealand Transport Agency and the Group Manager – Engineering Services, South Taranaki District Council.

50 The consent holder shall distribute copies of the Construction Traffic Management Plan certified by the Group Manager - Environmental Services, South Taranaki District Council to emergency services and landowners / occupiers with access to the local construction traffic routes at least 10 working days prior to the commencement of construction works authorised as part of this resource consent.

Physical Road Improvements

51 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall complete the upgrade of the intersection of State Highway 3 and Peat Road so that it can safely accommodate all of the expected construction traffic that will utilise the intersection. The upgrade of the intersection of State Highway 3 and Peat Road shall be undertaken in accordance with Austroads Design Guidelines (Austroads Part 4A: Unsignalised and Signalised Intersections) and the Transportation Assessment by Traffic Design Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016. The upgrade of the intersection shall also be undertaken to the satisfaction of the New Zealand Transport Agency.

52 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall complete the upgrade of the width of Peat Road so that it is capable of safely providing for two-way traffic along the construction traffic route. In addition, the pavement strength of the section of Peat Road to be utilised for construction traffic shall be upgraded. The improvements to Peat Road shall be undertaken in accordance with the New Plymouth District Council's Code of Practice for Infrastructure 2009: Part 3 Roads and to the satisfaction of the Group Manager – Engineering Services, South Taranaki District Council.

53 The consent holder shall, in consultation with the Group Manager – Engineering Services, South Taranaki District Council, undertake and agree the results of a baseline survey of the condition of all local roads to be used for construction traffic prior to the commencement of construction works authorised as part of this resource consent.

54 The consent holder shall:

(a) Maintain the roads to be used by construction traffic in accordance with the South Taranaki District Council's Local Amendments to *"NZS 4404 Land Development and Subdivision Infrastructure"* and to the design approval of the Group Manager – Engineering Services, South Taranaki District Council; and

(b) Ensure that on completion of construction activities for the Waverley Wind Farm, the roads used by construction traffic are in no worse condition to that which existed prior to the commencement of construction as documented in the baseline survey conducted as a requirement of Condition 53.

Note: Prior to the commencement of the construction works authorised as part of this resource consent, the consent holder may need to enter into a road maintenance agreement with the South Taranaki District Council (as Road Controlling Authority) for any roads that are expected to experience an increase in traffic volumes of 150% or more and continue for the period of that increase in traffic volumes.

55 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall obtain an over-dimension and / or over-weight load permit from the relevant issuing authority(s) for any over-dimension or over-weight loads travelling to the Waverley Wind Farm. The consent holder shall abide by the requirements of any such permit issued. The consent holder shall also provide the Group Manager - Environmental Services, South Taranaki District Council with a copy of any over-dimension and / or over-weight load permits issued.

Signage

56 At least 10 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall, subject to the approval of the New Zealand Transport Agency, erect signage along the margin of State Highway 3 informing approaching drivers from the east and the west of the potential visibility of the Waverley Wind Farm, as well as the potential to encounter construction traffic. The final location of the signage shall be determined in consultation with the New Zealand Transport Agency, the Group Manager – Environmental Services, South Taranaki District Council and the Consultative Group to be established under Condition 131 of this resource consent.

57 The signage informing approaching drivers shall be maintained for the duration of the construction works and for a period of 12 months following the date any wind turbine first generates electricity.

ECOLOGICAL MANAGEMENT / MITIGATION

Fencing

58 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall temporarily fence the boundaries of the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017. The temporary fences shall be maintained by the consent holder for the duration of the construction works and should be of suitable quality so that it presents a visible barrier to any contractors or machinery from entering the Environmental Buffer Zone.

59 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall fence off the section of the Waipipi Stream identified in the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017. The fencing shall be maintained by the consent holder for the life of the Waverley Wind Farm and should be of a suitable quality so that it prevents stock (particularly cattle) from entering the Waipipi Stream and its riparian margins.

60 Prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall fence off the wetlands identified as EV1 and EV3 in the Terrestrial and Freshwater Ecology Assessment by Ryder Consulting Limited appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016. The fencing shall be maintained by the consent holder for the life of the Waverley Wind Farm and should be of suitable quality so that it prevents stock (particularly cattle) from entering the wetlands.

Ecological Monitoring and Management Plan

61 At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Department of Conservation (Director, Operations, Central North Island) with the opportunity to review and comment on the draft Ecological Monitoring and Management Plan required in accordance with Conditions 63 and 64.

62 In the event that no written comments are received from the Department of Conservation (Director, Operations, Central North Island) on the draft Ecological Monitoring and Management Plan within 40 working days of it being provided by the consent holder, the consent holder may assume that no written comments will be forthcoming from the Department of Conservation (Director, Operations, Central North Island).

63 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Ecological Monitoring and Management Plan (including all written comments provided by the Department of Conservation (Director, Operations, Central North Island) and the consent holder's response to those comments) to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 63(a) to (e). The Ecological Monitoring and Management Plan shall be prepared by a suitably experienced and qualified person and shall provide for the following objectives:

(a) Restore the ecological values of the Waipipi Stream within the project site boundaries of the Waverley Wind Farm;

(b) Restore the ecological values of the wetlands identified as EV1 and EV3 in the Terrestrial and Freshwater Ecology Assessment by Ryder Consulting Limited appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016;

(c) Translocate and establish a successful population of fennel-leaved pondweed (*Stuckenia pectinata*), blunt pondweed (*Potamogeton ochreatus*) and horse's mane weed (*Ruppia polycarpa*) from the farm ponds to be drained and infilled to a location(s) within the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017;

(d) Capture and translocate native fish, koura and eels from the farm ponds to be drained and infilled to suitable habitat within the Environmental Buffer Zone as defined in the figure by Isthmus Group dated April 2017; and

(e) Create or enhance foraging habitat for shag and other waterbird species to compensate for the loss of the 2.6 hectare farm pond that is to be drained and infilled.

64 In order to achieve the objectives established in Condition 63 above, the Ecological Monitoring and Management Plan shall, as a minimum, address the following matters:

(a) A clear description of the timing of any restoration works proposed;

(b) The detailed measures proposed to restore the ecological and amenity values of the Waipipi Stream, including via the implementation of stock fencing as required in accordance with Condition 59 above;

(c) A planting plan for the riparian margins of the Waipipi Stream, which includes details on the proposed indigenous plant species to be planted and intended planting densities;

(d) The detailed measures proposed to restore the ecological and amenity values of the wetlands identified as EV1 and EV3 in the Terrestrial and Freshwater Ecology Assessment by Ryder Consulting Limited appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, including via the infilling of drains and the implementation of stock fencing as required in accordance with Condition 60 above;

(e) The detailed measures proposed to translocate fennel-leaved pondweed (*Stuckenia pectinata*), blunt pondweed (*Potamogeton ochreatus*) and horse's mane weed (*Ruppia polycarpa*) 12 months prior to the draining and infilling of the farm ponds;

(f) The detailed measures proposed to capture and translocate native fish, koura and eels from the farm ponds prior to their draining and infilling in accordance with the permit obtained from the Ministry for Primary Industries;

(g) The detailed measures proposed, and at what location(s), to create or enhance foraging habitat for shag and other waterbird species in order to compensate for the loss of the 2.6 hectare farm pond that is to be drained and infilled;

(h) Requirements for monitoring, and annual reporting, of on-site enhancement works (including riparian revegetation, plant survival rates and the success of the translocation of aquatic plants); and

(i) Requirement for monitoring and reporting of all other ecological surveys or programmes occurring on site.

65 The consent holder shall contribute $25,000 (CPI adjusted from the date of grant of this resource consent) per annum to the Ashburton River / Hakatere Shorebird Management Programme from the date any wind turbine first

generates electricity, and until such time as the Waverley Wind Farm is decommissioned. The purpose of the contribution is to compensate for the mortality predictions of the individual species identified in Condition 82, while also recognising the benefits of the contribution to other bird species. The consent holder shall provide written verification of the contribution to the Group Manager – Environmental Services, South Taranaki District Council within 10 working days of the payment being made to the programme annually.

66 In addition to Condition 65, the consent holder shall make a one-off contribution of $25,000 to the Ashburton River / Hakatere Shorebird Management Programme from the date any wind turbine first generates electricity in order to assist with establishment and administration costs for the programme. The consent holder shall provide written verification of the contribution to the Group Manager – Environmental Services, South Taranaki District Council within 10 working days of the payment being made to the programme.

67 In the event that the Ashburton River / Hakatere Shorebird Management Programme ceases:

(a) Prior to the date any wind turbine first generates electricity, the consent holder shall contribute the $25,000 (CPI adjusted from the date of grant of this resource consent) per annum required in accordance with Condition 65 and the one-off contribution of $25,000 required in accordance with Condition 66 to any other Shorebird Management programme administered or endorsed by the Department of Conservation; or

(b) During the operation of the Waverley Wind Farm (i.e. from the date any wind turbine first generates electricity), the consent holder shall contribute the $25,000 (CPI adjusted from the date of grant of this resource consent) per annum required in accordance with Condition 65 to any other Shorebird Management programme administered or endorsed by the Department of Conservation.

EXPERT PANEL AND BIRD COLLISION MONITORING

Establishment of Expert Panel

68 At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the names and curriculum vitae of four independent experts with appropriate qualifications and experience in the monitoring of avifauna ecology and / or risk assessment to the Group Manager – Environmental Services, South Taranaki District Council. Two of the experts shall be nominated by the Department of

Conservation (Director, Operations, Central North Island), and two shall be nominated by the consent holder.

69 Notwithstanding Condition 68 above, the two experts nominated by the Department of Conservation (Director, Operations, Central North Island) may be employees of, or contractors to, the Department of Conservation.

70 The Group Manager – Environmental Services, South Taranaki District Council shall select two experts from the names provided by the consent holder to form an expert panel in accordance with Condition 71 below. One expert must be from the names submitted by the Department of Conservation (Director, Operations, Central North Island), and one expert must be from the names submitted by the consent holder.

71 The consent holder shall establish the expert panel within five working days of the selection of the two experts by the Group Manager – Environmental Services, South Taranaki District Council. The expert panel shall be maintained for the duration of the bird collision monitoring required in accordance with Condition 81 below.

72 In the event that either member of the expert panel is unable, for whatever reason, to continue in their role in accordance with this resource consent, the party which nominated the expert shall submit the name and curriculum vitae of a replacement expert with appropriate qualifications and experience in the monitoring of avifauna ecology and / or risk assessment to the Group Manager – Environmental Services, South Taranaki District Council for approval.

73 The role of the expert panel is to assist the Group Manager – Environmental Services, South Taranaki District Council with the following:

(a) The provision of advice and assistance to the consent holder in respect of the consent holder's responsibilities in accordance with this resource consent in relation to the monitoring and management of potential adverse effects on bird species;

(b) The provision of oversight, and input into, the implementation of the conditions of this resource consent relating to potential adverse effects on bird species on behalf of the Group Manager – Environmental Services, South Taranaki District Council; and

(c) The provision of advice and assistance to the consent holder and the Group Manager – Environmental Services, South Taranaki District Council in the event of any bird strike mortality events.

74 The consent holder shall meet the reasonable costs incurred by the expert panel in undertaking its duties as set out in Condition 73 above, subject to normal business practices of invoicing and accounting.

Bird Collision Monitoring Plan

75 At least 60 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the draft Bird Collision Monitoring Plan required in accordance with Conditions 77 and 78 below to the expert panel for review and comment.

76 The expert panel shall provide its written comments (if any) on the draft Bird Collision Monitoring Plan to the consent holder at least 40 working days prior to the commencement of construction works authorised as part of this resource consent.

77 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit the Bird Collision Monitoring Plan (including all written comments provided by the expert panel and the consent holder's response to those comments) to the Group Manager – Environmental Services, South Taranaki District Council to certify that the plan meets the objective in Condition 77(a). The Bird Collision Monitoring Plan shall be jointly prepared by a suitably experienced and qualified avian expert and a suitably experienced and qualified bio-statistician, and shall provide for the following objective:

(a) Measure the rates of bird mortality from collisions at the Waverley Wind Farm.

78 In order to achieve the objective established in Condition 77 above, the Bird Collision Monitoring Plan shall describe the methods for recording the frequency of collisions resulting in mortality for all bird species. These methods shall be statistically robust and include, but not be limited to, the following:

(a) Calculating the probability and rate of bird carcass loss to scavengers, decomposition and other causes, taking into account temporal, environmental and other sources of variation;

(b) Calculating the probability of carcass detection by searchers, which may include searching assisted by suitably-trained dogs, taking into account temporal, environmental, searcher identity and other sources of variation;

(c) A data collection and analysis regime specifying the timing, location and duration of monitoring at a statistically derived number of wind turbines

and wind monitoring masts, taking into account the statistical properties of the avian data presented in the Assessment of Potential Risk to Birds by Boffa Miskell appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, and other sources of relevant information. The purpose of the data collection and analysis regime is to ensure that a reliable estimate of bird strike mortality at all wind turbines and wind monitoring masts is obtained;

(d) Methods to account for carcass loss and detection probability when estimating rates of mortality across the Waverley Wind Farm;

(e) Methods to accurately record the condition (partial, full or feather spot) and cause of death; and

(f) Methods to record, and electronically store, audit and backup data.

79 In addition to the requirements specified in Condition 78, the Bird Collision Monitoring Plan shall:

(a) Specify that all carcasses found within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 shall be labelled with a unique number, bagged and frozen for future reference and possible necropsy of native species by a trained veterinarian, to determine cause of death, when this is not apparent. A copy of the associated data sheet for each carcass will be replicated, bagged and frozen with the carcass at all times. All carcass shall be photographed as found and mapped using GPS location on a detailed map of the search area showing the location of the wind turbines and associated facilities, such as internal access roads and wind monitoring masts;

(b) Identify additional measures that may be implemented by the consent holder in order to avoid, remedy, mitigate and / or compensate for the potential adverse effects of the Waverley Wind Farm on bird species in the event that the bird mortality for any individual species listed in Condition 82 equals or exceeds the Mitigation Review Threshold for the individual species; and

(c) Specify the methodology that will be utilised to identify applicable turbines for the purpose of Condition 93(b) below.

80 As part of the certification of the Bird Collision Monitoring Plan in accordance with Condition 77 above, the Group Manager – Environmental Services, South Taranaki District Council may seek advice and comment from the expert panel on the appropriateness of the methods proposed by the consent holder to achieve the objective of the Bird Collision Monitoring Plan.

Bird Collision Monitoring

81 Bird collision monitoring shall commence immediately following the date any wind turbine first generates electricity and continue for a period of ten years (or until an alternative date as determined by the Group Manager – Environmental Services, South Taranaki District Council in accordance with Condition 91) and at the frequencies specified in the Bird Collison Monitoring Plan.

82 Bird collision monitoring shall be measured against the following mortality predictions for the listed individual species:

Species	Conservation Status	Predicted Mortality[98]	Mitigation Review Threshold[99]	Immediate Review Threshold[100]
Nationally Critical or Nationally Endangered Species				
Black stilt	Critical	NP[101]	0.5	2
Australasian bittern	Critical	NP	0.5	2
Reef heron	Endangered	NP	0.5	2
Black-billed gull	Critical	NP	0.5	2
Black-fronted tern	Endangered	NP	0.5	2
Any other nationally critical or nationally endangered species		NP	0.5	2
Nationally Vulnerable Species				
Caspian tern	Vulnerable	NP	2	5
Wrybill	Vulnerable	NP	2	5
Banded dotterel	Vulnerable	NP	2	5
Any other nationally vulnerable species		NP	2	5

98 Based on pre-construction mortality modelling.

99 Based on a five-year rolling annual mean of bird mortality adjusted in accordance with Condition 78.

100 Based on actual bird mortality recorded over a 12-month period between 1 June and 31 May.

101 'NP' means no prediction.

At Risk and Other Species				
New Zealand dabchick	Recovering	NP	5	10
New Zealand dotterel	Recovering	NP	5	10
Red-billed gull	Declining	NP	5	10
White-fronted tern	Declining	NP	5	10
Godwit	Declining	NP	5	10
New Zealand pipit	Declining	NP	5	10
Brown teal	Recovering	NP	5	10
Variable oystercatcher	Recovering	NP	5	10
Fluttering shearwater	Relict	NP	5	10
Northern diving petrel	Relict	NP	5	10
Black shag	Naturally uncommon	NP	5	10
Little black shag	Naturally uncommon	NP	5	10
Royal spoonbill	Naturally uncommon	NP	5	10
North Island fernbird	Declining	NP	5	10
Spotless crake	Declining	NP	5	10
Pied stilt[102]	Not threatened	1	5	20
Pied oystercatcher[103]	Declining	3	10	20
Any other at risk species		NP	5	10

Note: The conservation status specified in Condition 82 is that stated in the publication "Robertson, H.A.; Baird, K.; Dowding, J.E.; Elliott, G.P.; Hitchmough, R.A.; Miskelly, C.M.; McArthur, N.; Colin F.J. O'Donnell, C.J.F.; Sagar, P.M.; Scofield, R.P.; Taylor, G.A. 2017: Conservation status of New Zealand birds, 2016. New Zealand Threat Classification Series 19." Department of Conservation, Wellington. 23 pp.

[102] Review thresholds differ from other species based on modelling and to reflect Conditions 65 and 66.
[103] Review thresholds differ from other species based on modelling and to reflect Conditions 65 and 66.

83 In the event that the conservation status of any of the individual bird species listed in Condition 82 changes as a result of an amendment to the New Zealand Threat Classification as published by the Department of Conservation, then the Mitigation Review Threshold and Immediate Review Threshold for the new, relevant threat classification shall apply.

84 A draft annual monitoring report shall be jointly prepared by a suitably experienced and qualified avian expert and a suitably experienced and qualified bio-statistician, and be provided to the expert panel for review and comment within 20 working days of the anniversary of the commencement of bird collision monitoring. The annual monitoring report shall present, summarise and analyse the data collected in the preceding year and report on the operation of the Waverley Wind Farm against the objective of the Bird Collision Monitoring Plan and the mortality predictions for the individual species set out in Condition 82 above.

85 The expert panel shall provide its written comments (if any) on the draft annual monitoring report to the consent holder within 20 working days of receipt of the report from the consent holder.

86 The consent holder shall submit the annual monitoring report (including all comments from the expert panel and the consent holder's response to those comments) to the Group Manager – Environmental Services, South Taranaki District Council within 60 working days of the anniversary of the commencement of bird collision monitoring. A copy of the annual monitoring report shall also be provided to the Department of Conservation (Director, Operations, Central North Island).

87 Upon receiving the annual monitoring report the Group Manager – Environmental Services, South Taranaki District Council may seek advice and comment from the expert panel on the data presented in the report and the operation of the Waverley Wind Farm against the objective of the Bird Collision Monitoring Plan and the mortality predictions for the individual species set out in Condition 82 above.

Bird Collision Monitoring Review

88 On the fifth anniversary of the date any wind turbine first generates electricity the consent holder shall commission a bird collision monitoring review report by a suitably experienced and qualified avian expert that:

(a) Reviews the results of the monitoring required in accordance with the Bird Collison Monitoring Plan against the mortality predictions for the individual species specified in Condition 82 above;

(b) Considers whether the monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency; and

(c) Considers whether any additional mitigation and / or compensation, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder in the event that bird mortality for any individual species listed in Condition 82 has equaled or exceeded the Mitigation Review Threshold for the individual species.

89 The consent holder shall submit the draft bird collision monitoring review report to the expert panel for review and comment. The expert panel shall provide its written comments (if any) on the draft bird collision monitoring review report to the consent holder within 20 working days of receipt of the report from the consent holder.

90 The consent holder shall submit the bird collision monitoring review report (including all comments from the expert panel and the consent holder's response to those comments) to the Group Manager – Environmental Services, South Taranaki District Council within 20 working days of the receipt of written comments from the expert panel. A copy of the bird collision monitoring review report shall also be provided to the Department of Conservation (Director, Operations, Central North Island).

91 The Group Manager – Environmental Services, South Taranaki District Council shall review the bird collision monitoring review report, subject to any advice from the expert panel, and determine whether:

(a) The monitoring required in accordance with the Bird Collision Monitoring Plan needs to continue, and if so at what frequency;

(b) Any additional mitigation and / or compensation, as identified in the Bird Collision Monitoring Plan, that should be implemented by the consent holder in the event that bird mortality for any individual species listed in Condition 82 has equaled or exceeded the Mitigation Review Threshold for the individual species; and

(c) There is a need to serve notice on the consent holder of its intention to review any of the ecological management / mitigation / compensation conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the need for, or

quantum of, any additional ecological management / mitigation / compensation.

92 Where there is agreement between the consent holder and the expert panel over the need for, or quantum of, any additional ecological management / mitigation / compensation, the consent holder shall implement such agreement.

Immediate Review

93 In the event that the bird collision monitoring required in accordance with the Bird Collision Monitoring Plan and Condition 81 identifies that the mortality of any individual bird species listed in Condition 82 has equaled or exceeded the Immediate Review Threshold for that individual species, then the consent holder shall:

(a) Notify the Group Manager – Environmental Services, South Taranaki District Council and the expert panel within 24 hours of becoming aware of the exceedance; and

(b) Immediately suspend the operation of the applicable wind turbine(s), as identified by the suitably experienced and qualified avian expert responsible for bird collision monitoring at the Waverley Wind Farm.

94 The suitably experienced and qualified avian expert responsible for bird collision monitoring at the Waverley Wind Farm shall undertake an investigation and complete a draft report on the possible cause of the bird mortalities within 10 working days of the consent holder notifying the Group Manager – Environmental Services, South Taranaki District Council. The draft report shall be immediately provided to the expert panel for review and comment.

95 The consent holder shall convene a meeting with the expert panel within five working days of their receipt of the draft report on the possible cause of the bird mortalities. The purpose of the meeting shall be to:

(a) Review and discuss the findings of the draft bird mortality investigation report;

(b) Consider whether any additional monitoring is required to further consider the potential cause of bird mortality;

(c) Consider whether any additional mitigation and / or compensation, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder; and

(d) Consider whether it is appropriate for the applicable wind turbine(s) suspended in accordance with Condition 93(b) to re-commence operations, and whether there is a need for further controls on the interim operation of the relevant wind turbines (e.g. limiting operations at particular times of the day / season or in particular wind / weather conditions).

96 The consent holder shall submit the bird mortality investigation report (including all comments from the expert panel from the meeting and the consent holder's response to those comments) to the Group Manager – Environmental Services, South Taranaki District Council within five working days of convening a meeting with the expert panel in accordance with Condition 95. A copy of the bird mortality investigation report shall also be provided to the Department of Conservation (Director, Operations, Central North Island).

97 The Group Manager – Environmental Services, South Taranaki District Council shall, upon receipt of the bird mortality investigation report and as a matter of urgency, but subject to any advice from the expert panel, determine in consultation with the consent holder whether:

(a) It is appropriate for the applicable wind turbine(s) suspended in accordance with Condition 93(b) to re-commence operations, and whether there is a need for further controls on the interim operation of the relevant wind turbines (e.g. limiting operations at particular times of the day / season or in particular wind / weather conditions);

(b) Consider whether any additional monitoring is required and at what frequency;

(c) Any additional mitigation and / or compensation, as identified in the Bird Collision Monitoring Plan, needs to be implemented by the consent holder; and

(d) There is a need to serve notice on the consent holder of its intention to review any of the conditions of this resource consent in accordance with Sections 128 to 131 of the Resource Management Act 1991 where there is not an agreement between the consent holder and the expert panel as to the matters specified in Conditions 96(a) to (d).

98 Where there is agreement between the consent holder and the expert panel over additional ecological management / mitigation / compensation, the consent holder shall implement such agreement.

LANDSCAPE MITIGATION

99 At least 80 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall write to the owner(s) of the dwellings at the following addresses, as well as the owners of Lot 201 DP401250 and Lot 3 DP401177, informing them of their entitlement to landscape mitigation:

DWELLING[104]	PROPERTY
51	92 Elsea Road
53	64 Rāngikura Road
54	77 Rāngikura Road (cnr Rangikura Road and Elsea Road)
55	120 Rāngikura Road
56	169 Rāngikura Road
57	Proposed residence on Waipipi Road
62	500 Rāngikura Road
91	204 Rākaupiko Road
92	264 Rākaupiko Road
93	285A Rākaupiko Road
96	371 Rākaupiko Road
97	391 Rākaupiko Road
98	395 (A & B) Rākaupiko Road
109	Proposed residence on Waipipi Road
110	Private residence on Waipipi Road
155	147 Stewart Road

Note: Conditions 99 to 107 of this resource consent shall not apply if alternative arrangements are agreed by contractual obligation between the consent holder and the property owner.

100 The written offer required by Condition 99 above shall inform the owner(s) of the dwelling that they may request the consent holder to undertake and maintain landscape mitigation relating to views from dwellings on the property prior to, or after, construction of the Waverley Wind Farm.

104 As identified in Appendix C of the Landscape and Visual Assessment by Isthmus Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated April 2016.

101 Within 40 working days of the date any wind turbine first generates electricity, the consent holder shall repeat the offer required by Condition 99 above to the owner(s) of any dwelling who have not already accepted the offer. The consent holder shall expressly state that the offer shall remain valid for 24 months following the date any wind turbine first generates electricity.

102 Where requested by the owner(s), the consent holder shall undertake landscape mitigation by means of on-site planting on those properties to mitigate the effects of the Waverley Wind Farm on views from dwellings. The mitigation techniques shall be set out in a property specific concept plan that is provided in draft form for approval by the owner(s) within 60 working days of the owner requesting landscape mitigation. The concept plan will typically consist of trees planted within the general vicinity of the dwelling to intercept views towards the Waverley Wind Farm.

103 Following approval of the concept plan by the owner(s), the consent holder shall implement the concept plan at a practicable time agreed between the consent holder and the owner(s), but preferably during the first planting season (May – September) following the approval of the concept plan.

104 Subject to Condition 105 below, the consent holder shall maintain the planting for 12 months following the completion of the planting. The maintenance of the planting shall include the consent holder replacing any trees that die within the first 12 months following the completion of the planting.

105 In the event that any owner(s) advises the consent holder that they wish to maintain the planting themselves, the consent holder shall pay the owner(s) the sum of money allocated in the cost estimate for maintenance set out in the approved concept plan.

106 In the event that any owner(s) advise the consent holder that they wish to implement the concept plan themselves, the consent holder shall pay the owner(s) the sum of money allocated in the approved concept plan on the agreement that the owner(s) shall carry out the planting themselves.

107 A copy of each concept plan, and confirmation that the works have been implemented and maintained (or that arrangements have been made for the owner(s) to implement and / or maintain the planting themselves in accordance with Conditions 105 and 106 above), shall be provided to the Group Manager – Environmental Services, South Taranaki District Council within 20 working days of the completion of such works or arrangements.

ARCHAEOLOGY

108 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Accidental Discovery Protocol and Management Plan to the Group Manager - Environmental Services, South Taranaki District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objectives in Condition 108(a) and (b). The Accidental Discovery Protocol and Management Plan shall be prepared by a suitably experienced and qualified archaeologist and in consultation with Ngaa Rauru Kiittahi and Heritage New Zealand. The objectives of the Accidental Discovery Protocol and Management Plan shall be to:

(a) Minimise the effects of construction works on any koiwi, taonga or archaeological features within the project site boundaries of the Waverley Wind Farm; and

(b) Ensure construction works are designed and implemented in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014.

109 In order to achieve the objectives established in Condition 108 above, the Accidental Discovery Protocol and Management Plan shall, as a minimum, address the following matters:

(a) Preconstruction protocols that may be carried out;

(b) Protocols for notification of relevant parties and site management procedures in the event any koiwi, taonga or archaeological features are uncovered at any time;

(c) Contact details for relevant parties;

(d) The procedures to be adopted during construction in potentially sensitive locations; and

(e) Training procedures for all site staff and contractors.

110 The consent holder shall ensure that a suitably experienced and qualified archaeologist is on site to monitor construction works (particularly surface clearing, trenching, and the formation of the internal access road network and foundation excavations) in the vicinity of the unmodified coastal dunes, Whenuakura River and the Waipipi Stream.

111 The consent holder shall ensure the archaeologist is given the opportunity to examine any archaeological deposits disturbed by construction works in the locations identified in Condition 110 above. The archaeologists shall make recommendations to the consent holder with respect to further examination of any archaeological deposits where appropriate. The consent holder shall implement the recommendations of the archaeologist and also notify the Group Manager – Environmental Services, South Taranaki District Council of these recommendations.

112 The requirements of the Accidental Discovery Protocol and Management Plan established in Condition 108 above, along with Conditions 110 and 111 above, shall only apply for those areas within the project site boundaries of the Waverley Wind Farm not subject to an archaeological authority obtained under the Heritage New Zealand Pouhere Taonga Act 2014.

Note: If required, the consent holder is responsible for obtaining archaeological authorities under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014 prior to the commencement of construction works authorised as part of this resource consent.

113 The consent holder shall provide an opportunity for a representative of Ngaa Rauru Kiittahi to be present on site during any examinations of archaeological deposits of potential significance to either iwi.

DUNE MANAGEMENT

114 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Dune Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 114(a). The objective of the Dune Management Plan shall be to:

(a) Avoid or mitigate the risk of dune instability within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects*" dated 14 April 2016.

115 In order to achieve the objectives established in Condition 114 above, the Dune Management Plan shall, as a minimum, address the following matters:

(a) The construction management controls to be utilised by the consent holder, in addition to those set out in the Earthworks and Construction

Management Plan required in accordance with Conditions 27 and 28 if necessary, in order to avoid or mitigate potential adverse effects on dune landforms within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016;

(b) The location of areas of bare sand within the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 based on ground mapping;

(c) The areas of bare sand that should be monitored, the monitoring methodology to be utilised (e.g. observation and photography), and the frequency of the monitoring to be undertaken by the consent holder (e.g. annual, quarterly, monthly); and

(d) The mitigation planting (e.g. tauhinu or sand coprosma) and fencing measures that will be utilised to stabilise the movement of migrating dunes if necessary.

AIR TRAFFIC SAFETY

116 The consent holder shall advise the Civil Aviation Authority at least six months prior to the date any wind turbine first generates electricity of the finalised geographical co-ordinates of the sites where the wind turbines are to be installed.

117 The five wind turbines with the highest elevation above mean sea level, along with those wind turbines around the perimeter of the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016, shall be lit with aviation obstacle lighting as follows:

(a) The spacing between the wind turbines fitted with aviation obstacle lighting must not exceed 1,850 metres;

(b) All aviation obstacle lighting will have an intensity of not less than 1,600 candela of red light as defined in Civil Aviation Rule Part 77, Appendix B10;

(c) All aviation obstacle lighting must flash between 20 and 60 times per minute; and

(d) All aviation obstacle lighting must be located on, or above, the top of the nacelle of the wind turbine and shall be visible from all directions but must be shielded below the horizontal plane.

118 No later than five working days after the construction of all wind turbines is completed (or after each stage, if the Waverley Wind Farm is constructed in stages), the consent holder shall submit a registered surveyor's determination of the height and position of the wind turbines to the Civil Aviation Authority. The consent holder shall also submit proof of compliance with the aviation obstacle lighting standards set out in Condition 117 above. All correspondence to the Civil Aviation Authority in relation to this condition shall be copied to the General Manager – Environmental Services, South Taranaki District Council.

119 Should the consent holder decide not to proceed with the Waverley Wind Farm, the consent holder shall notify the Civil Aviation Authority within five working days of its decision.

COMMUNICATION SERVICES

120 The consent holder shall undertake an independent assessment, prepared by a person qualified in communication reception, of television reception at any residential dwelling either existing or consented at the date of notice of the decision on the resource consent applications for the Waverley Wind Farm under s114 of the Resource Management Act located within the intended coverage area, if it receives any complaints (within 12 months of the first wind turbine as part of the Waverley Wind Farm being commissioned) from occupants of that dwelling that post construction television reception is impaired. If the television reception quality is found to be impaired as a result of the operation of the Waverley Wind Farm, the consent holder shall undertake the best practicable measures to provide reasonable television reception.

121 The consent holder shall undertake an independent assessment, prepared by a person qualified in radio reception and transmission, of radio reception if it receives any complaints (within 12 months of the first wind turbine as part of the Waverley Wind Farm being commissioned) from users of radio transmitters that post construction radio reception or transmission is impaired. If the radio transmission quality is found to be impaired as a result of the operation of the Waverley Wind Farm, the consent holder shall undertake the best practicable measures to provide reasonable radio reception.

SHADOW FLICKER

122 The consent holder shall ensure that shadow flicker effects at any residential dwelling existing or consented at the date of notice of the decision on the resource consent applications for the Waverley Wind Farm under s114 of the Resource Management Act (and outside of the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016) arising from the operation of the Waverley Wind Farm shall be no greater than 30 minutes per day, and a total of 30 hours per year.

123 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Pre-Instalment Shadow Flicker Assessment to the Group Manager - Environmental Services, South Taranaki District Council. The Pre-Instalment Shadow Flicker Assessment shall be prepared by an appropriately qualified consultant and demonstrate that the proposed numbers, layout and type of wind turbines to be used in the Waverley Wind Farm will comply with the shadow flicker limits specified in Condition 122 above.

HAZARDOUS SUBSTANCES / CONTAMINANTS

124 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Contaminant Spill Contingency Management Plan to the Group Manager - Environmental Services, South Taranaki District Council for endorsement acting in a technical certification capacity to certify that the plan meets the objectives in Condition 124(a) and (b). The Contaminant Spill Contingency Management Plan shall be prepared by a suitably qualified and experienced person and provide for the following objectives:

(a) Ensure measures are implemented on the site of the Waverley Wind Farm in order to minimise the potential risk, and effects, of a spill of hazardous substances, fuels or other contaminants; and

(b) The use, handling or storage of hazardous substances during the construction, operation and maintenance of the Waverley Wind Farm complies with the requirements of Hazardous Substances and New Organisms Act 1996 and its associated regulations.

125 In order to achieve the objectives established in Condition 124 above, the Contaminant Spill Contingency Management Plan shall, as a minimum, address the following matters:

(a) The identification of designated bulk fuel storage, contaminant storage facilities and re-fuelling locations;

(b) Measures to ensure that all contaminant storage or designated re-fuelling areas are bunded or contained in such a manner so as to prevent the discharge of contaminants;

(c) Requirements for all mobile fuel tankers to carry spill kits;

(d) Details on the contents of the spill kits;

(e) Records of the names of operators trained in spill response and remediation;

(f) Measures to ensure that all machinery is regularly maintained in such a manner so as to minimise the potential for leakage of contaminants;

(g) Measures to ensure that no machinery is cleaned, stored or refueled within 20 metres of the bed of any water body;

(h) Measures to ensure that all contaminants are removed from the site at the end of the construction works, except for those required for the on-going maintenance and operational activities at the Waverley Wind Farm;

(i) Details of an internal and external notification procedure in the event of a spill of contaminants; and

(j) The identification of measures to be undertaken to remediate a contaminant spill, including instructions for removing and disposing of contaminated material in a manner suitable to ensure no further contamination occurs.

126 The transformers and radiators in the electrical substation / switchyard building shall be located on pedestal foundations and enclosed by bunds. The bunds must be designed with sufficient capacity to retain all of the oil utilised in each of the transformers.

127 Electric and magnetic field levels at the project site boundaries as defined in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 shall not exceed the

limits in the International Commission on Non-Ionising Radiation Protection (ICNIRP) guidelines endorsed by the New Zealand Ministry of Health.

FIRE MANAGEMENT

128 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Fire Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objective in Condition 128(a). The Fire Management Plan shall be prepared by a suitably qualified and experienced person and provide for the following objective:

(a) Ensure measures are implemented on the site of the Waverley Wind Farm in order to minimise the potential risk, and effects, of fire.

129 In order to achieve the objective established in Condition 128 above, the Fire Management Plan shall, as a minimum, address the following matters:

(a) The identification of potential sources of combustion and fire during the construction, operation and maintenance of the Waverley Wind Farm;

(b) Measures to minimise or prevent the potential for fire during the construction, operation and maintenance of the Waverley Wind Farm;

(c) Sources of water for fire-fighting purposes and / or fire retardants across the site of the Waverley Wind Farm;

(d) Protocols for the management of different fire events (e.g. grass fires, mechanical fires) across the site of the Waverley Wind Farm; and

(e) Training procedures for all site staff and contractors.

COMMUNITY CONSULTATION / COMMUNICATION

130 The consent holder shall establish and publicise a toll-free telephone number so that members of the public may raise matters with, or make an enquiry of, the consent holder during the construction of the Waverley Wind Farm. The toll-free telephone number shall be established at least 10 working days prior to the commencement of construction works authorised as part of this resource consent, and shall be maintained until the completion of construction works. The toll-free telephone number shall be publicised by the following means:

(a) Via the consent holder's website or social media;

(b) Via an advertisement in the South Taranaki Star, the Wanganui Chronicle and the Taranaki Daily News;

(c) Via the signage erected along the margin of State Highway 3 (subject to the approval of New Zealand Transport Agency);

(d) Via the site signage at the entrance to the Waverley Wind Farm on Peat Road; and

(e) As part of the Construction Traffic Management Plan distributed to landowners / occupiers with access to the local construction traffic routes.

131 At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall establish and co-ordinate a Consultative Group for the Waverley Wind Farm. Subject to Condition 133 below, this group is to be consulted, as a minimum, at least six monthly during the construction phase and over the first two years of the operation of the Waverley Wind Farm. Thereafter, the frequency of consultation is to be determined by a majority of the Consultative Group itself. Individual Consultative Group members may, with the agreement of the Group Manager - Environmental Services, South Taranaki District Council, call meetings at shorter intervals to deal with any interim matters that need to be addressed before the next scheduled meeting.

132 The objective of the Consultative Group will be to facilitate information flow between the consent holder's management team and the community, and will be an on-going point of contact between the consent holder and the community. The functions of the Consultative Group shall also include acting as a forum for relaying community concerns about the construction and on-going operation of the Waverley Wind Farm to the consent holder's on-site management team, developing acceptable means of addressing (where possible) and managing those concerns, and reviewing the implementation of measures to resolve and manage community concerns.

133 The consent holder shall be responsible for convening the meetings of the Consultative Group and shall cover the direct costs associated with the establishment and operation of the meetings. The consent holder shall be responsible for the keeping and distribution of the Consultative Group's minutes to all participants in the Consultative Group. A person independent of the consent holder shall chair the meeting. The chair of the Consultative Group shall be appointed by the Group Manager - Environmental Services, South Taranaki District Council.

134 The consent holder shall notify its intention to establish a Consultative Group for the Waverley Wind Farm project by public notice. The consent holder shall invite, as a minimum, the following parties to participate in the Consultative Group:

(a) A representative of property owners and occupiers on local roads identified for use by construction traffic;

(b) An elected representative of the South Taranaki District Council;

(c) A delegate of the Department of Conservation (Director, Operations, Central North Island);

(d) A representative each from Ngaa Rauru Kiittahi and Te Runanga o Ngati Ruanui Trust; and

(e) Local residents.

No owner or occupier of any property on which the Waverley Wind Farm is located may be a member of the Consultative Group. The consent holder shall not be in breach of this condition if any one or more of the parties specified above do not wish to be members of the Consultative Group or to attend any particular meeting.

135 The Consultative Group shall cease to exist when a 75% majority of the Consultative Group vote that it is no longer necessary.

136 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall publicly advertise the temporary closure of the informal access route through the site of the Waverley Wind Farm to the Tasman Sea and the Whenuakura River. The public notice shall be advertised in the South Taranaki Star and provide details on the expected duration of the access restrictions.

COMPLAINTS

137 The consent holder shall maintain and keep a Complaints Register to record any complaints about construction works and operation of the Waverley Wind Farm received by the consent holder in relation to traffic, noise, dust, television or radio reception interference, shadow flicker or any other environmental effects. The register shall record, where this information is available, the following:

(a) The date, time and duration of the incident that resulted in the complaint;

(b) The location of the complainant when the incident was detected;

(c) The possible cause of the incident; and

(d) Any corrective action taken by the consent holder in response to the complaint, including the timing of the corrective action.

138 The Complaints Register shall be available to staff and authorised agents of the South Taranaki District Council and to members of the Consultative Group at all reasonable times upon request. Complaints received by the consent holder that may infer non-compliance with the conditions of this resource consent shall be forwarded to the Group Manager - Environmental Services, South Taranaki District Council within 48 hours of the complaint being received.

DECOMMISSIONING AND SITE REHABILITATION

139 If any of the wind turbines cease to generate electricity for a continuous period of more than 24 months, the consent holder shall remove from the site all above ground structures associated with the operation of that wind turbine (including the turbine tower, wind turbine generator and externally housed transformer unit). The site of each wind turbine generator shall be restored and re-vegetated as pasture within 12 months of any wind turbine being removed.

REVIEW

140 Pursuant to Sections 128 to 131 of the Resource Management Act 1991, the South Taranaki District Council may one year after the commencement of this resource consent, and at five yearly intervals thereafter, serve notice on the consent holder of its intention to review any or all of the conditions of this resource consent for any of the following purposes:

(a) To review the effectiveness of the conditions of this resource consent in avoiding, remedying or mitigating any adverse effects on the environment that may arise from the exercise of this resource consent (in particular, the potential adverse environmental effects in relation to ecology, archaeology, noise, earthworks, traffic and roading, visual, landscape and amenity effects);

(b) To address any adverse effects on the environment which have arisen as a result of the exercise of this resource consent that were not anticipated at

the time of commencement of this resource consent, including addressing any issues arising out of complaints; and

(c) To review the adequacy of, and necessity for, any of the monitoring programmes or management plans that are part of the conditions of this resource consent.

CHARGES

141 The consent holder shall pay to the South Taranaki District Council:

(a) All required administration charges fixed by the South Taranaki District Council pursuant to Section 36 of the Resource Management Act 1991 in relation to the administration, monitoring and inspection of this resource consent; and

(b) All other charges authorised by regulations.

APPENDIX B

CONSENT AUTHORITY:	South Taranaki District Council
CONSENT HOLDER:	Tararua Wind Power Limited
CONSENT TYPE:	Land Use Consent
ACTIVITY AUTHORISED:	The construction, operation and maintenance of a single circuit 110 kV transmission line between the Waverley Wind Farm and an electrical substation on Mangatangi Road, Waverley
SITE LOCATION:	Between Peat Road / Dryden Road and Mangatangi Road, Waverley
CONSENT DURATION:	Unlimited

GENERAL

1 The construction, operation and maintenance of the single circuit transmission line as part of the Waverley Wind Farm shall be undertaken in general accordance with the information provided in *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 and any other documentation relevant to the resource consent applications, including responses to requests for further information from the South Taranaki District Council in accordance with Section 92 of the Resource Management Act 1991 (all held on South Taranaki District Council file RML16030). In the event of any conflict or discrepancy between these documents and the conditions of this resource consent, the conditions shall be determinative.

2 Pursuant to Section 125(1) of the Resource Management Act 1991, this resource consent will lapse if not given effect to within 10 years of the commencement of this resource consent.

3 Pursuant to Section 134(1) of the Resource Management Act 1991, this resource consent may only be exercised by the consent holder, its successor, or any person acting under the prior written approval of the consent holder.

4 The consent holder shall ensure that all contractors engaged in undertaking activities authorised by this resource consent are made aware of the conditions of this resource consent relevant to their work area and the measures required for compliance with the conditions.

5 The consent holder shall notify the Group Manager - Environmental Services, South Taranaki District Council as to the commencement date of construction works authorised as part of this resource consent, at least 15 working days before such works commence.

6 The consent holder shall at all times construct, operate and maintain the transmission line in accordance with all management plans submitted to, and certified by, the Group Manager- Environmental Services, South Taranaki District Council as part of the conditions of this resource consent.

TRANSMISSION LINE CHARACTERISTICS

7 The transmission line and associated infrastructure shall be entirely located within the road / rail reserve and private properties identified in Table 1.4 of *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016 and shall follow the alignment identified in Figure 1 of Appendix A to the Landscape and Visual Assessment by Isthmus Group appended to "*Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016. A 30 metre wide transmission corridor may be utilised where the transmission line is located on private land.

8 The transmission line shall have a maximum of three conductors and a maximum voltage not exceeding 110 kV / 130 MVA.

9 The transmission line shall be supported on monopoles with a maximum height of 22 metres above ground level (excluding any earth wire), except where the transmission line is located in the road reserve along Swinbourne Street and Fookes Street in which case the maximum height of the monopoles shall be 14 metres above ground level (excluding any earth wire).

10 Notwithstanding Condition 9 above, double pole structures may be utilised to support the transmission line where topographical or technical constraints limit the utilisation of monopole structures (except where the transmission line is located in the road reserve along Swinbourne Street and Fookes Street). All double pole structures shall also have a maximum height of 22 metres above ground level (excluding any earth wire).

11 Where the transmission line and associated infrastructure is located in the road reserve along Swinbourne Street and Fookes Street, all monopoles shall be placed in the pole locations identified in the map entitled *"Proposed 110 kV Overhead Line Route – Trustpower"*, attached to the further information response provided to the South Taranaki District Council on 19 October 2016.

PLANS

12 At least 40 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall provide the Group Manager - Environmental Services, South Taranaki District Council with a set of final design drawings for the single circuit transmission line. The final design drawings shall, as a minimum, include:

(a) The alignment of the transmission line from the Waverley Wind Farm to the electrical substation on Mangatangi Road, Waverley;

(b) The location of all pole structures, including the identification of all double pole structures; and

(c) The specifications of all pole structures.

13 Within 40 working days of the transmission line first being utilised to convey electricity from the Waverley Wind Farm to the electrical substation on Mangatangi Road, Waverley, the consent holder shall provide the Group Manager - Environmental Services, South Taranaki District Council with a set of as-built plans of the transmission line and all pole structures.

EARTHWORKS AND CONSTRUCTION

14 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Earthworks and Construction Management Plan to the Group Manager – Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 14(a) to (d). The Earthworks and Construction Management Plan shall be prepared by an experienced and appropriately qualified person and shall provide for the following objectives:

(a) Minimise the volume of earthworks required for the construction of the transmission line;

(b) Maximise the effectiveness of erosion and sediment control measures associated with earthworks by minimising sediment generation and sediment laden runoff;

(c) Minimise the overall area of disturbance so as to reduce the potential impact on any vegetation, streams, ponds, wetlands and potential archaeological features along the alignment of the transmission line; and

(d) Ensure control and / or mitigation of the adverse effects of any dust emissions.

15 In order to achieve the objectives established in Condition 14 above, the Earthworks and Construction Management Plan shall, as a minimum, address the following matters:

(a) An explanation of how the Earthworks and Construction Management Plan shall be implemented and the associated roles, responsibilities and contact details for the principal persons responsible for management during the construction period;

(b) A clear description of the planned staging of works and the description of earthworks in each stage, including detailed site plans;

(c) Confirmation of the volumes of earthworks required;

(d) The engineering controls, supervision and certification that will be applied to each stage of development;

(e) The specific erosion and sediment control measures that will be applied to each stage of earthworks;

(f) The specific dust control measures that will be applied to each stage of earthworks;

(g) The engineering and management procedures for the disposal of excess / unsuitable materials; and

(h) Details on the frequency of inspections and monitoring of all stormwater, dust, erosion and sediment control measures throughout each stage of construction works, including details of the experienced and appropriately qualified person responsible for inspections and monitoring.

16 All earthworks required for the construction of the transmission line shall be undertaken in accordance with the Taranaki Regional Council's "*Guidelines for Earthworks in the Taranaki Region, 2006*."

NOISE

Construction Noise

17 Noise from all construction works associated with the establishment of the transmission line shall be measured and assessed in accordance with the requirements and limits of "*NZS6803:1999 Acoustics – Construction Noise*."

18 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Noise Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 18(a) to (d). The Construction Noise Management Plan shall be generally in accordance with Section 8 and the relevant annexures of *"NZS6803:1999 Acoustics – Construction Noise",* which detail the relevant types of construction to which the Construction Noise Management Plan is to apply, and the procedures that will be carried out to ensure compliance with the standard. The objectives of the Construction Noise Management Plan shall be to ensure construction works are:

(a) Designed and implemented to comply with the requirements of *"NZS6803:1999 Acoustics – Construction Noise"*; and

(b) Implemented in accordance with the requirements of Section 16 of the Resource Management Act 1991, so as to adopt the best practical option to ensure the emission of noise from the project site does not exceed a reasonable level.

19 In order to achieve the objectives established in Condition 18 above, the Construction Noise Management Plan shall, as a minimum, address the following matters:

(a) The operating hours for the construction works and any time restrictions on the operation of particular machinery and equipment;

(b) Details on the machinery and equipment to be utilised during the construction works, any required mitigation measures associated with the operation of the machinery and equipment;

(c) Predictions of sound levels from the machinery and equipment to be utilised during the construction works;

(d) Details on the noise monitoring programme to be undertaken during the construction works (if necessary);

(e) The procedure for the reporting of any exceedances of *"NZS6803:1999 Acoustics – Construction Noise"* to the Group Manager - Environmental Services, South Taranaki District Council; and

(f) The procedures for the reporting and logging of noise related complaints, including the need for additional monitoring following the receipt of noise complaints.

20 The Construction Noise Management Plan shall be prepared by an appropriately qualified and experienced acoustical consultant.

Operational Noise

21 Noise from the operation of the transmission line shall not exceed 45 dBA $L_{Aeq\ (15\ mins)}$ when measured at, or within, the notional boundary of any rural zoned dwelling in existence or authorised by a resource consent or building consent at the date of notice of the decision on the resource consent applications for the Waverley Wind Farm under s114 of the Resource Management Act (excluding those dwellings where the property owner has provided their written approval and where this approval has been provided to the Group Manager – Environmental Services, South Taranaki District Council) or at, or within, the boundary of any residential zoned site.

Except where otherwise expressly provided for, noise shall be measured in accordance with the requirements of "NZS6801:2008 Measurement of Sound" and assessed in accordance with the requirements of *"NZS6802:2008 Assessment of Environmental Sound"*.

TRAFFIC

22 The routes, vehicle types, traffic movements and traffic generation related to the construction, operation and maintenance of the transmission line shall be in general accordance with those described in the Transportation Assessment by Traffic Design Group appended to *"Waverley Wind Farm – Resource Consent Applications and Assessment of Environmental Effects"* dated 14 April 2016.

Construction Traffic Management Plan

23 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Construction Traffic Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 23(a) to (g). The objectives of the Construction Traffic Management Plan shall be to:

(a) Ensure all specific legislative requirements (e.g. statutes, regulations and / or bylaws) and consent conditions in relation to construction traffic are adhered to;

(b) Encourage a culture of road safety awareness and commitment;

(c) Ensure best practice in transport safety;

(d) Ensure emergency services are not obstructed;

(e) Minimise disruption to the surrounding community, farming operations and rural services;

(f) Minimise traffic generation; and

(g) Encourage the participation of the surrounding community in maximising safety and minimising disruption.

24 In order to achieve the objectives established in Condition 23 above, the Construction Traffic Management Plan shall, as a minimum, address the following matters:

(a) The construction programme and the associated traffic volumes estimated for the construction of the transmission line;

(b) Driver protocols aimed at ensuring safe driving practices and full compliance with the law, including speed limits, appropriate following distances, observing engine braking restrictions, and affording priority to other traffic;

(c) The traffic management measures to be implemented at intersections, level crossings, stock crossings and access points to local properties;

(d) The timing of construction traffic to minimise disruption to, and potential safety issues, for the operation of school bus services;

(e) Requirements for the monitoring of construction traffic;

(f) Communication arrangements with affected residents, South Taranaki District Council, New Zealand Transport Agency, schools, emergency services and other key stakeholders, including provision of prior notice of traffic arrangements and any road closures; and

(g) The ongoing review and evaluation of the contents of the Construction Traffic Management Plan throughout the period of construction works.

25 The Construction Traffic Management Plan shall be prepared by a suitably experienced and qualified traffic engineer and in consultation with the New Zealand Transport Agency and the Group Manager – Engineering Services, South Taranaki District Council.

26 The consent holder shall distribute copies of the Construction Traffic Management Plan to emergency services and landowners / occupiers with access to the local construction traffic routes.

HEALTH AND SAFETY

27 In those areas along the transmission line where the public has access, electric and magnetic fields' strength shall comply with the guidelines for public exposure to electric and magnetic fields as published in 2010 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

28 All works authorised by this resource consent shall be designed to comply with NZS6869:2004 *"Limits & Measurement Methods of Electromagnetic Noise from High Voltage A.C. Power Systems, 015 to 1000 MHZ"*.

NETWORK UTILITIES

29 Prior to the commencement of any construction works over State Highway 3 and the Marton – New Plymouth Railway Line, the consent holder shall install safety nets to ensure that conductor stringing does not adversely affect the safe and efficient utilisation of the state highway and railway network.

30 The location and design of the safety nets shall be determined in consultation with the New Zealand Transport Agency and KiwiRail. A copy of the design plans for the safety nets shall be provided to the Group Manager – Environmental Services, South Taranaki District Council prior to the safety nets being erected.

31 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit a Network Utilities Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objective in Condition 31(a). The Network Utilities Management Plan shall be prepared by the consent holder in consultation with those network utility operators with infrastructure that will be directly affected by the project. The objective of the Network Utilities Management Plan shall be to:

(a) Ensure that enabling works, design, construction and ongoing operational works associated with the 110 kV transmission line alignment and associated buffer area adequately take account of, and include measures to address the safety, integrity, protection and relocation of existing network utilities, where necessary.

32 The purpose of the certification under Condition 31 is for the Group Manager - Environmental Services, South Taranaki District Council to:

(a) Confirm that the appropriate liaison with infrastructure providers has occurred and that their concerns have been taken into account; and

(b) Confirm that the Network Utilities Management Plan meets the requirements of Conditions 33 and 34 below.

33 In order to achieve the objectives established in Condition 31 above, the Network Utilities Management Plan shall, as a minimum, address the following matters:

(a) The methods the consent holder will use to liaise with all infrastructure providers who have existing utilities that are directly affected by, or located in close proximity to the project including the process for:

(i) Seeking network utility provider approval of proposed works where their assets are affected;

(ii) The process for obtaining any supplementary authorisations (e.g. easements and/or resource consents; and

(iii) Protocols for inspection and final approval of works by network utility providers.

(b) The methods the consent holder will use to enable infrastructure providers to access existing network utilities for maintenance at all reasonable times, and to access existing network utilities for emergency works at all

times, during which construction and ongoing activities associated with the project are occurring;

(c) The methods the consent holder will use to ensure that all construction personnel, including contractors, are aware of the presence and location of the various existing network utilities which traverse, or are in close proximity to, the project, and the restrictions in place in relation to those existing network utilities. This shall include plans identifying the locations of the existing network utilities and appropriate physical indicators on the ground showing specific surveyed locations;

(d) How the consent holder will meet the costs for any project-related works that are required in order to protect, relocate and/or reinstate existing network utilities. Such methods shall be consistent with the provisions of the Electricity Act 1992, the Gas Act 1992 and the Telecommunications Act 2001;

(e) The methods the consent holder will use to ensure that provision, both physical and legal, is made for future maintenance access to utilities to a standard at least equivalent to that currently existing;

(f) Measures to be used to accurately identify the location of existing network utilities;

(g) Measures for the protection, relocation and/or reinstatement of existing network utilities;

(h) Measures to ensure the continued operation and supply of essential infrastructural services. Such measures shall include, but need not be limited to, a requirement for any new or relocated electrical or gas infrastructure to be made operational prior to the termination of the existing electrical or gas lines;

(i) Measures to provide for the safe operation of plant and equipment, and the safety of workers, in proximity to existing network utilities;

(j) Earthworks management procedures (including depth and extent of earthworks and dust management), for earthworks in close proximity to existing network utilities; and

(k) Emergency management procedures in the event of any emergency involving existing network utilities.

34 The Network Utilities Management Plan shall be implemented so that enabling works, design and construction of the project adequately take account of, and

include measures to address, the safety, integrity, protection, and relocation of existing Network Utilities where necessary. The consent holder shall adhere to the relevant requirements of the Network Utilities Management Plan at all times during any construction works and ongoing works/activities associated with the project.

ARCHAEOLOGY

35 At least 20 working days prior to the commencement of construction works authorised as part of this resource consent, the consent holder shall submit an Accidental Discovery Protocol and Management Plan to the Group Manager - Environmental Services, South Taranaki District Council to certify that the plan meets the objectives in Condition 35(a) and (b). The Accidental Discovery Protocol and Management Plan shall be prepared by a suitably experienced and qualified archaeologist and in consultation with Ngaa Rauru Kiitahi and Heritage New Zealand. The objectives of the Accidental Discovery Protocol and Management Plan shall be to:

(a) Minimise the effects of construction works on any koiwi, taonga or archaeological features within the alignment of the transmission line consent; and

(b) Ensure construction works are designed and implemented in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014.

36 In order to achieve the objectives established in Condition 35 above, the Accidental Discovery Protocol and Management Plan shall, as a minimum, address the following matters:

(a) Preconstruction protocols that may be carried out;

(b) Protocols for notification of relevant parties and site management procedures in the event any koiwi, taonga or archaeological features are uncovered at any time;

(c) Contact details for relevant parties;

(d) The procedures to be adopted during construction in potentially sensitive locations within the alignment of the transmission line; and

(e) Training procedures for all site staff and contractors.

37 The requirements of the Accidental Discovery Protocol and Management Plan established in Condition 35 above, shall only apply for those areas within the alignment of transmission line not subject to an archaeological authority obtained under the Heritage New Zealand Pouhere Taonga Act 2014.

Note: If required, the consent holder is responsible for obtaining archaeological authorities under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014 prior to the commencement of construction works authorised as part of this resource consent.

COMPLAINTS

38 The consent holder shall maintain and keep a Complaints Register to record any complaints about construction works and the operation of the transmission line received by the consent holder in relation to traffic, noise, radio reception interference, or any other environmental effects. The register shall record, where this information is available, the following:

(a) The date, time and duration of the incident that resulted in the complaint;

(b) The location of the complainant when the incident was detected;

(c) The possible cause of the incident; and

(d) Any corrective action taken by the consent holder in response to the complaint, including the timing of the corrective action.

39 The Complaints Register shall be available to staff and authorised agents of the South Taranaki District Council and to members of the Consultative Group (established under Resource Consent RML16030.1 for the Waverley Wind Farm) at all reasonable times upon request. Complaints received by the consent holder that may imply non-compliance with the conditions of this resource consent shall be forwarded to the Group Manager - Environmental Services, South Taranaki District Council within 48 hours of the complaint being received.

REVIEW

40 Pursuant to Sections 128 to 131 of the Resource Management Act 1991, the South Taranaki District Council may one year after the commencement of this resource consent, and at five yearly intervals thereafter, serve notice on the consent holder of its intention to review any or all of the conditions of this resource consent for any of the following purposes:

(a) To review the effectiveness of the conditions of this resource consent in avoiding, remedying or mitigating any adverse effects on the environment that may arise from the exercise of this resource consent (in particular, the potential adverse environmental effects in relation to archaeology, noise, earthworks, traffic and roading effects);

(b) To address any adverse effects on the environment which have arisen as a result of the exercise of this resource consent that were not anticipated at the time of commencement of this resource consent, including addressing any issues arising out of complaints; and

(c) To review the adequacy of, and necessity for, any of the monitoring programmes or management plans that are part of the conditions of this resource consent.

CHARGES

41 The consent holder shall pay to the South Taranaki District Council:

(a) All required administration charges fixed by the South Taranaki District Council pursuant to Section 36 of the Resource Management Act 1991 in relation to the administration, monitoring and inspection of this resource consent; and

(b) All other charges authorised by regulations.