



# Fast Track Approvals Act Application

**Foxton Solar Farm**

**Genesis Energy Limited**

Prepared by:

**SLR Consulting New Zealand**

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## Revision Record

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## Basis of Report

This report has been prepared by SLR Consulting New Zealand Limited (SLR), on the instruction of Genesis Energy (the Client), in accordance with the agreed scope of work. It is intended to support the Client's application under the Fast Track Approvals Act 2024 and may be relied upon by the Expert Panel and relevant administering agencies for the purposes of assessing the application. While SLR has exercised due care in preparing this report, it does not accept liability for any use of the report beyond its intended purpose. Where information has been supplied by the Client or obtained from external sources, it has been assumed to be accurate unless otherwise stated.

## Qualifications of Author

This report was prepared in accordance with the Environment Court Practice Note 2023 (Code of Conduct for Expert Witnesses) by Nicola Sedgley.

Nicola is a Technical Director of Planning at SLR and is a full member of the New Zealand Planning Institute, has a degree in Resource Studies from Lincoln University and has 27 years' experience practicing in the area of planning in New Zealand either in District Councils, at the Ministry for the Environment or as a private planning consultant. Nicola has assisted with the approval of three previous utility solar farm applications through the COVID fast track consenting process.

Nicola is also a Qualified Hearings Commissioner under the "Making Good Decisions" course.



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## Application details

Consent authority:	Horowhenua District Council and Manawatū-Whanganui Regional Council
Applicant:	Genesis Energy Limited 155 Fanshawe Street Auckland Central Auckland 1010
Address for service:	SLR Consulting New Zealand 201 Victoria Street West Auckland Central Auckland 1010  Attn: Tim Grace Email: [REDACTED]
Address for fees:	Genesis Energy Limited 155 Fanshawe Street Auckland Central Auckland 1010  Attn: Jack Baird Email: [REDACTED]
Site:	304-508 Wall Road and 447 Motuiti Road, Foxton 4891
Legal description:	Lot 3 Deposited Plan 88328, Part Himatangi X Block, Lot 1 DP Deposited Plan 31997, Lot 2 Deposited Plan 31997, Lot 3 Deposited Plan 31997, Lot 2 Deposited Plan 88328, Lot 1 Deposited Plan 88328, Part Himatangi 5A6B Block, Part Himatangi 5A6A2 Block, Himatangi 4D3B1 Block, Lot 4 Deposited Plan 88328, Part Himatangi 5A4B Block and Part Himatangi 4C3 Block and Part Himatangi 4C4 Block and Part Himatangi 4C5 Block and Part Himatangi 4D2 Block and Part Himatangi 4D3A Block and Part Himatangi 4D3B2 Block and Lot 1 Deposited Plan 427921.
Owner(s):	[REDACTED] [REDACTED]
Occupier(s):	[REDACTED] [REDACTED] [REDACTED]
Site area:	Site area: 488ha Project area: 436ha
Regional Plan:	Manawatū-Whanganui Regional Council One Plan
Regional Plan notations:	Lowland Mixed Life Supporting Capacity



	Flood Control and Drainage
District Plan:	Operative Horowhenua District Plan
District Plan Zone:	General Rural
Designations:	None
District Plan Overlays or controls:	Foxton Dunefields Landscape Precinct
Other notation(s):	National Grid Corridor (High Voltage Corridor) Ponding Hazard
Brief description of the proposed activity:	The construction, operation, maintenance and decommissioning of a Solar Farm and ancillary infrastructure (including a BESS) at 304-508 Wall Road and 447 Motuiti Road, Foxton. The proposal will also involve the installation of a grid connection via a new substation to the Transpower Bunnythorpe-Haywards (BPE-HAY) National Grid Transmission Lines.
Resource consent(s) required:	<p><u>Manawatū-Whanganui Regional Council One Plan:</u> Controlled activity resource consent is required for large scale land disturbance. Discretionary activity resource consent is required for the construction of an open wire fence perpendicular to a drain. Discretionary activity resource consent is sought on a precautionary basis for vegetation clearance, and land disturbance that does not comply with Rules 13-1 to 13-6 due to proximity to the farm drains.</p> <p><u>National Environmental Standards for Freshwater 2020:</u> Discretionary activity resource consent is required for earthworks and vegetation clearance in and within 10m of a natural inland wetland under Regulations 45(1), (2) and (3).</p> <p><u>Operative Horowhenua District Plan:</u> Discretionary activity resource consent (land use) is required for a solar farm and ancillary infrastructure. Other consent requirements include consent to exceed maximum height of structures and voltage for the substation, exceed the restricted discretionary volume limits for the use and storage of hazardous substances on site and exceed noise standards at some adjoining sites and existing dwellings. Discretionary activity resource consent (subdivision) is required to give effect to the lease area boundaries and to create rural residential lots around existing dwellings.</p>
Status of the proposed activity:	Discretionary Activity



## 1.0 Overview

Genesis Energy Limited (Genesis) is proposing to build and operate an approximately 220 MWp solar facility that will generate approximately 345GWh per year of renewable electricity. This will be enough to power the equivalent of 47,000 homes annually.

The site for the proposed solar farm is located approximately 4km north from the centre of Foxton, on 436ha of a 488ha site currently used for dairy farming and stock grazing.

The solar farm will consist of solar panels and power generation equipment arranged in rows across the site with a battery energy storage system. The renewable electricity generated will be connected to the National Grid via a new on-site substation and connection assets. As the lease agreement to secure the land for this use is for a term of more than 35 years, this lease agreement is defined as a subdivision. The proposed subdivision plan to give effect to this agreement is included as part of these application documents.

The proposal also includes 26ha of planting for the purposes of either boundary screening or the enhancement of dunelands, wetlands or drain margins.

The solar farm will be owned and operated by Genesis. The new substation and connection assets will be constructed by Genesis before being transferred to Transpower. The substation will be created within its own separate (lot) title proposed by this application.

Having been confirmed as a listed project with significant regional or national benefits in Schedule 2 of the Fast-track Approvals Act 2024 (“FTA”), Genesis seeks resource consents from the Environmental Protection Authority (“EPA”) that would otherwise be applied for under the RMA for the construction, operation, maintenance, and eventual decommissioning of the proposed Foxton Solar Farm.

This Assessment of Effects on the Environment (“AEE”) has been prepared in support of the applications by Genesis under the FTA.

### 1.1 Genesis Energy Limited

Genesis is a diversified energy company. It sells electricity, reticulated natural gas and LPG. It is one of New Zealand’s largest energy retailers with around 520,000 customers. The company generates electricity from a diverse portfolio of thermal and renewable generation assets located in different parts of Aotearoa. The spread of locations and fuel types in the portfolio provides Genesis significant operating flexibility. Genesis also has a 46% interest in the Kupe Joint Venture, which owns the Kupe Oil and Gas Field offshore of Taranaki, New Zealand.

Genesis' portfolio of generation assets comprises:

1. The Huntly Power Station including two modern gas fired and three gas/coal fired generating units with a nominal capacity of approximately 1204 MW, which is the largest electricity generation facility in New Zealand by capacity. A nominal 100 MW lithium-ion battery is under construction at Huntly.
2. Three renewable generation hydro schemes, Tongariro (362 MW), Waikaremoana (138 MW) and Tekapo (190 MW). These schemes comprise eight power stations, with six being located in the North Island and two in the South Island.
3. A 63 MWp solar farm at Lauriston, Canterbury (with FRV Australia).

Genesis is committed to playing its role in decarbonising the New Zealand economy. It has worked with the Science Based Targets initiative (SBTi) to set carbon reduction targets for the 2025 financial year (“FY”) aligned with limiting global warming to below 1.5°C and have



submitted long term targets for validation to FY 2040, in line with Science Based Target's Corporate Net zero standard.

Genesis has also submitted a net zero emission reduction target in line with the SBTi Corporate Net Zero guidance for validation, targeting to meet net zero criteria by 2040.

Genesis' strategy, Gen35, outlines its plans for taking action over the next 10 years to reduce its emissions by growing renewables, supporting customers to electrify, and managing increasing energy demand, while ensuring customers have reliable and cost effective energy. Under the Gen35 pillar to "Grow renewables", Genesis is aiming to secure 8,300 GWh of new renewable electricity generation by FY35.

In respect to its approach to environmental management more generally, Genesis seeks to efficiently use the resources available to it, while working alongside tangata whenua and local communities, and looking after the environment in which it operates. Genesis recognises that in addition to its shareholders, the Company interacts with many other stakeholders, including the communities within the rohe on which it operates its generation assets and business activities, customers, suppliers and creditors and local and central government regulatory bodies and non-governmental organisations. The Company has adopted and promoted a range of policies and practices which reflect the respect it holds for its stakeholders and the value that good relationships with stakeholders deliver to the Company and its shareholders. These include recognising the role of tangata whenua (the people of the land) as kaitiaki of the natural resources and taonga within their rohe, respecting Treaty of Waitangi principles and developing pro-active and constructive long-term relationships with tangata whenua, communities and organisations where the Company operates.

Genesis operates an Environmental Management System ("EMS") which utilises business systems to manage the company's effects and requirements for environmental management across all of Genesis' projects and operational sites. The EMS provides the necessary controls and instructions to achieve the company's commitment to environmental excellence and requirement to comply with all environmental legislation. The EMS applies to all activities involving the use of natural and physical resources and the environment, from the conceptual stage of any project through to normal operational activities of Genesis. Genesis holds all relevant statutory authorisations and resource consents for the operation of its assets, including those required under the RMA. This provides a sound basis for identifying and managing environmental effects, reporting on environmental performance and reviewing what constitutes the best practicable option for various activities.

Genesis is the Authorised Person in respect of the Foxton Solar Farm as listed in Schedule 2 of the FTAA.

Genesis holds Agreements to Lease and Licence with the legal landowners for the land identified as the site as recorded on the certificates of title in Appendix A. These agreements enable Genesis to construct and operate a solar farm at the site.

### **1.1.1 Summary of compliance or enforcement actions**

As outlined in the FTAA Schedule 2 application form included in Appendix C, Genesis is committed to ensuring that environmental, social and cultural awareness and responsibility are cornerstones of the company's business activities and that a duty of care towards people, communities and the environment is exercised at and around its assets. The company achieves this by implementing an Environmental Management System that aligns with core company values. Genesis seeks full regulatory compliance as a minimum standard and publicly reports on its environmental performance.



Genesis' activities are monitored regularly by the relevant regulatory authorities and Genesis has a history of very high environmental compliance, with no environmental enforcement actions having been taken against it.

## 2.0 Requirements of the Fast-track Approvals Act

### 2.1 Assessment against the purpose of the Fast-Track Approvals Act

Assessment of the proposal against the purpose of the FTA is to be given the most weight by the panel in its decision on the approvals sought.

The section 3 purpose of the FTA is:

*“to facilitate the delivery of infrastructure and development projects with significant regional or national benefits”.*

What constitutes a significant regional or national benefit is not defined in the FTA, however the considerations in section 22(2) (criteria for assessing referral application) have been used as a reference point for this analysis. The Foxton Solar Farm is considered to meet the purpose of the FTA for the following reasons:

- The project is an infrastructure project that has significant regional or national benefits. The RPS defines that an energy generating facility that generates 1MW is of regional significance. The proposal will generate 180<sub>AC</sub>MW and significantly exceeds this level and therefore meets this definition.
- The solar farm will generate approximately 345GWh per year of renewable electricity which is enough to power 47,000 homes annually. This electricity generation will significantly contribute to New Zealand's renewable energy generation, decreasing the reliance on fossil fuels, gas and diesel which are currently widely used to generate electricity. This transfer of generation source will work towards lowering CO2 emissions to contribute towards New Zealand's emissions reduction targets.
- The solar farm will increase New Zealand's electricity diversity and resiliency by providing a clean and climate resilient energy source. Solar farms are resilient to climate effects and provide a reliable source of energy, ensuring greater electricity security nationally.
- The Economic report attached as Appendix B assesses and describes the benefit of the project to the local economy. In summary this is a peak of up to 103 jobs in the construction period; 3-5 permanent ongoing jobs; and \$7.8 million in additional wages and salaries is for residents in the region.
- Regional benefits include local employment and economic opportunities that would extend through the supply chain and procurement. During the peak of construction, it is expected to directly create up to 103 jobs, and the local sourcing of labour will bring additional benefits to the local economy. In addition to the benefit of the direct jobs created there will be flow on effects for other businesses in the area such as cafes, trades businesses and equipment, fuel and accommodation providers.
- Upon the granting of resource consents and subject to final investment decisions, an 18-24 month construction programme would commence. The construction cost is estimated at \$312 million. Of this \$54.6 million (17.5%) is expected to be spent within the Horowhenua District and an estimated \$78.0 million (25%) within the Manawatū-Whanganui Region (including the Horowhenua District).



- The expenditure on other goods and services (i.e. other than labour) over the 18–24-month construction period is estimated at \$49.6 million within the Horowhenua District and \$70.2 million within the Manawatū-Whanganui Region.
- The Economic Report in Appendix B also describes the indirect benefits that will result from the proposal having a multiplier of between 1.5 to 2.0 which equates to \$7.5 million in additional wages and salaries for local Horowhenua District residents and \$74.4 million in additional expenditure for local Horowhenua District businesses.
- Section 22(6) states that when assessing if the project has regional or national benefits the activity may be compared against the current and other likely uses of the space, taking into account:
  - The economic benefits and strategic importance of the proposed project; (section 22(6)(a)) and
  - The environmental impact of the competing activities. (section 22(6)(c))
- If the solar farm does not proceed, the most likely use of the site is continuation of the current dairy farm activities or a potential future sheep grazing block. The economic benefits of the proposed activity outlined in the Economic report in Appendix B assess the benefits of the proposal are far greater than this landuse. In addition, the current activity of dairy farming and the disposal of stickwater to the site has the environmental impact of discharging large volumes of nitrogen and other contaminants to the land and the increased rate of leaching of contaminants due to the application of high volumes of water drawn from ground water irrigated onto the site. These impacts are fully described in section 7. When assessing the competing likely other land uses and the environmental impact of the existing land use activity against the proposed solar farm, the proposal has other clear benefits to the existing land use.
- The project will support climate change mitigation, including the reduction or removal of greenhouse gas emissions (section 22(2)(viii)) by the generation of 180MW<sub>AC</sub> of electricity to meet demand that would otherwise most likely need to have been met by the burning of fossil fuels.
- The proposal will assist to address the significant environmental issue of providing for energy use for communities in a more sustainable way (section 22(2) (ix)).
- The proposal is predominantly consistent with the district and regional planning documents.

As outlined above the proposal is clearly consistent with the matters outlined in section 22 that contains criteria for determining regionally and nationally significant projects as well as the criteria in the regional policy statement.

## 2.2 Fast-track approval process

Prior to enactment of the FTA, the project was approved by the Minister as a 'listed project', which subsequently meant that it was listed in Schedule 2 to the FTA upon enactment. The application to become a listed project included a summary of the proposal included in this application and a summary of the key effects. The FTA listed project application has been attached as Appendix C for information.

### 2.2.1 Pre-lodgement requirements for listed projects

Section 29(1) of the FTA contains requirements before lodging a substantive application. Section 29(1) states:



*Before lodging a substantive application for a listed project, the authorised person for the project must—*

- (a) *consult the persons and groups referred to in section 11;*  
(. . .)

The persons and groups required to be consulted with prior to lodging a substantive application and the consultation that has occurred with these parties are set out in Table 1 below.

**Table 1: Parties required to consult with prior to lodging a substantive application**

<b>FTA Section 11 Person or Groups</b>	<b>Specific Group</b>	<b>Consultation</b>
Relevant local authorities	Horowhenua District Council	Online meetings. See Section 5 and Appendix D for details.
	Manawatū–Whanganui Regional Council	Online meetings. See Section 5 and Appendix D for details.
Relevant iwi authorities, hapū, and Treaty settlement entities	Ngā Hapū o Himatangi (including Ngāti Te Au, Ngāti Turanga, and Ngāti Rakau)	Letters of support obtained from Ngā Hapū o Himatangi (as hapū of Ngāti Raukawa ki te Tonga), Rangitāne o Manawatū and Muaūpoko Tribal Authority. See Section 5 and Appendix D for details.
	Ngāti Raukawa ki te Tonga	
	Rangitāne o Manawatū / Rangitāne o Manawatū Settlement Trust (RoMST)	
	Muaūpoko / Muaūpoko Tribal Authority (MTA)	

The iwi groups listed in Table 1 are the relevant “iwi authorities and groups” that represent hapū and represent mana whenua for the project area.

There are no applications for customary marine title under the Marine and Coastal Area (Takutai Moana) Act 2011 relevant to the project and the project area is not within or adjacent to, nor would it directly affect, ngā rohe moana o ngā hapū o Ngāti Porou. The project also does not require an approval for land exchange.

### **2.2.2 Identification of existing resource consent for same activity or competing applications**

Section 47 of the FTA sets out requirements relating to competing applications or existing resource consents. Section 30(1)(b) states for activities where the “*authorised person for the project does not hold an existing resource consent for the same activity using some or all of the same natural resource.*”

Genesis does not hold any resource consents for the same activity.

Manawatū–Whanganui Regional Council and Horowhenua District Council have advised (see Appendix D) that there do not appear to be any existing or competing consents as this section only applies to consents sought under section 12,13,14 and 15 of the RMA. This application only requires consent for landuse under section 9 from both the District and Regional Council.



Section 3.3 below lists some of the existing landuse, water take and discharge permits that have been granted on the application site. These consents are not for use of resources that would be competed for if this consent application was granted as this application does not involve consent for the use of the same water or discharge capacity. This is with the exception of consent 107377 and 107378 for the use of land for intensive dairying and the associated nitrogen discharge. The landuse consented under this approval will not be able to continue in its current form as the majority of the land covered by the consent will be converted to solar panels. This consent is a consent under section 9, not sections 12-15 and is not therefore considered an existing resource consent under section 30(3)(a) and section 124C(1)(c).

A copy of the Resource Consent 107377 and 107378 is included in Appendix U.

Correspondence with the councils is included in Appendix D.

### 2.2.3 Project priority

Genesis has not sought priority under section 38 of the FTA.

### 2.2.4 Substantive application for approval

Section 42 of the FTA sets out the requirements for lodging applications for approvals under the FTA. FTA section 42(3)(a) requires that an applicant for an approval must be eligible to apply for any corresponding approval under a specified Act. For this application, Genesis is eligible to apply for a resource consent that would otherwise be applied for under the RMA.

Section 42(2)(a) requires that an application must comply with section 43 of the FTA. This is discussed below.

### 2.2.5 Requirements for substantive application

The requirements for a substantive application are set out in section 43 of the FTA. These matters and how they have been addressed in this proposal is summarised in Tables 2, 3, 4, 5 and 6 below. The information set out in section 43 of the FTA must be provided in sufficient detail to satisfy the purpose for which it is required.<sup>1</sup>

**Table 2: Requirements for a substantive application**

SECTION	REQUIREMENT	COMMENT / CROSS REF RELEVANT SECTION
43(1)(a)	Must be lodged in the form and manner approved by the EPA	Requirement complied with.
43(1)(b)(i) <sup>2</sup>	Explanation of how the project to which the application relates is consistent with the purpose of this Act.	Section 2.1.
43(1)(c)	Demonstrate that the project does not involve any ineligible activities.	No ineligible activities are included
43(1)(d)	More than 1 authorised person	No.

<sup>1</sup> FTA, section 44.

<sup>2</sup> Section 43(1)(b)(ii) does not apply to this project.



43(1)(e)(i)	Information requirements specified by the Minister under section 27(3)(b)(ii).	None specified.
43(1)(e)(ii)	The requirements listed in subsection (3) that apply to the approvals sought.	Sections 6 - 8
43(1)(f)	Section 39 determination under section 23 or 24.	None made.
43(1)(g)	Steps taken to secure the agreement referred to in section 5(1)(a).	Not applicable
43(1)(h)	Does the application relate to a priority project and, if so, confirm that, to the best of the applicant's knowledge, there are no competing applications.	No.
43(1)(i)	Has the application been made by the deadline specified in the notice under section 28(3)(d).	None made.
43(1)(j)	Has the relevant fee, charge, or levy payable under regulations in respect of the application been paid?	Yes.
43(2)	Information required by section 13(4) and section 29.	Section 5, 7.3, 10 and Appendix FD, E.
43(3)(a) <sup>3</sup>	The requirements in clauses 5 to 8 of Schedule 5.	Refer Table 4 below

**Table 3: Requirements under s13(4)**

SECTION	REQUIREMENT	COMMENT
13(4)(a)	A description of the project and the activities it involves:	Section 4.
13(4)(c)	Information to demonstrate that the project does not involve any ineligible activities (other than activities that may be the subject of a determination under section 23 or 24):	Does not include any ineligible activities
13(4)(d)	A description or map of the whole project area that identifies its boundaries in sufficient detail to enable consideration of the referral application:	Appendix Fand G.

<sup>3</sup> Section 43(3)(b)-(m) do not apply to this project.



SECTION	REQUIREMENT	COMMENT
13(4)(e)	The anticipated commencement and completion dates for construction activities (where relevant):	Section 4.18.
13(4)(f)(i)	A statement of whether the project is planned to proceed in stages and, if so,— (i) an outline of the nature and timing of the stages; and	Section 4.18.
13(4)(h)	A description of the anticipated and known adverse effects of the project on the environment:	Section 7.
13(4)(i)	A statement of any activities involved in the project that are prohibited activities under the Resource Management Act 1991:	None, refer Section 6.
13(4)(j)	A list of the persons and groups the applicant considers are likely to be affected by the project, including— (i) relevant local authorities: (ii) iwi authorities and groups that represent hapū that are parties to relevant Mana Whakahono ā Rohe or joint management agreements: (iii) other relevant iwi authorities: (iv) relevant Treaty settlement entities: ... <sup>4</sup>	Section 5 and Appendix F.
13(4)(k)	A summary of— (i) the consultation undertaken for the purposes of section 11 [per s 43(2)(a) to be read as section 29] and any other consultation undertaken on the project with the persons and groups referred to in paragraph (j); and (ii) how the consultation has informed the project:	Section 5 and Appendix D.
13(4)(l)	A list of any Treaty settlements that apply to the project area, and a summary of the relevant principles and provisions in those settlements:	Section 9.

<sup>4</sup> (v) to (viii) are not relevant to the project.



SECTION	REQUIREMENT	COMMENT
13(4)(m)	A description of any processes already undertaken under the Public Works Act 1981 in relation to the project	None.
13(4)(n)	Any relevant principles or provisions in the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019	Not applicable.
13(4)(o)	Information identifying the parcels of Māori land within the project area, marae, and identified wāhi tapu within the project area:	None within project area.
13(4)(p)	A statement of whether the applicant is seeking a determination under section 23 and, if so, an assessment of the effects of the activity on the relevant land and on the rights and interests of Māori in that land:	No section 23 determination is sought.
13(4)(q)	A statement of whether the applicant is seeking a determination under section 24(2) and, if so, a description of— (i) the scale and adverse effects of the existing electricity infrastructure; and (ii) (how, if at all, that scale or those adverse effects are anticipated or known to change as a result of the maintenance, upgrading, or continued operation of the infrastructure:	Not applicable.
13(4)(r)	a statement of whether the applicant is seeking a determination under section 24(4) and, if so,— ...	Not applicable.
13(4)(s)	A description of the applicant's legal interest (if any), or if the referral application is lodged by more than 1 person, the legal interest of any of those persons (if any), in the land on which the project will occur, including a statement of how that affects the applicant's ability to undertake the work:	Section 1.1.



SECTION	REQUIREMENT	COMMENT
13(4)(t)	An outline of the types of consents, certificates, designations, concessions, and other legal authorisations (other than contractual authorisations or the proposed approvals) that the applicant considers are needed to authorise the project, including any that the applicant considers may be needed by someone other than the applicant:	Section 6.
13(4)(u)	Whether any activities that are involved in the project, or are substantially the same as those involved in the project, have been the subject of an application or a decision under a specified Act and,— (i) if an application has been made, details of the application: (ii) if a decision has been made, the outcome of the decision and the reasons for it:	Not applicable.
13(4)(v)	A description of whether and how the project would be affected by climate change and natural hazards:	Section 7.11.
13(4)(w)	If the referral application is lodged by more than 1 person, a statement of each proposed approval to be held by each of those persons:	Not applicable.
13(4)(x)	A summary of compliance or enforcement actions (if any), and the outcome of those actions, taken against the applicant under a specified Act:	Section 1.1
13(4)(y)	if the proposed approvals include— (i) an approval described in section 42(4)(a) or (b) (resource consent or designation), the information specified in clause 2 of Schedule 5: (...)	Not applicable.

### 2.2.6 Project eligibility

Section 43(1)(c) states that an application must demonstrate that the project does not involve any ineligible activities.

The resource consents sought for the Foxton Solar Farm do not involve any of the activities described in section 5 of the FTA. The application does not involve any ineligible activity.



## 2.2.7 Schedule 5 requirements

Section 43(3)(a) of the FTA states that the information requirements for a substantive application under the FTA for a resource consent are set out in clauses 5 to 8 of Schedule 5.<sup>5</sup> Section 13(4)(y) also requires that the information required by clause 2 of Schedule 5 be provided.

The requirements of clauses 2 and 5 to 7 of Schedule 5 are summarised in the following tables.

**Table 4: FTA Clause 2**

Clause 2 Information Requirement	Comment
(1) The information required to be provided under section 13(4)(y)(i) is (a) an assessment of the project against—	
(i) any relevant national policy statement; and	Section 8.5 - 8.7
(ii) any relevant national environmental standards; and	Section 8.8 and 8.9
(iii) if relevant, the New Zealand Coastal Policy Statement.	Not applicable.
(b) in relation to any proposed approval that is a resource consent, whether, to the best of the applicant's knowledge, there are any existing resource consents of the kind referred to in section 30(3)(a).	Not applicable.
(2) If the referral application is to be lodged by more than 1 person, the reference to the applicant in subclause (1)(b) must be read as a reference to the person who is to be identified in the application as the proposed holder of the resource consent.	Not applicable.

**Table 5: FTA Clause 5**

Clause 5 Information Requirement	Comment
(1) For the purposes of section 43(3)(a), a consent application must include the following information:	
(a) a description of the proposed activity;	Section 4.

<sup>5</sup> The application is not for a subdivision or reclamation, so information is not required under clause 8 (information required in application for subdivision or reclamation) of Schedule 5. Clauses 9-12 of Schedule 5 are also not relevant to this application.



Clause 5 Information Requirement	Comment
<p>(b) a description and map of the site at which the activity is to occur, including whether the site is within or adjacent to—</p> <ul style="list-style-type: none"> <li>(i) a statutory area (as defined in the relevant Treaty settlement Act); or</li> <li>(ii) ngā rohe moana o ngā hapū o Ngāti Porou; or</li> <li>(iii) a protected customary rights area under the Marine and Coastal Area (Takutai Moana) Act 2011</li> </ul>	Section 4, Appendix G and Section 9.
<p>(c) confirmation that the consent application complies with:</p>	
<p>(i) Section 46(2)(a)</p>	Is lodged by an authorised person, for a relevant matter, in the required form.
<p>(ii) Section 46(2)(b)</p>	Is a listed project.
<p>(iii) Section 46(2)(d)</p>	Levy and fee has been paid.
<p>(d) the full name and address of—</p> <ul style="list-style-type: none"> <li>(i) each owner of the site and of land adjacent to the site; and</li> <li>(ii) each occupier of the site and of land adjacent to the site whom the applicant is unable to identify after reasonable inquiry</li> </ul>	Refer to Appendix F.
<p>(e) a description of any other activities that are part of the proposal to which the consent application relates</p>	Section 4.
<p>(f) a description of any other resource consents, notices of requirement for designations, or alterations to designations required for the project to which the consent application relates</p>	<p>Consent may be required under the National Environmental Standards for Electricity Transmission Activities for the connection between the substation and national grid. This cannot be confirmed until detailed design is complete.</p> <p>No notices of requirement for designations or alterations to designations are required.</p>
<p>(g) an assessment of the activity against sections 5, 6, and 7 of the Resource Management Act 1991</p>	Section 11.
<p>(h) an assessment of the activity against any relevant provisions in any of the documents listed in subclause (2)</p>	Section 8.



Clause 5 Information Requirement	Comment
<p>(i) information about any Treaty settlements that apply in the area covered by the consent application, including—</p> <ul style="list-style-type: none"> <li>(i) identification of the relevant provisions in those Treaty settlements; and</li> <li>(ii) a summary of any redress provided by those settlements that affects natural and physical resources relevant to the project or project area</li> </ul>	Section 9.
<p>(j) a list of any relevant customary marine title groups, protected customary rights groups, ngā hapū o Ngāti Porou (where an application is within, adjacent to or directly affecting ngā rohe moana o ngā hapū o Ngāti Porou), or applicants under the Marine and Coastal Area (Takutai Moana) Act 2011</p>	Not applicable.
<p>(k) the conditions that the applicant proposes for the resource consent</p>	Appendix T.
<p>(l) if a notice under section 30(3)(b) or (5) has been received,—</p> <ul style="list-style-type: none"> <li>(i) a copy of that notice showing that it was received within the time frame specified in section 30(6)(b); and</li> <li>(ii) if a notice has been received under section 30(5), any more up-to-date information that the applicant is aware of about the existing resource consent referred to in the notice.</li> </ul>	Appendix D and Section 3.3
<p>(2) The documents referred to in subclause (1)(h) are the following:</p>	
<p>(a) a national environmental standard:</p>	Section 8.8 and 8.9
<p>(b) other regulations made under the Resource Management Act 1991:</p>	Sections 8, 12, 13, 14 and 15.
<p>(c) a national policy statement:</p>	Section 8.
<p>(d) a New Zealand coastal policy statement:</p>	Not applicable.
<p>(e) a regional policy statement or proposed regional policy statement:</p>	Section 8.10
<p>(f) a plan or proposed plan:</p>	Section 8.10 and 8.11



Clause 5 Information Requirement	Comment
(g) a planning document recognised by a relevant iwi authority and lodged with a local authority.	Section 9.
(3) An assessment under subclause (1)(h) must include an assessment of the activity against—	
(a) any relevant objectives, policies, or rules in a document listed in subclause (2); and	Section 8.
(b) any requirement, condition, or permission in any rules in any of those documents; and	
(c) any other requirements in any of those documents.	
(4) A consent application must include an assessment of the activity's effects on the environment that—	
(a) includes the information required by clause 6; and	Section 7.
(b) covers the matters specified in clause 7.	Section 7.
(5) A consent application must also include the following information:	
(a) if a permitted activity is part of the proposal to which the consent application relates, a description that demonstrates that the activity complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1) of the Resource Management Act 1991); and	Section 4 and Appendix P
(b) if the activity is to occur in an area that is within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011 or the environmental covenant prepared by ngā hapū o Ngāti Porou under section 19 of the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019, an assessment of the activity against any resource management matters set out in that document; and	Not applicable.



Clause 5 Information Requirement	Comment
(c) if the activity is to occur in an area that is a taiāpure-local fishery, a mātaītai reserve, or an area that is subject to bylaws made under Part 9 of the Fisheries Act 1996, an assessment of the effects of the activity on the use or management of the area.	Not applicable.
(6) If the applicant is not able to supply the name and address of the owner and each occupier of the site and of land adjacent to the site because the land is Māori land in multiple ownership, the applicant must include a statement to that effect.	Section 10 and Appendix F.
(7) If the substantive application is to be lodged by more than 1 authorised person, the references to the applicant in subclauses (1)(d), (k), (l) and (6) must be read as references to the authorised person who is to be identified in the application as the proposed holder of the resource consent.	Not applicable.

**Table 6: FTA Clause 6**

Clause 6 Information Requirements	Comment
(1) The assessment of an activity's effects on the environment under clause 5(4) must include the following information:	
(a) an assessment of the actual or potential effects on the environment:	Section 7 and Appendices.
(b) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use:	Section 7.11.
(c) if the activity includes the discharge of any contaminant, a description of— (i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and (ii) any possible alternative methods of discharge, including discharge into any other receiving environment:	Not applicable.
(d) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect of the activity:	Section 7 and appendices.



(e) identification of persons who may be affected by the activity and any response to the views of any persons consulted, including the views of iwi or hapū that have been consulted in relation to the proposal:	Refer to Appendix F and Section 5.
(f) if iwi or hapū elect not to respond when consulted on the proposal, any reasons that they have specified for that decision:	Not applicable.
(g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how the effects will be monitored and by whom, if the activity is approved:	Not applicable.
(h) an assessment of any effects of the activity on the exercise of a protected customary right.	Not applicable.
(2) A consent application need not include any additional information specified in a relevant policy statement or plan that would be required in an assessment of environmental effects under clause 6(2) or 7(2) of Schedule 4 of the Resource Management Act 1991.	

**Table 7: FTA Clause 7**

<b>Clause 7 Information Requirements</b>	<b>Comment</b>
(a) The assessment of an activity's effects on the environment under clause 5(4) must cover the following matters:	
(b) any effect on the people in the neighbourhood and, if relevant, the wider community, including any social, economic, or cultural effects:	Section 7.
(c) any physical effect on the locality, including landscape and visual effects:	Section 7.5 and Appendix G and H
(d) any effect on ecosystems, including effects on plants or animals and physical disturbance of habitats in the vicinity:	Section 7.12 and Appendix I
(e) any effect on natural and physical resources that have aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:	Section 7.3, 7.4, 7.14



(f) any discharge of contaminants into the environment and options for the treatment and disposal of contaminants:	Section 7.13
(g) any unreasonable emission of noise:	Section 7.7
(h) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.	Section 7.11.

## 2.3 Decision making under the FTA

When considering the application for resource consent, the Panel must apply the relevant decision-making criteria set out in sections 81–85 and clauses 17–18 of Schedule 5 of the FTA.<sup>6</sup>

### *Requirements on the Panel*

Within the applicable timeframe, the Panel must issue its decision granting the resource consents sought and setting any conditions or declining the application.<sup>7</sup> In making its decision the Panel must consider:

- this substantive application;<sup>8</sup>
- any advice and reports the Panel convener has obtained;<sup>9</sup>
- the report on Treaty settlements and other obligations;<sup>10</sup>
- the comments it has received from invited persons or groups within the specified timeframe, and the applicant's response to those comments;<sup>11</sup>
- any information received by the Panel during a hearing, if a hearing is held;<sup>12</sup>
- any responses to further information requests to the applicant or peer review advice;<sup>13</sup>
- any response from the applicant on the draft decision and any responses from the applicant and persons and groups invited to comment on the draft conditions;<sup>14</sup>
- any responses to further information requests to the relevant administering agency or local authority;<sup>15</sup> and

<sup>6</sup> Clauses 19–22 of Schedule 5, referred to in ss 81(2)(b) and (3)(a), are not relevant as the application does not concern standard freshwater fisheries; aquaculture; or a coastal permit.

<sup>7</sup> FTA, ss 79 and 81(1).

<sup>8</sup> FTA, s 81(2)(a).

<sup>9</sup> FTA, ss 51 and 81(2)(a).

<sup>10</sup> FTA, ss 18, 52 and 81(2)(a).

<sup>11</sup> FTA, ss 53, 55 and 81(2)(a) and (6).

<sup>12</sup> FTA, ss 58 and 81(2)(a).

<sup>13</sup> FTA, ss 67 and 81(2)(a) and (6)

<sup>14</sup> FTA, ss 69, 70 and 81(2)(a) and (6).

<sup>15</sup> FTA, ss 81(2)(a) and 90.



- any comments from the Minister for Māori Crown Relations: Te Arawhiti and the Minister for Māori Development on the draft decision, including any draft conditions.<sup>16</sup>
  - apply the criteria in clause 17 of Schedule 5 (discussed below);<sup>17</sup> and
  - comply with section 82 (discussed below), if applicable<sup>18</sup>

The Panel has discretion to:

- consider any advice, report, comment, or other information received outside the specified timeframe in the FTA;<sup>19</sup> and
- impose conditions (limited by provisions in the FTA).<sup>20</sup>

#### *Criteria for assessing resource consent application*

In considering the resource consent application, the Panel is required to take into account:<sup>21</sup>

- the purpose of the FTA;
- the provisions of Parts 2,<sup>22</sup> 3, 6 (excluding s 104D) and 8 to 10 of the RMA that direct decision making on an application for a resource consent; and
- the relevant provisions of any other legislation that directs decision making under the RMA.

The purpose of the FTA must be given the greatest weight, ahead of all other considerations.<sup>23</sup> When considering the purpose of the FTA, the Panel must consider the extent of the Project's regional or national benefits.<sup>24</sup>

For the Foxton Solar Farm application, the relevant provisions of the RMA are sections 5–7, 87A, 104, 104B, 108–108A and 123. There is no other relevant legislation that directs decision making under the RMA.

#### *Effect of Treaty settlement and other obligations on decision making*

Section 82 applies if a Treaty settlement, the Marine and Coastal Area (Takutai Moana) Act 2011 or the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 is relevant to an approval. If a Treaty settlement or those Acts provide for the consideration of a document (such as a statutory document amended as a result of a Treaty settlement), the Panel must give it the same or equivalent effect through its decision making as it would under the relevant specified Act.

The Panel must also consider section 7 of the FTA in its decision making by acting in a manner that is consistent with the obligations in existing Treaty settlements and recognised

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<sup>16</sup> FTA, ss 72 and 81(2)(a).

<sup>17</sup> FTA, ss 81(2)(b) and (3)(a).

<sup>18</sup> FTA, s 81(2)(c).

<sup>19</sup> FTA, s 81(6).

<sup>20</sup> For example, under s 81(2)(e) of the FTA the Panel has discretion to impose conditions under s 84.

<sup>21</sup> FTA, sch 5 cl 17(1). 'Take into account' requires the decision maker to consider the matter (can be synonymous with "have regard to", ie give the matter genuine attention and thought). The question of weight is left to the decision maker (qualified here by the explicit requirement to give greater weight to the purpose of the FTA). See generally *Bleakley v Environmental Risk Management Authority* [2001] 3 NZLR 213 (HC) at [72]; and *New Zealand Transport Agency v Architectural Centre Inc* [2015] NZHC 1991, (2015) 19 ELRNZ 163 at [63].

<sup>22</sup> Excluding s 8, per sch 5 cl 17(2)(a) of the FTA.

<sup>23</sup> FTA, sch 5 cl 17(1).

<sup>24</sup> FTA, s 81(4).



customary rights. Section 82(3) requires the Panel to consider whether granting an approval would comply with section 7.<sup>25</sup>

The Marine and Coastal Area (Takutai Moana) Act 2011 and the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 are not relevant to the Foxton Solar Farm application.

The Rangitāne o Manawatū settlement including the Rangitāne o Manawatū Claims Settlement Act 2016, are discussed in section 9. The Foxton Solar Farm is not inconsistent with the Rangitāne o Manawatū settlements.

#### *Limited grounds to decline*

The Panel must decide whether to decline the approval.<sup>26</sup> The FTA prescribes limited grounds by which the Panel can decline to grant an approval.<sup>27</sup> Section 85 sets out when a panel must decline an approval, and where an approval may be declined (if the adverse impacts of that activity are considered to be out of proportion to the regional or national benefits of the proposal).

The Panel must decline the Foxton Solar Farm application if one or more of the following matters apply:<sup>28</sup>

- the approval is for an ineligible activity;<sup>29</sup> and/or
- the Panel considers that granting an approval would breach section 7 of the FTA.<sup>30</sup>

The Foxton Solar Farm application is not for an ineligible activity. Section 9 of the AEE explains how the Foxton Solar Farm is consistent with the Rangitāne o Manawatū settlement.

The only ground on which the Panel has discretion to decline the approval is if, in making its decision,<sup>31</sup> it forms the view that:

- there are one or more 'adverse impacts'<sup>32</sup> in relation to the approval sought;<sup>33</sup> and
- those adverse impacts are sufficiently significant to be out of proportion to the Project's regional or national benefits considered when giving weight to the FTA, even after taking into account;<sup>34</sup>
- any conditions that the Panel may set in relation to those adverse impacts; and
- any conditions or modifications that the applicant may agree to or propose to avoid, remedy, mitigate, offset, or compensate for those adverse impacts.

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<sup>25</sup> For completeness, s 81(7) provides that nothing in ss 81, 82 or 85 limits s 7.

<sup>26</sup> FTA, s 81(1)(b).

<sup>27</sup> FTA, ss 81(2)(f), 85.

<sup>28</sup> The requirements in ss 85(1)(c)-(h) and (2) do not apply to the Foxton Solar Farm. The application is not for a change or cancellation of resource consent condition; certificate of compliance; concession; land exchange; access arrangement; mining permit; or coastal permit for aquaculture activities.

<sup>29</sup> FTA, ss 5 and 85(1)(a).

<sup>30</sup> FTA, ss 7 and 85(1)(b).

<sup>31</sup> In accordance with s 81(2) of the FTA.

<sup>32</sup> FTA, s 85(5). This term is broadly defined as meaning any matter "*considered by the panel in complying with section 81(2) that weighs against granting the approval*".

<sup>33</sup> FTA, s 85(3)(a).

<sup>34</sup> FTA, s 85(3)(b).



Significantly, the above threshold cannot be met solely on the basis that an adverse impact is inconsistent with or contrary to a provision of a specified Act, or any other document that a panel must take into account or otherwise consider in making its decision.<sup>35</sup>

### *Conditions*

Genesis; proposed conditions are set out in Appendix T of the application.<sup>36</sup> When considering the application, the Panel must decide whether to grant any approvals and set any conditions to be imposed on those approvals.<sup>37</sup> If the Panel decides to impose conditions:

- the Panel must take into account the provisions of Parts 6, 9 and 10 of the RMA, but give greater weight to the purpose of the FTA;<sup>38</sup> and
- the conditions must be no more onerous than necessary to address the purpose for which they are set.<sup>39</sup>

For this application the relevant provisions of the RMA are sections 87A, 104B and 108–108A. The broad powers to impose conditions for resource consents under ss 108–108A of the RMA are relevant to the Panel's powers to set conditions under the FTA. The following principles, with which the Panel will be familiar, are relevant. Valid conditions must:<sup>40</sup>

- be for a resource management purpose and not for any ulterior purpose;
- fairly and reasonably relate to the proposal which is the subject of consent or designation (noting that section 108AA of the RMA requires a condition to be "directly connected" to an adverse effect of the activity on the environment and/or an applicable planning rule or environmental standard); and
- not be so unreasonable that no reasonable decision maker could have imposed them.

Section 104(1)(ab) of the RMA explicitly applies to the Panel's decision making on resource consents.<sup>41</sup> As is the case under the RMA, the Panel cannot impose a requirement for offsetting or compensation without agreement from Genesis.

### *Assessment against criteria*

The Foxton Solar Farm application satisfies the relevant tests under the FTA and accords with the purpose of the FTA as set out in this AEE. These matters are discussed in more detail in the statutory assessments in sections 10-12 of this document.

The Panel can be satisfied that the resource consents can be granted on the conditions proposed.

The following sections describe the proposal and assess the effects of the proposal against the relevant statutory documents and tests.

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<sup>35</sup> FTA, s 85(4). The decision must be made in accordance with s 81(2) of the FTA.

<sup>36</sup> As required by sch 5 cl 5(1)(k) of the FTA.

<sup>37</sup> FTA, s 81(1)(a).

<sup>38</sup> FTA, ss 81(2)(b) and (3)(a) and sch 5 cls 17(1) and 18.

<sup>39</sup> FTA, ss 81(2)(d) and 83.

<sup>40</sup> *Newbury District Council v Secretary of State for the Environment* [1980] 1 All ER 731 (HL) at 739, endorsed in the context of the RMA in *Housing NZ Ltd v Waitakere City Council* [2001] NZRMA 202 (CA) at [18].

<sup>41</sup> FTA, ss 81(2)(b) and (3)(a) and sch 5 cls 17(1) and 18. Imposing compensation or offsetting not proposed or agreed to, or altering conditions proposed by Genesis, would not help facilitate delivery of the project and would likely be more onerous than necessary.



## 2.4 Any other activities that are part of the proposal

Clause 5(1)(e) of Schedule 5 of the FTA requires the Applicant to describe any other activities that are part of the proposal to which the consent application relates.<sup>42</sup> This is intended to capture activities which need permission or licensing outside of resource consents, for example, activities under the Building Act 2004 or the Hazardous Substances and New Organisms Act 1996.

The applicant will obtain all other necessary approvals required for the establishment, operation and maintenance of the proposed solar farm. There is no requirement for resource consents to be conditional upon authorities being granted under other statutory regimes.<sup>43</sup>

## 3.0 Site and surrounding environment

### 3.1 Surrounding environment

The site is located north of Foxton, located between Wall Road and Motuiti Road, to the east of State Highway 1. A full description of the site and its surrounds can be found in the Assessment of Landscape Effects (ALE) in Appendix H. The key features and characteristics are summarised below, with the site location and main nearby roads shown Figure 1 below. The adjacent dwellings are shown in the Graphic Package included with the ALE in Appendix H and listed in the table in Appendix F.

The site is located approximately 4km north from the centre of Foxton and 23km from the centre of Palmerston North. State Highway 1 is located to the west of the project site which provides connectivity to Wellington to the south and Taupō to the north. State Highway 56 is located to the east of the project site which provides connectivity to Palmerston North (via Rangiotu Road).

Figure 1: Site Location Plan



<sup>42</sup> Similarly to clause 2(1)(d) of Schedule 4 of the RMA.

<sup>43</sup> *Poutama Kaitiaki Charitable Trust v Taranaki Regional Council* [2020] NZHC 3159, (2020) 22 ELRNZ 202 at [90].



The site is located approximately 3.5km west of the Manawatū River (and 8km northeast of the SH1 Manawatū river crossing). The Manawatū River discharges to the coastal marine environment approximately 11.5km west of the centre of the site.

The landcover within the site's vicinity largely comprises improved pasture, and some properties to the north of the project site retaining pockets of plantation forestry. A few pockets of indigenous vegetation remain, with the largest being Himatangi Bush Scientific Reserve and Round Bush Reserve (Omarupapako), approximately 1.7km north and 1.4km southwest from the site respectively.

A key feature of the surrounding area (in particular to the south, south-east and east) is the large, stable dunelands that traverse through the area up to 20km long in some instances. An example of these is shown in Figure 2 below.

**Figure 2: Subject site with Dunes in the background**



The presence of these dunes, over 10m high in places, has shaped the location and direction of roads in the area and location of titles. These large, vegetated sand dunes remain in some locations immediately surrounding the site and further afield, but only very small remnants still exist on the site itself.

The land use around the site is primarily a working rural environment with agricultural activities, such as dairy and sheep and beef farming, market gardening, orcharding and poultry farming being common as well as forestry blocks. The area at the western end of Motuiti has been subdivided for rural residential living and displays a more rural lifestyle character.

The allotment sizes in the area range from smaller rural residential to longer narrower lifestyle blocks through to large lots, some over 100ha or more. The rural residential blocks are concentrated along Motuiti Road, with pockets of rural residential blocks also located on Wall Road. Other structures and dwellings are generally grouped and occur as ribbon development along the western part of Motuiti Road. Most of the rural dwellings are single storey houses located on flat land with a few two storey properties, sometimes these are set amongst the dunelands or surrounded by shelterbelts or boundary planting.

There are two Marae within the vicinity of the site, both located off SH1. Paranui Pā is located 2.3km northwest of the site. Motuiti Pā is located 0.6km west of the site. The Foxpine Airpark is located further to the southwest approximately 6km from the site.

Beyond the town and settlements, the circulation and roading pattern is quite simple. SH1 has a generally north to south alignment parallel to the coast 6.7km to the west as does Himatangi Block Road. Secondary roads run perpendicular to SH1, following the general alignment of the dunelands.

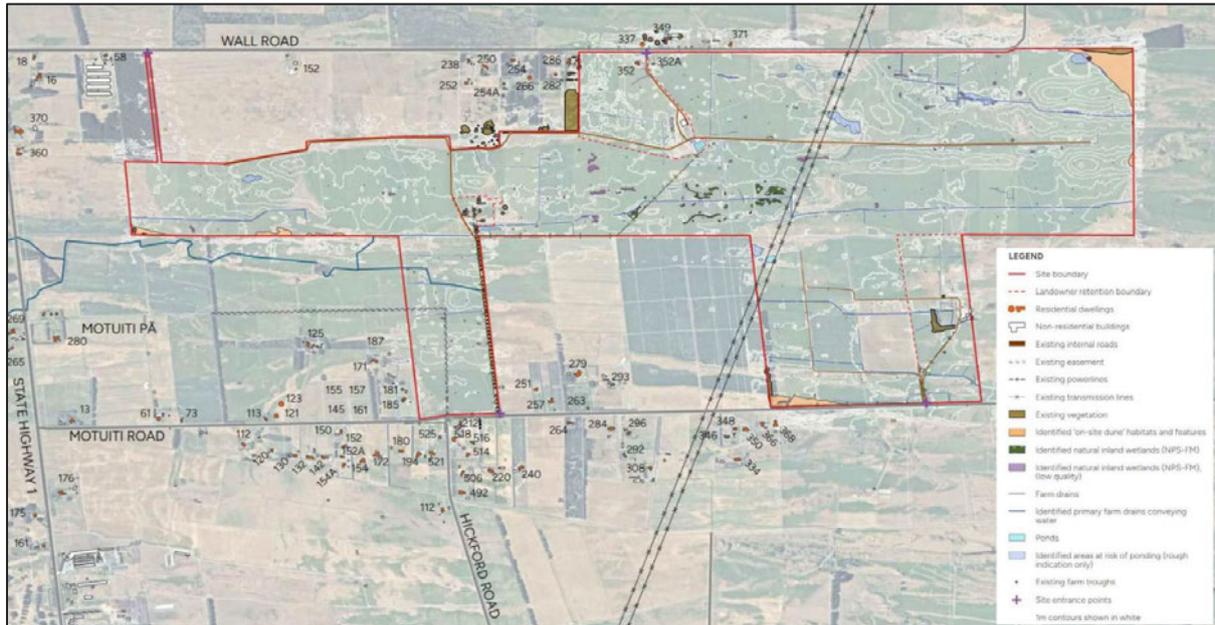
Domestic powerlines supplying homes and farms run as a single line on one side of the road verge, with the larger national grid transmission lines running through the site and adjacent properties in a northeast-southwest direction. Wind turbines located on the Tararua Ranges to the east of Palmerston North are visible in long distance views.



### 3.2 The Site

The project is proposed to occur on two large farm holdings, one is currently operated as a dairy farm (Motuiti Farms block) and the other as a stock overnighting facility (Seymour block). These farm holdings are made up of a number of different titles. The development site has a combined area of 436ha. Figure 3 below shows project area that will be leased from part of the overall legal site boundaries.

**Figure 3: Project Area (Source: Application Plans)**



The site contains features common to these types of farming activities including standard stock fencing, the occasional shelterbelt, farm tracks, farm sheds and farm dwellings.

A key feature of the site and surrounds is the National Grid transmission line that traverses through the site in a northeast to southwest alignment, with pylons located on small, elevated domes.

The site was largely levelled between 2010 and 2015 to allow installation of pivot irrigation for dairy farming. Very little of the original dunelands still exist within the site. Three remnant areas remain: a small area in the south-western corner of the site, an area adjacent to Motuiti Road on the southern boundary, and an area in the north-eastern corner of the site that extends into the adjoining land.

#### 3.2.1 Site access, existing buildings and farm infrastructure

The site currently has two legal access points from Wall Road. One is a long, unformed entrance strip, and the other is an accessway that leads to the main dwellings and the dairy and farm buildings. This access will be retained for use by the landowner and will not be used to access the solar farm area. There are also two current access points from Motuiti Road that provide access to the existing dwellings (Motuiti Farms block) and the existing farm buildings and office building (Seymour block). A short section of these existing accesses from Motuiti Road will be used provide access to the solar farm area. The landowner will retain these existing accesses to continue to provide access to the existing dwellings (Motuiti Farms block) and the existing farm buildings and office building (Seymour block).



The site contains several large dairy sheds, dairy milking facilities, dwellings and other farm buildings. The development would not result in the demolition of any of these structures, which are to be retained by the landowners and do not form part of the project area. There are however other smaller farm buildings and structures situated outside of the areas to be retained by the landowners that may be removed to facilitate the development of the Solar farm

Large pivot irrigators are currently located across the site, using water sourced from on-site bores in accordance with consents granted by the Horizons Regional Council. The development would result in the removal of all pivot irrigators within the site.

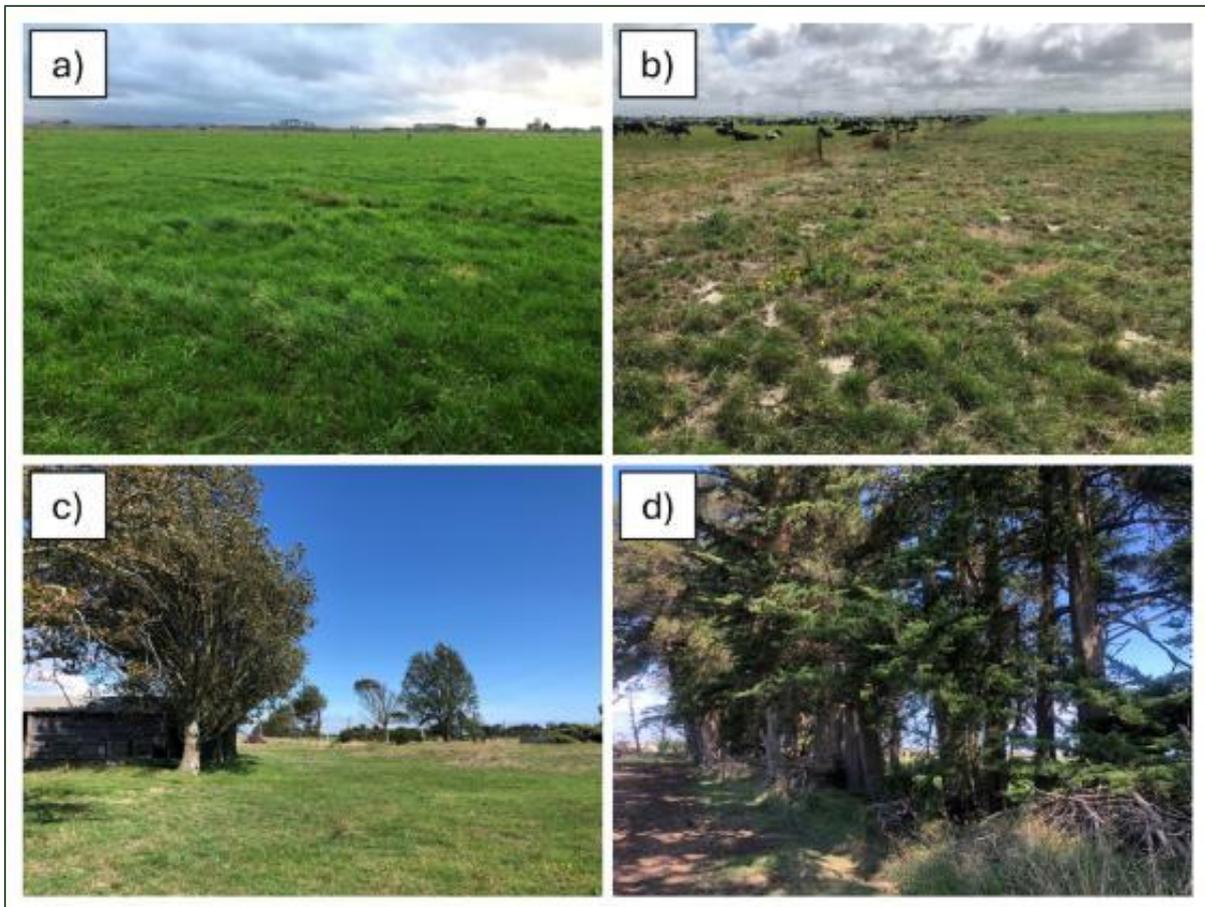
### 3.2.2 Vegetation and ecological features

An assessment of the site's existing vegetation and ecological features has been undertaken and is included in the Ecological Impact Assessment (EIA) (attached as Appendix I). A summary of the key vegetation and ecological features is provided below.

#### 3.2.2.1 Terrestrial vegetation

The primary vegetation type is exotic pasture grass cover, with minor areas of exotic tree, shrubland. There are small areas of remnant sand dunes in small corners and margins of the site. Photographs of the general terrestrial habitat within the site are provided in Figure 4 and Figure 5 below. Photograph a) is view of general manged pasture, b) sparse pasture outside of irrigated areas, c) intermittent exotic trees around farm buildings, d) exotic tree row within site.

**Figure 4: Examples of vegetation cover on the site**



**Figure 5: Remnant dune habitat in far eastern portion of site.**

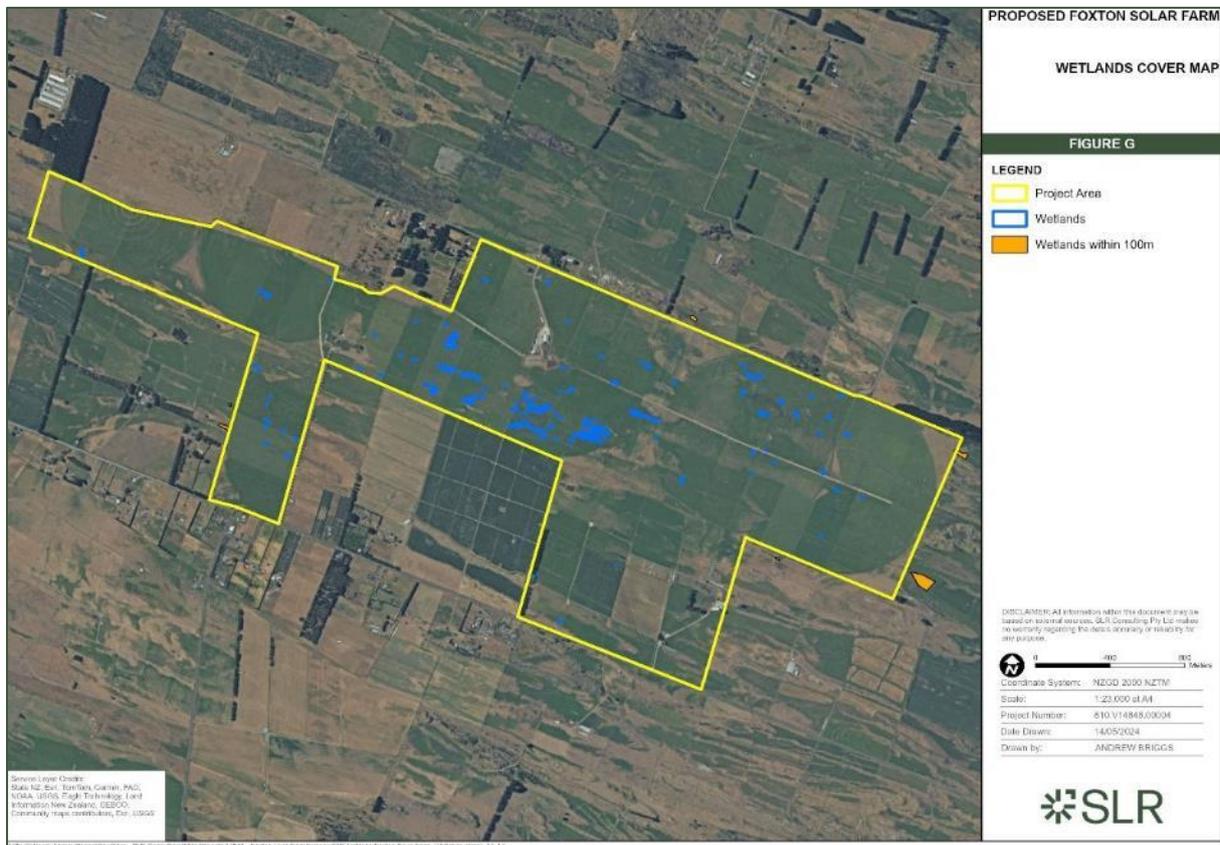


**3.2.2.2 Natural Inland Wetlands**

There are 99 areas that meet the definition of “natural inland wetland” under the National Policy Statement – Freshwater 2020 (NES-F) scattered through the site. The location of these wetlands is shown in Figure 6 below, with some examples shown in Figure 7 below. The wetlands are located primarily in low areas and near the drains on the site and have been assessed in the Ecological Impact Assessment a being of low quality.

A number of these wetland areas appear to be related to the operation of the pivot irrigation. Both examples shown in Figure 7 below have developed around the pivot irrigator tracks.

**Figure 6: Wetland cover within site**



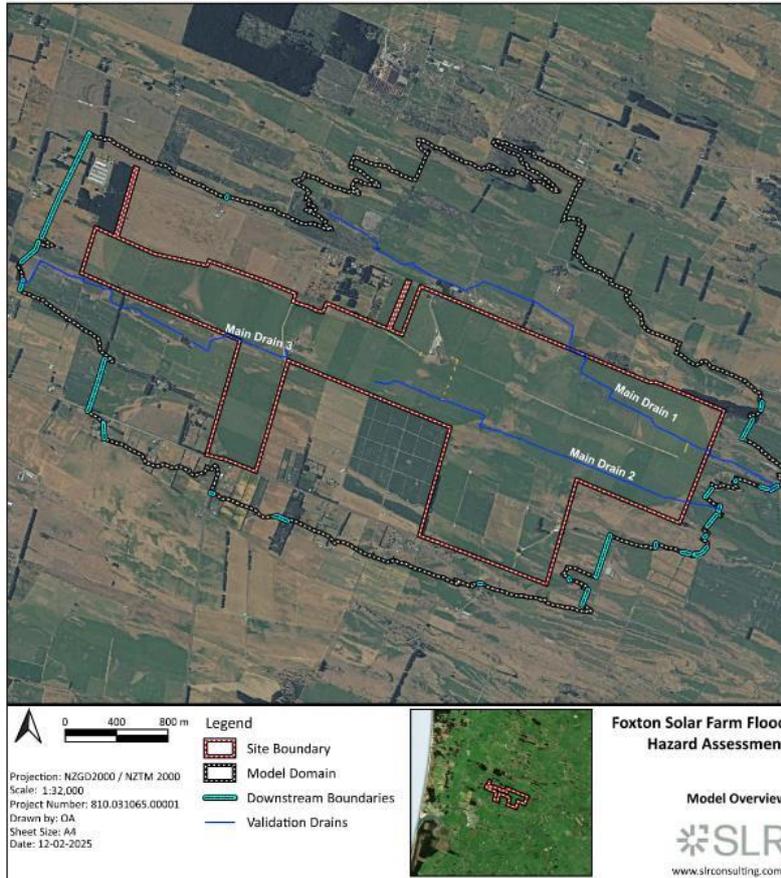
**Figure 7: Representative on-site natural inland wetland areas**



### 3.2.2.3 Farm Drains

There is an extensive network of shallow, well vegetated farm drains throughout the site. These were likely excavated to reduce the water levels in paddocks. The location of the two main site drains on the site are shown in Figure 8 below. The drains are between 1m to 4m wide and between 0.2m to 1.5m deep and are crossed by multiple culverts to allow the centre pivot irrigators to cross them. Examples of the drains are provided in Figure 9 below. These drains are dry most of the time and are expected to flow only in response to direct rainfall or to convey excess irrigation water (refer to Stormwater and Flood Risk Assessment in Appendix J for further detail).

**Figure 8: Location of main site drains**



**Figure 9: Images of drains running through the site**



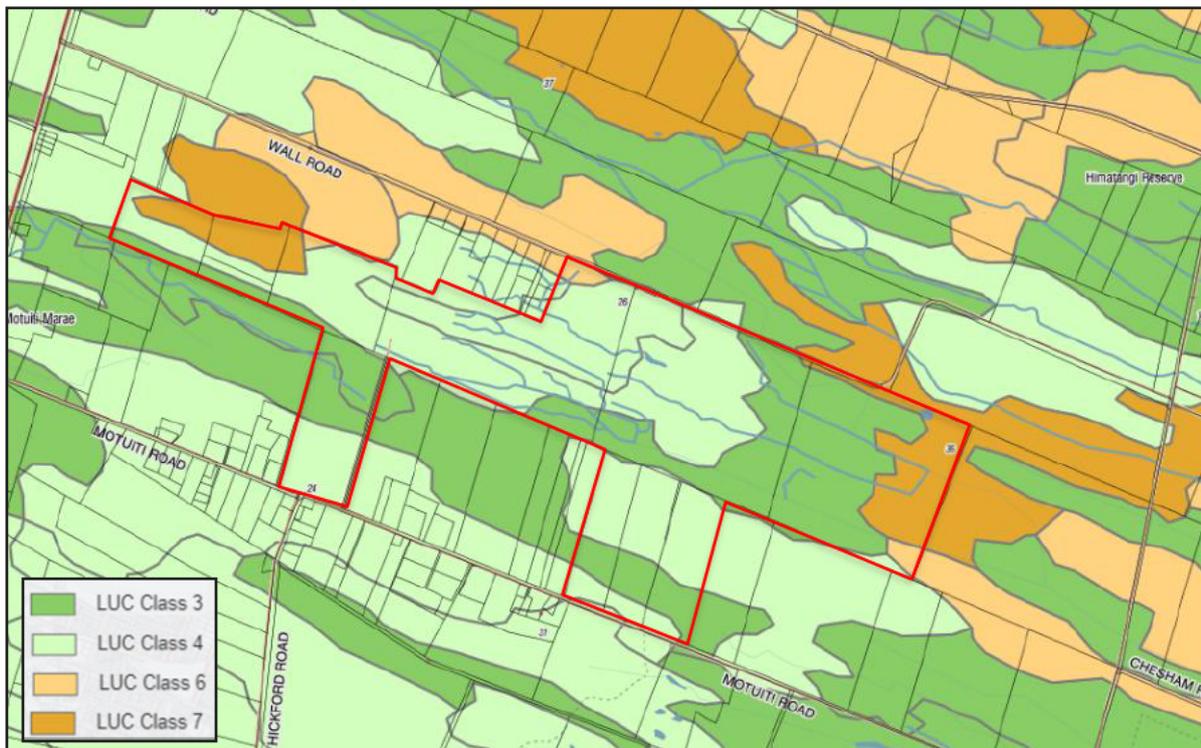
Drain 1

Drain 2

### 3.2.2.4 Soils

The Landcare Research Land Use Capability Maps identify the site as comprising mainly Class 4 soils with some areas of Class 3, 6, and 7. The soil classes are shown on the map in Figure 10 below.

**Figure 10: LUC soils map (Source: Landcare Research)**



Groundwater was encountered at a depth of approximately 1.0-1.8m below ground level. For further details on soil types and groundwater please refer to the Preliminary Geotechnical Assessment Report attached as Appendix K.



### 3.2.3 Archaeological sites

An archaeological assessment of the whole site area was undertaken by Clough and Associates in June 2024. The full report is attached as Appendix L. This report describes the Māori and European history of the area based on public record and outlines the methods used in the archaeologist's site walk over to identify any potential sites or area of interest. The assessment concluded the following:

- There are no recorded Māori or European archaeological sites on the site. The closest are a cluster of sites located between 1500m and 3000m to the east.
- The major settlements in the area were historically located along the coast or along or near the Manawatū River. The landscape of sand dunes and swampy land would likely have been exploited for resource collection but is unlikely to have been attractive for settlement.
- Forestry activity was common in the area and on the site until around 2017. Neighbouring sites contain more dune formations than the project site with the only dune formation on this site remaining in the far southern and eastern portions. These are small and less than 3m in height. The site was significantly earth worked and levelled in the past with these dunes removed.
- There are a number of old sheds on the site. These were inspected and concluded to not be pre-1900 and therefore not subject to protection.

### 3.3 Consent history and Competing Applications

The proposed solar farm has had no other consents applied for or granted in relation to it. The land parcels that comprise the overall project area do however have a number of discharge and water abstraction consents related to existing farming activities granted on them. As the application is only for consents under section 9 of the RMA section 30 in relation to competing applications does not apply. An email from the Regional Council in Appendix D confirms this.

A copy of the key consent is included in Appendix U.

One of the titles in the leased area for the solar farm (Part Himatangi X Block) has had a recent subdivision application approved to create two new rural-residential lots. This land will no longer be part of the subject site once the titles for these rural residential lots have been approved. These lots are in addition to the four recent titles created immediately to the west of the solar farm lease area on Wall Road (these four new lots have had titles issued so are shown as separate lots but currently remain in the ownership of Motuiti Farms Ltd in conjunction with the rest of the Motuiti Farms block).

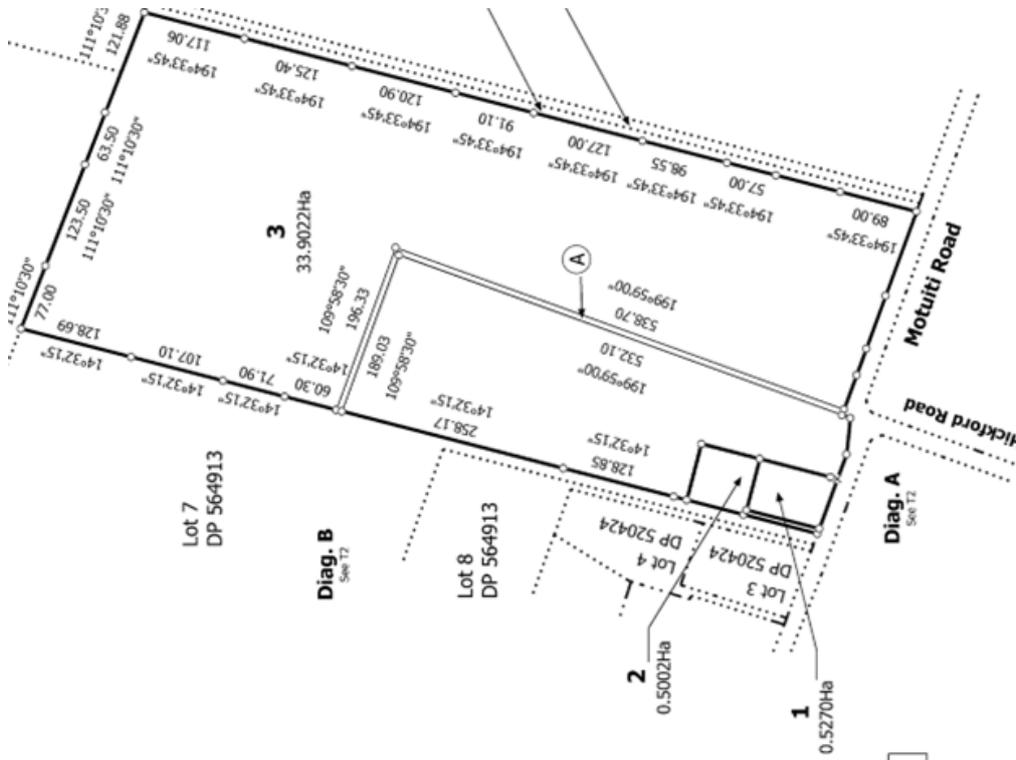
These consents are described below.

#### 3.3.1 Subdivision and Land Use Consents

- RM 502/20223/68. Approved 30<sup>th</sup> November 2023 to create 2 additional titles of approximately 0.5ha in area at the junction of Motuiti Road and Hickford Road.



**Figure 11: Approved Plan for RM502/20223/68**



- RM501/2020/181 to construct a fourth dwelling on 304-508 Wall Road was approved on 22 May 2020. This will be the dwelling proposed to now be contained within proposed Lot 4.
- 107377 and 107378 to use land for a new dairy farm operation and to discharge dairy farm animal effluent into and onto land (expires 1 July 2028)

### 3.3.2 Discharge Consents

The consented discharges will no longer occur within the development area of the site (solar farm area) These existing consents are:

- Consent reference: 103448
  - Consent to discharge stockyard and stock truck effluent and washwater to land on properties legally described as Himatangi Pt 5A4B Lots 1-3 DP 31996 Blk II Mt Robinson SD.
  - 280,000 litres per week April to August and 8,000 litres per week between September and March.
  - Approximately 28ha of land is available to receive effluent annually.
  - Expires 2030.
- Consent Reference 107377 and 107378 to discharge dairy farm animal effluent into and onto land (expires 1 July 2028)
  - Must not exceed 150kgN/ha/year
- Consent reference: 107377 and 107378
  - Consent to milk 1,000 Friesian-Cross dairy herd producing an average of 400,000kg of milk solids/year.



- Discharge to provide for the disposal of dairy effluent onto the property.
- Leaching of 39kg N/ha/yr.
- On properties legally described as Pt Himatangi 4D2, Pt Himatangi 4C4, Pt Himatangi 4D3B1, Lot 1 DP 88328, Pt Himatangi 4D3B2, Pt Himatangi 4D3A, Lot 2 DP 88328, Pt Himatangi 4C3, Lot 3 DP 88328, Lot 4 DP 88328.
- Expires 2028.
- Consent reference: APP-2016200991.00
  - Discharge of treated rendering stickwater to land at 447 Motuiti Road. Product is generated by the rendering of fish, poultry and meat waste. Stickwater contains high levels of nitrogen and phosphorous.
  - Stickwater applied to land via spraying from two tractor and effluent tanker units, the rate not to exceed 25m<sup>3</sup>/ha and application undertaken 5 days per week and when necessary up to 7 days per week.
  - Expires 2038.
- Consent reference: APP-2016200963.00
  - To abstract groundwater for pasture irrigation purposes at 10,370m<sup>3</sup> per day of groundwater at rates up to 120L/s over 24 hours.
  - Bore 464 metres deep.
  - Expires 2028.
- Consent reference: APP-2018202001.00
  - Abstract 4,300m<sup>3</sup>/day of groundwater at a maximum rate of 51L/s for stock water and irrigation and use land for new intensive beef farming and associated discharges to land at 447 Motuiti Road to irrigate 86ha of pasture to a depth of 5 mm undertaken by a central pivot and moveable irrigators. With a resulting loss of 20kg N/ha/yr in year 1.
  - Abstract 24m<sup>3</sup>/day at a maximum instantaneous rate of 0.5L/s for stock drinking water for 400 beef cattle and yard.

## 3.4 Regional and District plan notations

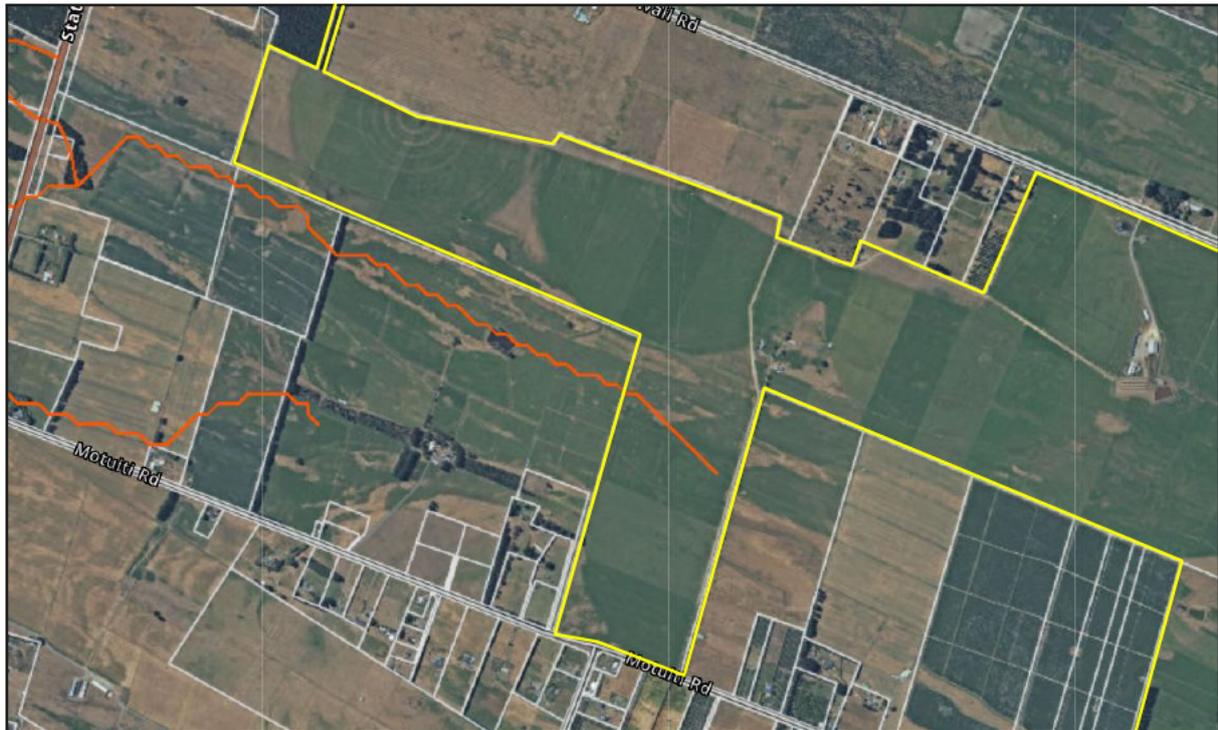
### 3.4.1 Manawatū-Whanganui Regional Council One Plan

The land is located within the Coastal Manawatū (Mana\_13a) surface water management zone under the One Plan and is subject to the following surface water management values:

- Lowland Mixed Life Supporting Capacity which covers the entire site; and
- Flood control and drainage which extends through a small part of the project area as shown in 11 below. It is noted that in the location of the drain shown there is only a small shallow depression running through the site that is mostly dry. The main drain that appears to carry water off the site to the east is located north of where this drain is shown and is labelled Drain 3 on the site development plans.



**Figure 12: Flood control drainage**



The Horizons Regional Council Natural Hazards Map Viewer identifies the following non-statutory natural hazard notations applying to the application land, but none are noted as relevant:

- Flooding: The site has not been subject to regional-scale flood modelling.
- Fault lines: The site is outside of known active fault lines.
- Liquefaction: The site is located in a low liquefaction susceptibility area.
- Tsunami: The site is located outside of a Tsunami Evacuation Zone.
- Coastal Hazards: The site is not subject to coastal hazards.
- Volcanic Hazards: The site is not subject to volcanic hazards.

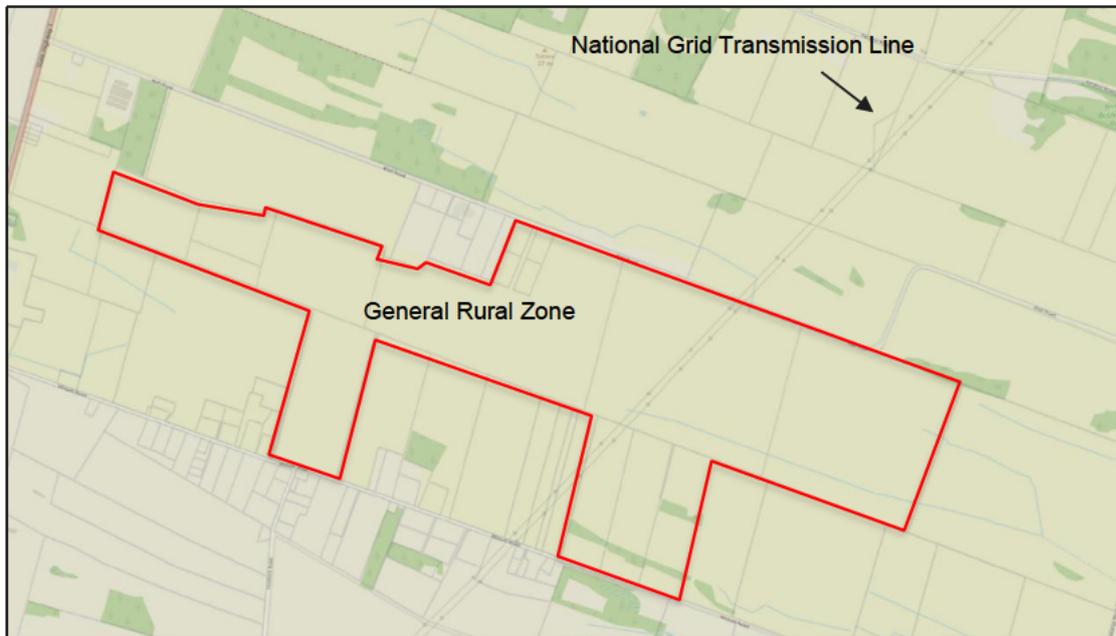
### **3.4.2 Operative Horowhenua District Plan**

The land is situated within the General Rural Zone (refer to Figure 13) under the Operative Horowhenua District Plan and is located within the Foxton Dunefields Landscape Precinct as shown in Figure 14 below. These figures also shows the National Grid transmission line (operated by Transpower) traversing the site.

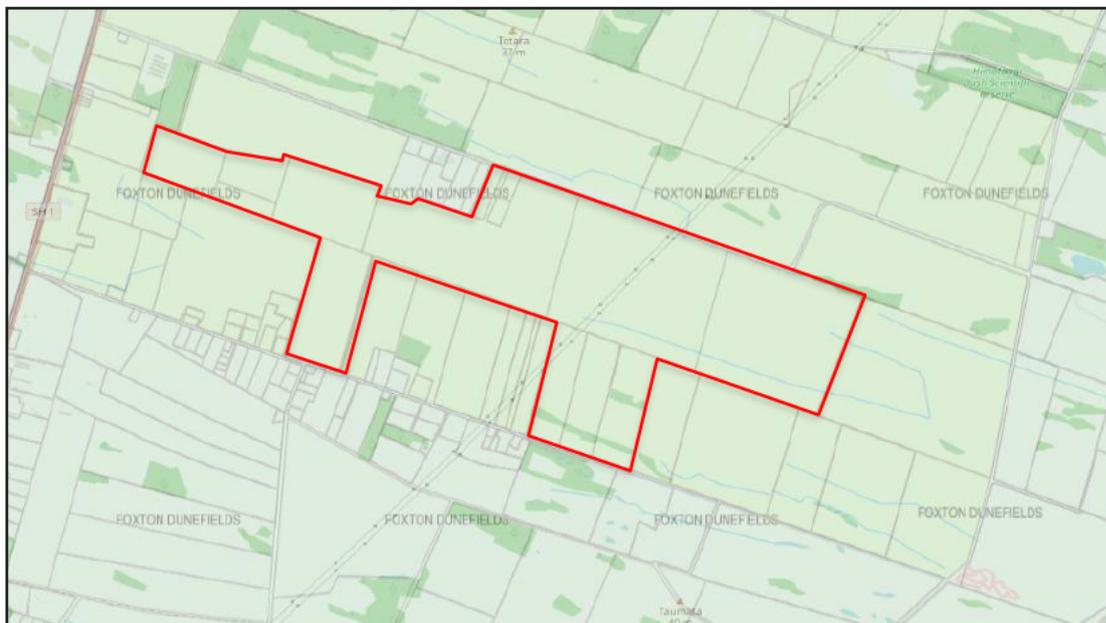
The site is not subject to any other designations and is outside of any outstanding natural landscape or feature overlays. The surrounding land is similarly zoned General Rural.



**Figure 13: Zoning and overlays under the Operative Horowhenua District Plan  
(Source: Horowhenua District ePlan)**



**Figure 14: Foxton Dunefields overlay under the Operative Horowhenua District Plan  
(Source: Horowhenua District Council)**



### 3.4.3 Record of titles, land ownership and easement arrangements

Genesis has an agreement with the landowners of the land within the subject site to use this land for the construction and operation of the solar farm and associated substation and Battery Energy Storage System (BESS).

The site has a total area of approximately 488ha and comprises the legal parcels set out in Appendix A. The landowners associated with each of these parcels is also listed in Appendix F.



The project area to be leased and used as a solar farm will be 436ha. The remaining land is to be retained and used exclusively by the current landowners and / or subsequent landowners with restrictions imposed by the lease agreement. For this reason, the project area is smaller than the combined area of the titles.

The only interest recorded on any of the titles that may be relevant to the proposal is an historic access easement recorded on Part Himatangi X Block. The applicant does not have the legal right to erect solar panels within this easement. The proposed layout currently avoids placing solar panels within this easement area; however, the applicant is investigating opportunities to uplift or realign the easement along the property boundary. If the easement can be removed or relocated, the existing panel layout may be extended across the easement.

## 4.0 Proposal

### 4.1 Proposal overview

Genesis proposes to construct, operate and, if necessary, decommission a solar farm with a peak output to the national grid of approximately 180MW (AC). Because some power is lost between the panels and the grid when electricity is converted from DC to AC, enough panels to supply up to 220MW (DC) will be installed.

The lease of the land that enables the use of this area as a solar farm is for a period of greater than 35 years. This is defined as a subdivision under the RMA and the proposal includes the resulting subdivision of the site to separate the landowner retained areas and the solar farm lease areas. An image of the proposal is shown in Figure 15 below, and key elements are outlined in Table 8. Full plans of the proposal, including the proposed subdivision details, are included in Appendix G. The following sections provide a description of each of the key parts of the project. The key elements are also described in Table 8 below.

**Table 8: Project summary**

Project Element	Summary
Project Area	Legal Site: 488ha Project Area (solar farm lease area): 436ha Solar Development Area: 335ha Area of Planting: 26ha
Electricity Generating Works	<ul style="list-style-type: none"> <li>• Construction and Operation of a 180MW ac solar farm, including elements such as:                             <ul style="list-style-type: none"> <li>○ monocrystalline photovoltaic bi-facial solar panels</li> <li>○ single-axis trackers, aligned generally north to south and supported on piles driven into the ground</li> <li>○ inverters and transformers</li> <li>○ underground cabling</li> <li>○ provision for a harmonic filter, if required.</li> </ul> </li> <li>• Provision for construction of a 200MWh BESS, which may be installed as a second stage.</li> </ul>

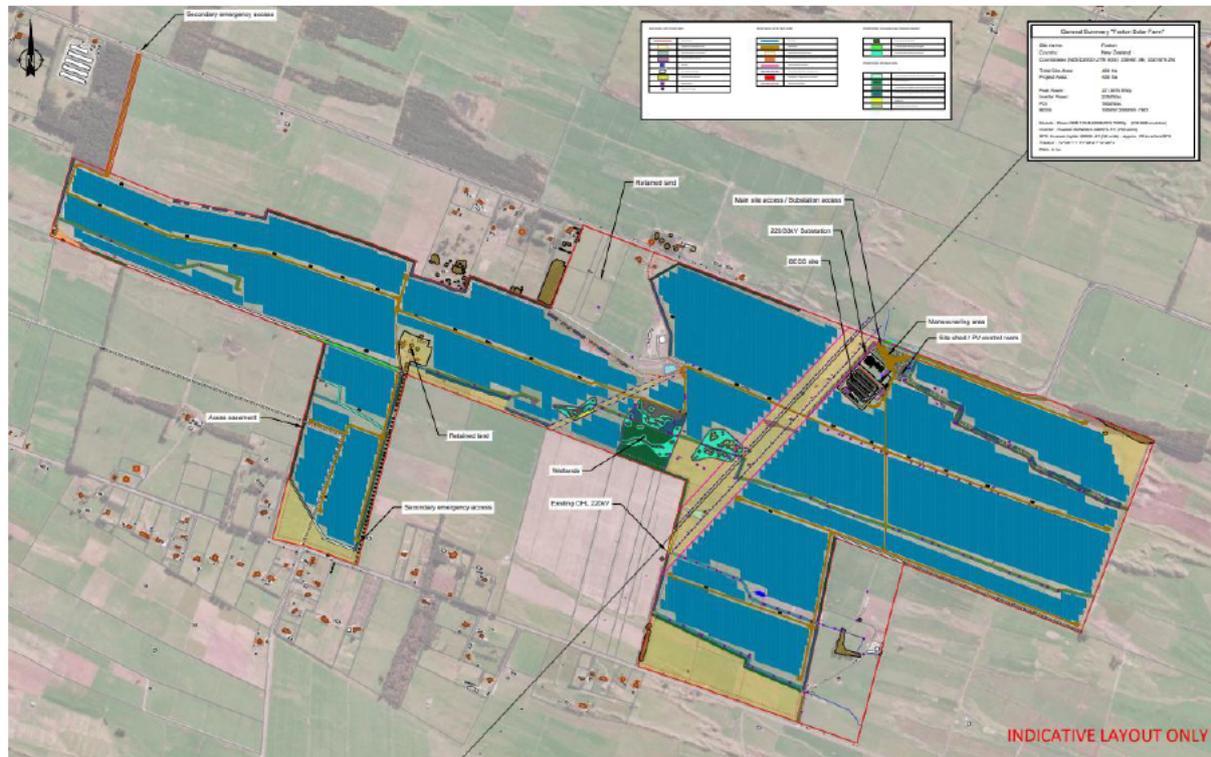


Project Element	Summary
	<ul style="list-style-type: none"> <li>• Construction of a new transmission substation, which would be transferred to Transpower, including:               <ul style="list-style-type: none"> <li>○ a high voltage (33/220KV) transformer</li> <li>○ switching station</li> <li>○ connection to the National Grid via the Transpower-operated existing 220kV transmission line traversing the site.</li> </ul> </li> </ul>
Ancillary Works	<p>Construction of:</p> <ul style="list-style-type: none"> <li>• An operations and maintenance (O&amp;M) building and storage shed, with a combined floorspace of up to 555m<sup>2</sup>.</li> <li>• Parking, loading and manoeuvring areas.</li> <li>• a new primary site access (A02) on Wall Road.</li> <li>• internal access and maintenance roads and crossings over farm drains.</li> <li>• Upgrades to existing site accesses (A01, A03 and A04) to accommodate emergency vehicles and construction traffic.</li> <li>• Perimeter security fencing and internal stock exclusion fencing.</li> </ul>
Construction Hours	<ul style="list-style-type: none"> <li>• Monday to Saturday:               <ul style="list-style-type: none"> <li>○ 7:00am – 7:30am      shoulder period (no noisy works)</li> <li>○ 7:30am – 6:00 m      key construction activities (except impact piling)</li> <li>○ 6:00pm – 8:00pm      shoulder period (no noisy works).</li> </ul> </li> <li>• Monday to Friday:               <ul style="list-style-type: none"> <li>○ 7.30am – 6pm      impact piling</li> </ul> </li> <li>• Sundays               <ul style="list-style-type: none"> <li>○ No works.</li> </ul> </li> <li>• Public Holidays               <ul style="list-style-type: none"> <li>○ No works.</li> </ul> </li> </ul>
Construction Duration	<p>18-months – 24-months</p> <p>The proposal includes a provision to construct the project in Stages. If constructed in Stages, the estimated construction duration would be:</p> <ul style="list-style-type: none"> <li>• Stage 1: 18-months – 24-months.</li> <li>• Stage 2: 12-months.</li> </ul>
Construction Workforce	<p>Approximately 250 full time equivalent (FTE) during peak construction.</p>
Ancillary Construction Activities	<p>Ancillary construction activities including:</p> <ul style="list-style-type: none"> <li>• Landscaping, riparian and wetland planting.</li> <li>• Earthworks for site preparation, including trenching.</li> <li>• Removal of minor farm buildings and scattered existing trees to enable the works.</li> </ul>



Project Element	Summary
	<ul style="list-style-type: none"> <li>Establishment of a construction compound including demountable offices and amenities.</li> <li>Establishment of temporary laydown areas during construction and decommissioning.</li> <li>Installation of underground and above ground cables.</li> </ul>
Operational Hours	24 hours a day, seven days per week.
Operational Workforce	Approximately 4-6 FTE
Operational Duration	Approximately 40 years, unless repowered.
Ancillary Operational Activities	<ul style="list-style-type: none"> <li>Property management and maintenance.</li> <li>Minor works permitted without consent.</li> <li>Provision for grazing sheep within solar array area.</li> </ul>
Decommissioning and Rehabilitation	At the end of the operational life of the project, if the solar farm is not repowered, infrastructure would be decommissioned and the site would be rehabilitated to enable the resumption of agricultural activities.
Subdivision	Subdivision proposed to reflect boundaries of solar farm across multiple land owner titles and to establish each of the existing dwellings in the landowner retained areas on separate lots and a utility lot for the substation .

Figure 15: Overview plan of proposal



## 4.2 Design approach

The proposed development has been based on a site values and site constraints design approach, having regard to physically and technically practicable outcomes, as well as environmental, social and cultural considerations. Values and constraints on the site including ecological, landscape, flooding, acoustic and mana whenua values, were considered and the project was designed to avoid and minimise effects where practicable. This process determined which areas of land were to be excluded from development for solar arrays and associated infrastructure and which areas were to be protected and enhanced. The proposal incorporates wetland and riparian enhancement, as well as landscape mitigation. The details of those proposed outcomes are set out in the following sub-sections.

It is important to note that due to the constant and fast paced nature of solar technology advancements, along with the economics of supply and availability of products, the layout and equipment used in the solar farm is subject to the final design and procurement process and cannot be specified in detail at this stage. For example, the make and model of panels and other electrical components is not yet settled, and this may impact on the final size and exact location of items.

For those reasons, the proposal has been put forward on the basis of the details being an indicative design envelope, particularly in relation to the type and dimensions of solar panels and ancillary equipment to allow for variations to occur in equipment selection in the final design.

## 4.3 Solar arrays

The solar arrays will consist of approximately 300,000 monocrystalline photovoltaic solar panels. The number of panels may be reduced if technological advancements result in larger or more efficient panels becoming available at the time the project is constructed. The solar panels will be installed on a metal tracking beam system running north to south, supported by piles. The tracking system will follow the sun over the course of the day, starting by facing east at an inclination of approximately 60 degrees from horizontal, gradually tilting to be approximately 60 degrees from horizontal facing west at the end of the day.

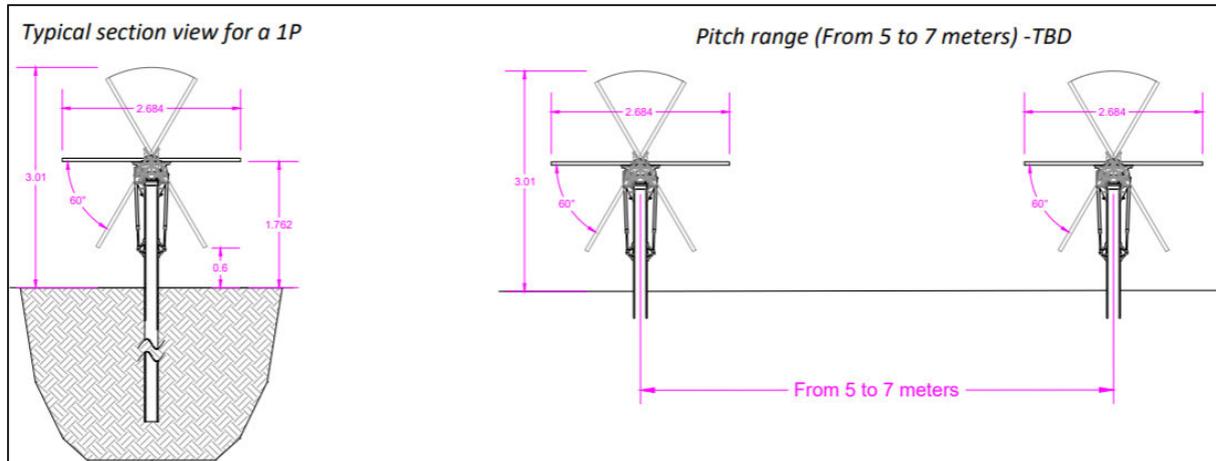
A possible layout design for the panels is shown in the plans in Appendix G taking into account the module length and site constraints like drainage. It is expected that the final constructed layout will be optimised during detailed design which may result in changes to the layout, including filling in 'gaps' in the current layout.

Each row of panels is separated by around 2-4m when the panels are horizontal to enable maintenance access and prevent shading. The actual separation distance will depend on final layout and design and may vary with geotechnical and technological constraints. At maximum tilt (60 degrees) the maximum height of the panel will be up to 3.5m above ground level depending on the details of final design<sup>44</sup> and the lowest point around 0.6m above ground level.

Indicative solar panel modules are shown in Figure 16 below.



**Figure 16: Indicative solar panel height and arrangement (Indicative only)**



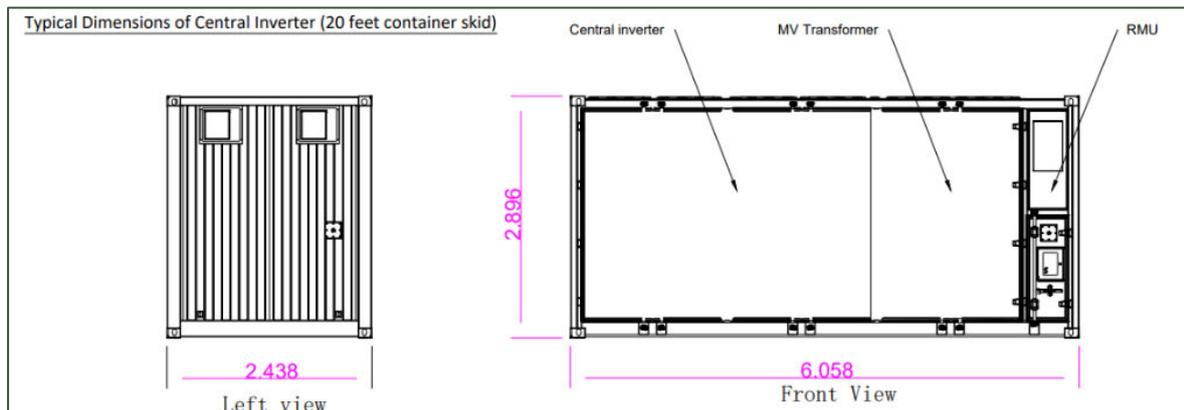
## 4.4 Inverters

The proposal will either utilise string inverters or central inverters. A final decision on the technology and arrangement will be made during detailed design, to ensure that the most appropriate and up-to-date technology is selected.

### 4.4.1 Central inverters

Central inverters are large inverters, which gather energy from many solar modules. An arrangement using central inverters would include approximately 67 inverters (more or less) spread across the site. Central inverters are similar in size and shape to a shipping container, as shown in Figure 17 below. Central inverters would be placed on gravel hardstand with concrete plinth foundations to support their weight. The inverters have an intelligent cooling system incorporated into them.

**Figure 17: Diagram of a typical central inverter (Indicative only)**



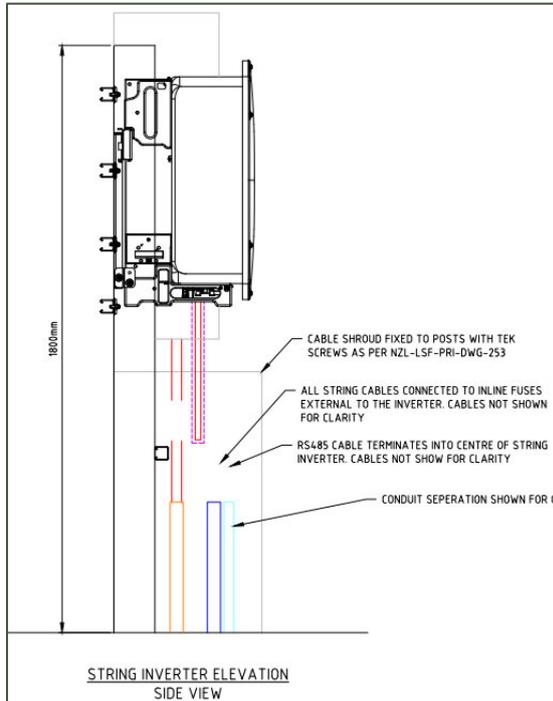
### 4.4.2 String inverters

String inverters collect energy from a much smaller number of modules. An arrangement using string inverters would require approximately 750 units (more or less) that are generally installed at the end of rows. The power from these string inverter units will feed through approximately 34 Smart Transformer Stations (STS units) (more or less). These STS units are similar in size and appearance to the Central inverters and would be located throughout the farm in the same way.



A diagram of a typical string inverter is shown in in Figure 18 below.

**Figure 18: Diagram of typical string inverter**

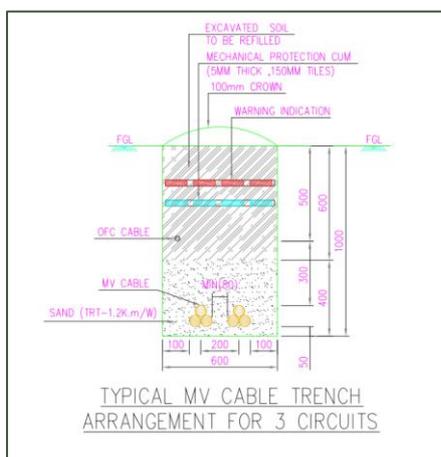


## 4.5 Connections and cabling

At the rear of the panels, string cabling will link rows of panels together. These cables would then be diverted into trenches, running perpendicular along the end of each row, carrying electricity to the inverters. Underground cabling would also link the inverters to the BESS and substation. A typical cross section of a cable trench is shown below in Figure 19. These cable trenches will range in size from 300mm wide to 1.3m wide and range in depth from 0.4m to 1.0m.

An overhead 110kV cable would transport electricity between the BESS and the immediately adjacent substation.

**Figure 19: Example of a cable trench cross-section**



## 4.6 Harmonic filter

A harmonic filter is a device that removes or reduces variations in an electrical current. It works by allowing the desired electrical signals to pass through while blocking or filtering out unwanted harmonic signals.

The project may require a harmonic filter, which would be located adjacent to the project's substation, if required.

## 4.7 Ancillary buildings

The Project will include an operations and maintenance (O&M) building and a storage shed for replacement parts and other equipment. These buildings will be located on the northern side of the substation adjacent to the Wall Road frontage of the site. The O & M building will have a floor area of approximately 135m<sup>2</sup> and the storage shed approximately 420m<sup>2</sup>. They will be located as shown on the Plans attached in Appendix G and will be approximately 80m from the drain to the east and 130m from Wall Road. The O&M buildings would look like standard metal farm sheds and will have a maximum height of 7m. An example of the type of building that will be utilised for the maintenance and operations building and storage shed is shown in Figure 20 below.

**Figure 20: Example of type of building proposed for operations and maintenance building and PV control room**



## 4.8 Vehicle access, parking, loading and manoeuvring

The solar farm will utilise the three existing vehicle access points shown as A01, A03 and A04 on Figure 21 below. The main access to the site will be established at a new location shown as A02.

The proposed new main site access off Wall Road (A02) will be the primary access for construction and during operations. This road crossing will be formed to provide sufficient width for the delivery of the large-scale componentry relating to the substation and solar farm. The other access points off Wall Road and Motuiti Road will be used for secondary access during construction and emergency access during operation. All new access points will be designed and established in accordance with Horowhenua District Council's



requirements for rural vehicle crossings. The primary access point may require widening for the delivery of the transformer.

A small gravel area sufficient for staff parking and loading will be provided adjacent to the operations and maintenance building. This area will provide sufficient space for parking and manoeuvring for the anticipated 4-6 operational staff.

Full details of the proposed access arrangements can be found in the Integrated Traffic Assessment (ITA) attached as Appendix M.

**Figure 21: Project access locations**



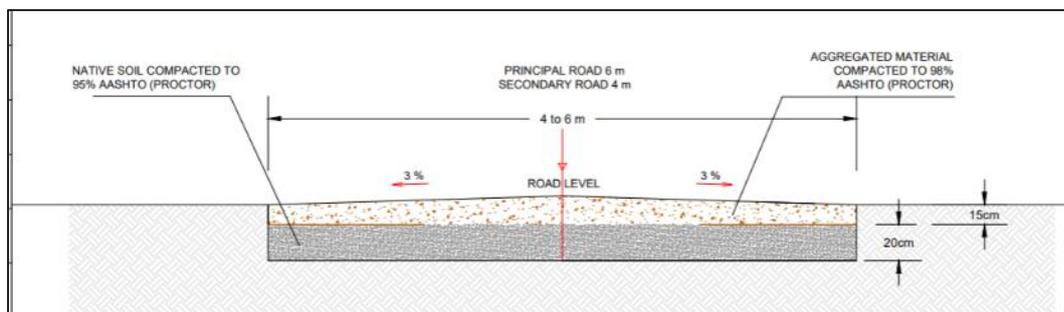
## 4.9 Access tracks

Compacted aggregate access tracks will be created throughout the solar farm area as shown on the plans in Appendix G. These tracks are to provide access around the solar farm for operation and maintenance purposes. These tracks are generally proposed over existing farm tracks where compatible with the final layout.

Tracks within the site will be between 4m and 6m in width. The total combined length of the finished access tracks is estimated to be approximately 14km. A typical cross section of the internal access tracks is shown in Figure 22 below.



**Figure 22: Cross section of typical internal access track**



## 4.10 Battery Energy Storage System

The proposal includes provision for a BESS with a nameplate capacity of up to 100MW / 200MWh which may be constructed sometime in the future if it is found to be required, after the solar farm has been operating. If constructed the BESS will be located on a 1.75ha gravel hardstand area adjacent to the substation.

The number and layout of the battery modules will depend on the technology chosen and confirmed during detailed design of the BESS. It is estimated that the BESS would contain up to 66 individual battery units. Dimensions for battery units vary between manufacturers, but are typically 2.9m tall, 6.1m long and 2.5m wide.

An indicative layout is shown in Figure 23, with details of individual units shown in Figure 24. The layout proposes a minimum spacing of 3.0m between battery unit pairs. The BESS would also require up to 33 PCUs (Power Control System Unit).

The BESS would utilise either lithium-ion or lithium iron phosphate batteries with inbuilt automatic cooling systems and multi-level fire protection and aerosol suppression systems.

An approximately 3m high acoustic wall would be constructed between the BESS area and the substation if required to reduce noise levels experienced beyond the site boundaries.

As discussed in section 4.18.1, the proposal seeks to retain flexibility to construct the BESS and noise wall separately at a later date if these are found to be required.



Figure 23: BESS layout with acoustic wall

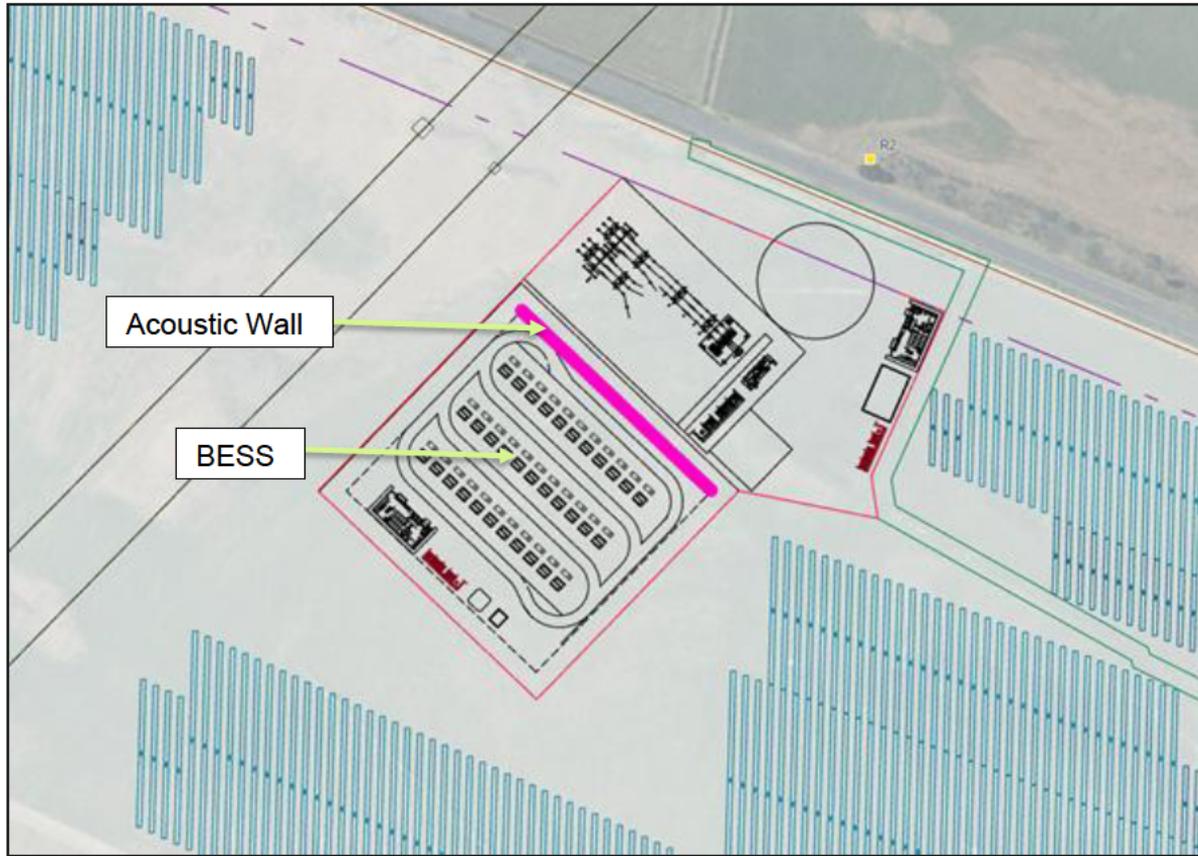
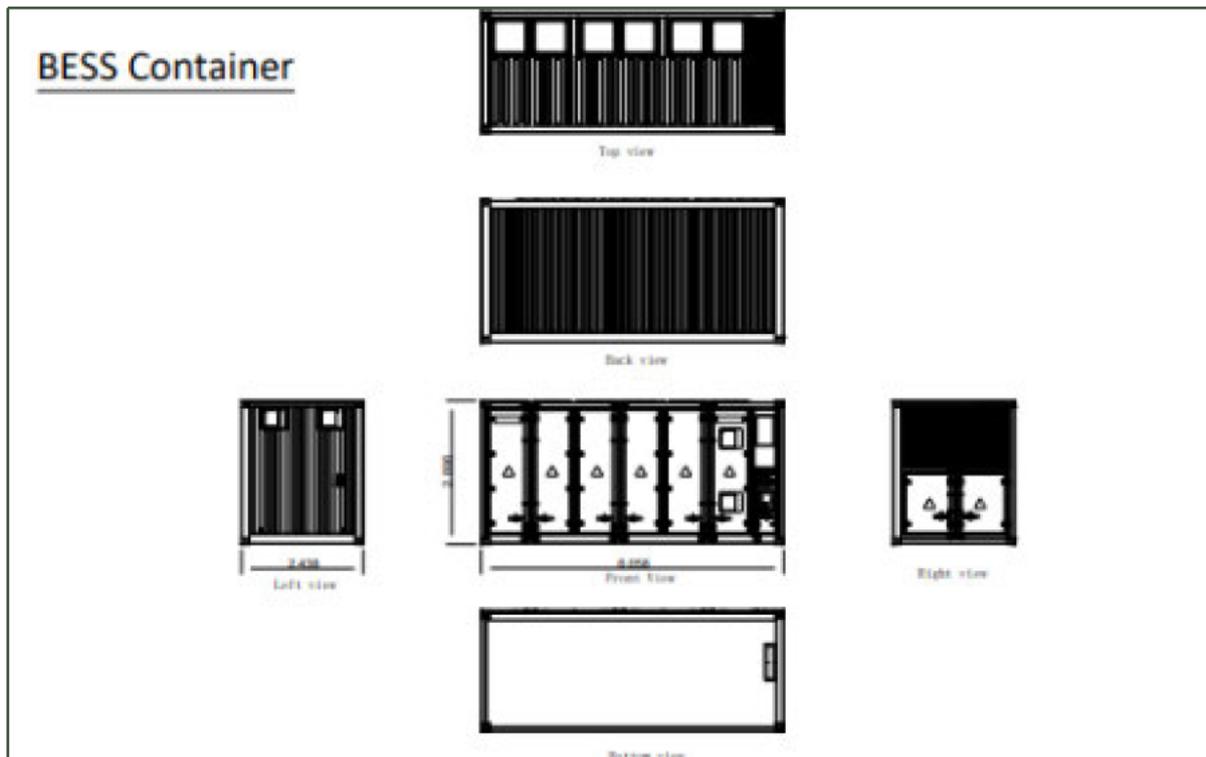


Figure 24: Typical BESS container



## 4.11 Substation

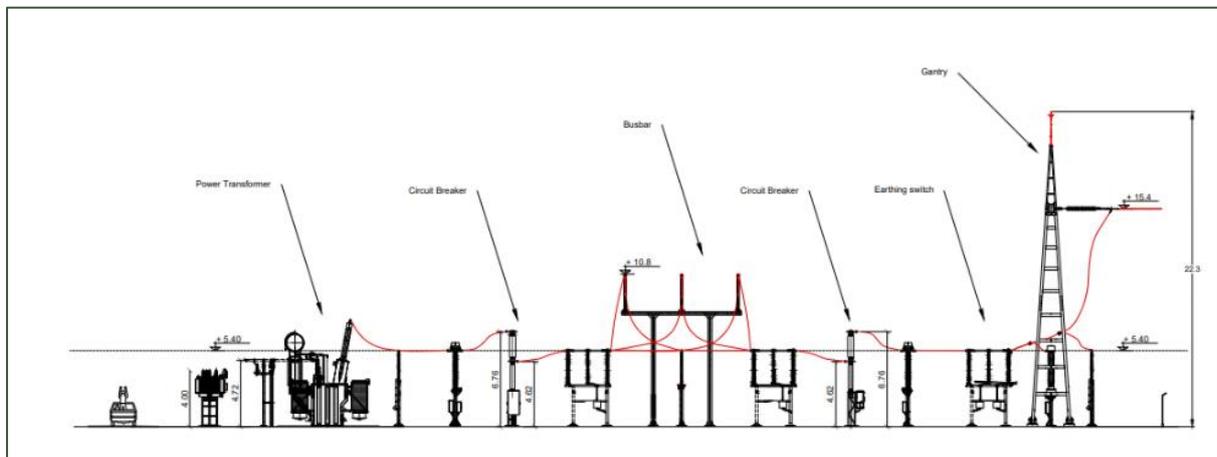
A new 220kV substation would be located approximately 70m from Wall Road and immediately to the east of the existing National Grid transmission lines that pass through the site. The location is shown on the overall site development plan. The proposed substation would house 33kV switchgear, metering, protection and communication infrastructure and auxiliary equipment. The substation will be located within its own separate title of 0.9ha as a result of the proposed subdivision so that the substation can be owned and operated by Transpower. The land on which the substation is located will be elevated up to 600mm above ground level (if required following detailed flood design), on a base of compacted soil and stone.

Most substation components would be under 6m in height, with gantries of approximately 23m in height. The substation and National Grid connection design and layout will be developed in consultation with Transpower. The proposed substation, its components and layout are typical of other similar infrastructure already constructed in the region and across New Zealand.

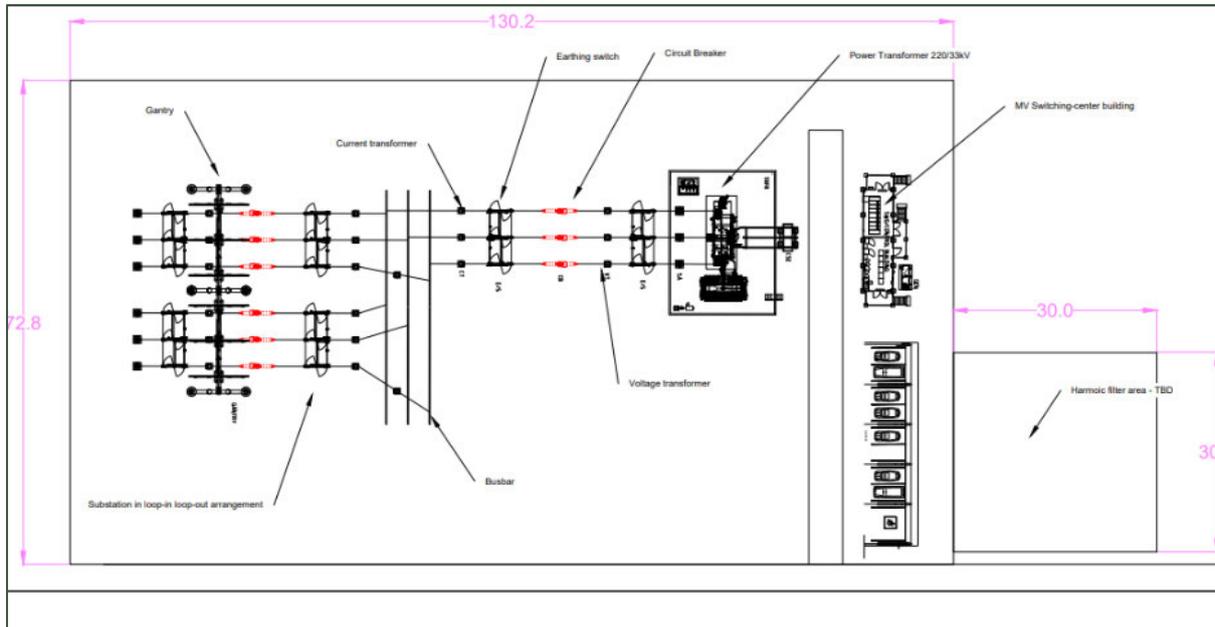
The indicative layout and anticipated height of the proposed substation is shown below in Figure 25 and Figure 26. The key components of substation and grid connection are;

- Most components would be under 6-7m in height.
- The gantry/gantries would be up to 23m in height (this is to match the height of the existing lines)
- The substation will contain a 220kVa and 33MVA Transformer (110KV)

**Figure 25: Image of typical substation proposed**



**Figure 26: Substation layout**



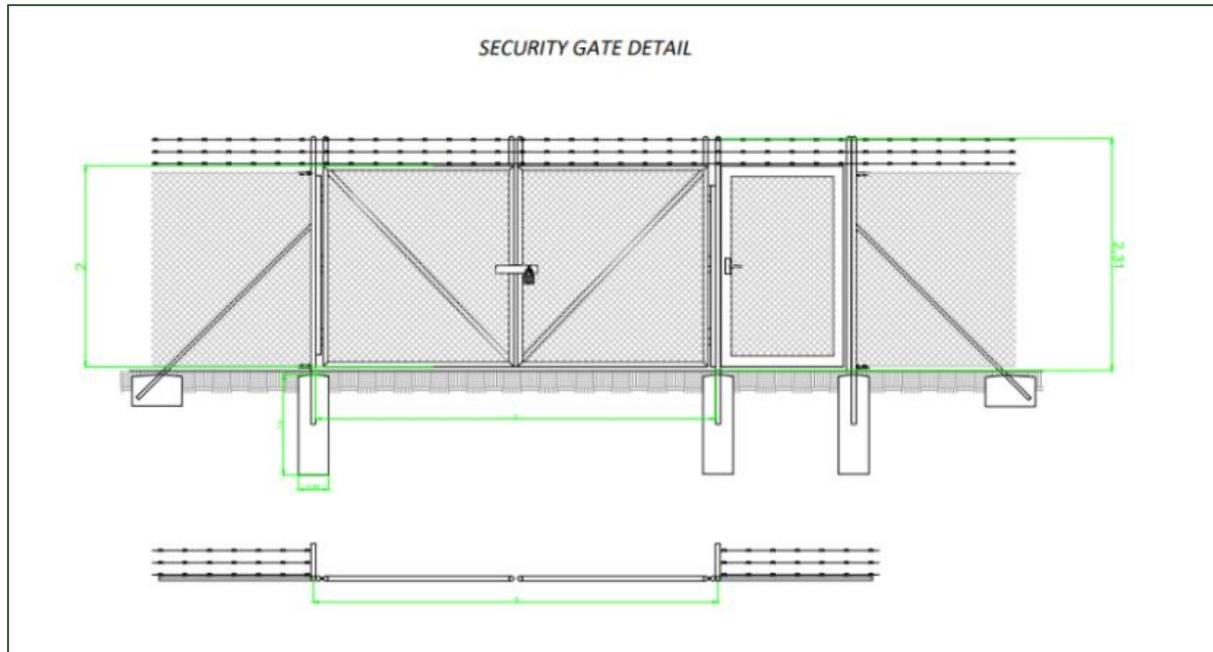
## 4.12 Fencing

Normal farm fencing will continue to border the majority of the property boundaries. Security fencing will be installed around the perimeter of the solar farm area but will usually be set back on the inside of the proposed boundary screen planting. The security fencing will be either chain link or deer-type fencing (depending on location), with a maximum height of 2.35m. Please refer to the Landscaping Plan included with the ALE in Appendix H.

There will be security gates located at the main entrance to the site from Wall Road and at the alternative entrances to the site from Wall Road and Motuiti Road. There may also be security gates in some internal locations of the site as required. The fences and gates will be similar to those shown in Figure 27 below.



**Figure 27: Example of security gates**



### 4.13 Lighting and CCTV

Low-level security lighting will be placed on the main buildings within the site. All external lighting will be shielded from upward light spill and will not be obtrusively visible beyond the site.

CCTV security cameras will be installed at all entrance gates and at key locations within the site (including the substation). The number and location of proposed cameras can be confirmed at the detailed design stage.

### 4.14 Hazardous substances

Components of the project, include the use and storage of the following hazardous substances:

- 194 tonnes of oil in Transformers:
  - If a 250MVA transformer – 70,000 litres, or
  - If a 215MVA transformer – 60,200 litres.
- Oil in inverters:
  - If central inverters – 130,000 litres of oil; or
  - If string inverters – 145,000 litres of oil.
- Lithium-ion batteries (66 units comprising 6,864 cells).
- 36 tonnes of Ethyl Glycol coolant in batteries.

The components of the solar farm that will utilise these substances are standard equipment manufactured to strict industry standards to ensure oil and other substances are able to be safely contained. Transformers include specifically designed bunds incorporated into their design.



A full description of the hazardous substances that will be used in the proposed solar farm, the details of the hazard classification of these, and details of how these substances will be managed on site, are included in the Hazardous Substances Assessment attached as Appendix N. These details form part of this proposal.

#### **4.15 Ecological restoration and landscape planting**

The proposed restoration and mitigation planting is detailed in the Assessment of Landscape Effects attached as Appendix H. A total of 26ha of planting is proposed as part of the proposal. This includes:

- Approximately 9.9ha of landscape boundary planting with a mix of indigenous and exotic species. Species mixes can be altered to suit neighbouring landowner preferences, where appropriate.
- Approximately 3.3ha of riparian planting along the larger internal drains.
- Approximately 1.15ha of wetland protection, within three areas of wetland, riparian and native planting.
- Approximately 0.4ha of scrub planting on dunes.

Stock proof fencing will be erected around each of the restoration areas to prevent stock access. Access gates will be provided for ongoing weed and pest control but will be secured when not in use. The condition of all fencing and gates will be checked on a regular basis.

#### **4.16 Farming activities**

Dairy and beef stock farming activities would cease over the 436ha project area. However, the landowners will retain all existing farm buildings on the retained land within the site and have indicated they will continue some farming operations on the retained land. The use of these retained areas by the landowners is not part of this application.

Whilst the grazing of cattle and cows and any other larger stock would cease in the project area, the development would support sheep grazing under and around the solar panels, subject to feasibility assessments. Sheep farming and solar farming are complementary activities, in that the solar panels provide shade for sheep, do not disrupt pasture growth and are set high enough above the ground to avoid interference by stock. Sheep also provide control of pasture and reduce the need for mowing/spraying around and between solar panels.

If sheep grazing is not practicable, groundcover would be managed manually by mowing and trimming.

#### **4.17 Earthworks**

The development of the solar farm will not involve significant earthworks in any one area of the site as the site is largely flat, having been previously levelled to support the current dairy farming activity, which includes the use of pivot irrigators.

Earthworks will be required to provide level building platforms for the substation, BESS and other infrastructure (such as central inverters or STS units). Earthworks will also be required for the trenching of cables and for improving and creating new internal access tracks around the solar farm. The approximate extent of earthworks required is estimated in Table 9 below.



**Table 9: Earthworks volumes and areas**

Description	Quantity	Area (m <sup>2</sup> )	Quantity (m <sup>3</sup> )
BESS yard area Flat hardstand area of 17,500 m <sup>2</sup> Excavate 0.4m, backfill with engineered fill to 0.3m above existing ground level	1	17,500m <sup>2</sup>	12,250m <sup>3</sup>
Substation yard area Excavate 0.4m, backfill with engineered fill to 0.3m above existing ground level	1	11,000m <sup>2</sup>	7,700m <sup>3</sup>
Inverters and STS units 20 ft shipping container sized units on concrete foundations (if central inverters used), a smaller number of STS units if string inverters used	40	1,000m <sup>2</sup>	400m <sup>3</sup>
AC and DC Cable trenches width between 600 and 1000 m Average depth of 1.2 m	50km	60,000m <sup>2</sup>	72,000m <sup>3</sup>
Internal roading and access	14km	4m or 6m wide 70,000m <sup>2</sup>	28,000m <sup>3</sup>
<b>Contingency and minor works</b> 10% contingency allowance for changes during detailed design and minor works including parking and manoeuvring areas, ancillary buildings, and small areas of cut/fill (including for site access, landscaping, and fencing)	1	14,000m <sup>2</sup>	9,000m <sup>3</sup>
<b>Total (rounded)</b>		<b>173,500m<sup>2</sup></b>	<b>129,350m<sup>3</sup></b>

Approximately 50% of the internal roading works will occur over the footprint of existing farm tracks, so the total earthworks footprint for roading does not represent entirely 'new' works.

The project will take a balanced approach to cut and fill. All cut material will be re-used within the site and primarily compacted within roadways or at the base of structures. In the event that a surplus of cut material remains, this will be spread thinly across the site, but not in or near any natural inland wetlands. No import or export of fill (excluding aggregate) is currently proposed.

Earthworks will be undertaken in accordance with the Draft Erosion and Sediment Control Plan (ESCP) attached as Appendix O. The ESCP contains methods to minimise discharge of sediment to wetlands and waterbodies on the site, and to minimise the generation of dust. The ESCP also outlines provisions for the occurrence of winter works.

#### 4.18 Construction methodology

Construction is estimated to occur over a period of 18-months and will generally follow the sequence summarised below. The size of the site will allow construction efficiencies, such as one phase of construction (e.g. piling or installation of panels) not needing to be completed across the whole site prior to the next stage commencing. Rather, sequential phases may start in separate areas, once the prior stage is suitably progressed.

The construction start date is dependent on a variety of factors, including receiving resource consent and grid connection approvals, and completion of project financing. Construction



typically begins 12-24 months after these approvals are all obtained. At this stage, we anticipate construction could commence in 2027 at the earliest with the solar farm becoming fully operational in mid to late 2028 - i.e. after an 18-24 month construction period.

Construction activities will be in accordance with NZS6803 which allows noise generating construction 0730-1800 Monday to Saturday with shoulder periods 0630-0730 and 1800-2000 on weekdays. Impact piling will be the most significant noise generating activity. It is proposed that impact piling only occur on Mondays to Fridays between 7.30am to 6pm.

No construction will occur on Sundays or public holidays.

### **Stage 1: Site establishment / enabling works**

This will include:

- Construction of new site accesses and amendments to existing site access to meet stabilised entrance requirements.
- Establishment of construction laydown and storage areas.
- Establishment of construction site office and associated facilities.
- Installation of perimeter fencing.
- Installation of erosion and sediment controls devices.
- Removal / disestablishment of existing site infrastructure including removal of pivot irrigation, troughs, water lines, and internal fencing, and farm buildings and other structures.

### **Stage 2: Establish access tracks**

- Upgrade existing farm tracks (where these align with permanent access ways).
- Construct new access tracks: removal of topsoil, placement of structural fill (where required), and placement of metal/aggregate surfacing.

### **Stage 3: Main works**

- Installation of solar panel arrays: Drive piles, install frames and internal wiring, install solar panels.
- Installation of inverter stations: Establish foundation pads and place inverter stations.
- Complete cabling: Excavate trenches, place thermal bedding, lay cables, place thermal cover, backfill.
- Construct O&M buildings: Establish foundation pad / hardstand area, install building/s
- Construct substation: Establish foundation pad / hardstand area, install switch gear, transformer, and substation cabinetry
- Construct BESS hardstand: Establish foundation pad / hardstand area<sup>45</sup>
- Installation of BESS infrastructure.<sup>45</sup>

### **Stage 4: Solar farm commissioning**

- Complete electric commissioning activities.

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<sup>45</sup> Subject to matters discussed in section 4.18.1



#### Stage 5: Landscape and revegetation

- Complete landscape planting and wetland restoration and planting.
- Complete any remaining fencing.
- Revegetate any remaining exposed areas.

#### Stage 6: Construction dis-establishment

- Remove any remaining erosion and sediment controls.
- Remove any temporary construction buildings and laydown areas.

Construction is expected to take 18 to 24-months from site establishment to commissioning, with the majority of earthworks completed within 12-months.

#### 4.18.1 Staged construction of BESS facility

Due to current constraints regarding their economic feasibility in New Zealand, the proposal seeks flexibility to construct the project in two stages:

- **Stage 1:** Construction of the solar farm, establishment of all internal roads, erection of fences, substation, on-site buildings, landscaping and other ancillary works.
- **Stage 2:** Establishment of BESS compound, installation of the BESS infrastructure, connection to the substation and/or solar farm, construction of the noise wall and other ancillary works.

Whilst possible, it is unlikely that the BESS would be constructed at the same time as the solar farm. We estimate that construction of BESS and ancillary infrastructure would occur sometime after Stage 1, as BESS technology becomes more cost-effective in the New Zealand context.

If constructed separately, it is estimated that construction of Stage 2 of the proposal would occur over a period of 12-months requiring a peak workforce of approximately 60 construction staff. All project management plans would be updated prior to the commencement of construction of Stage 2, as appropriate and in consultation with the Council.

#### 4.18.2 Construction staff

During the peak construction period of approximately 5-months, it is estimated that between 200 and 250 construction staff would be on-site each day. At other times during the construction period, the construction workforce would be much less.

Whilst the final numbers of construction staff will depend on variables such as detailed design, environmental factors and the final construction schedule, an estimate of the construction staff numbers over the 18-month construction period is outlined in Table 10 below.

**Table 10: Estimated on-site construction workforce**

Construction stage	Estimated workforce
Enabling Works	up to 20
Months 1-4	25 – 50
Months 5-7	75 – 140
Months 8 – 12	200 – 250



Construction stage	Estimated workforce
Months 13 - 14	90 – 130
Months 15 – 18	20 – 45

It is anticipated that staff will be on site during typical construction hours, six days a week (i.e. excluding Sunday), with the exception of Public Holidays.

#### 4.18.3 Construction traffic

A full description of the construction traffic is set out in the Integrated Transport Assessment (ITA) attached as Appendix M. Traffic is expected to come mainly from Wellington, Palmerston North and Foxton, depending on what labour and services can be provided from each location. During the peak construction times, the site will have around 170 vehicle movements each day. In the earlier and later stages of construction, this will decrease to about 80 vehicle movements per day. A summary of the predicted traffic movements taken from the ITA is shown in Table 11 below.

**Table 11: Summary of Construction Traffic**

Vehicle Type	Average Movements per Day		Peak Movements per Day	
	Daily (vpd)	Peak Hour (vph)	Daily (vpd)	Peak Hour (vph)
Light Vehicles	40	20	60	30
Buses	20	10	30	15
Heavy Vehicles	20	5	80	5
<b>Total</b>	<b>80</b>	<b>35</b>	<b>170</b>	<b>50</b>

Details of specific construction management measures will be included in a Construction Traffic Management Plan (CTMP), once delivery and construction details have been refined.

No construction traffic would turn right off State Highway 1 onto Wall Road, but right-hand turns would occur from State Highway 1 onto Motuiti Road, using the existing right-turn facilities on State Highway 1.

#### 4.19 Subdivision

As the lease of the land to enable the development of the solar farm is for a period greater than 35 years, the lease is considered a subdivision. A subdivision consent is therefore being sought in conjunction with the land use consent. Details of the subdivision are shown in the plans attached in Appendix G. In summary the subdivision includes:

- The creation of a 0.9515m<sup>2</sup> utility lot (Lot 6) around the substation.
- The creation of a 336ha lot (Lot 3) that contains the solar farm that is in the ownership of Motuiti Farms Ltd.
- The creation of lots around the existing dwellings that have been agreed to be retained by Motuiti Farms Ltd as part of the lease agreement. These lots are Lot 1 - 2.07ha, Lot 2 - 1.61ha, Lot 4 - 16.0ha and Lot 5 - 0.5340ha.
- The creation of a 43.21ha lot (Lot 7) that contains the area of the solar farm that is in the ownership of Currie and Seymour.



- The creation of a 26.96ha lot (Lot 8) over the land and buildings that has been agreed to be retained by Currie and Seymour as part of the lease agreement.

Part Himatangi X Block and Lot 1 DP 31997 form part of the solar farm lease area. This land is already held in two separate records of titles and does not form part of the subdivision as detailed on the scheme plan. This land will continue to be retained in the existing records of titles.

The proposed easements are detailed on the Memorandum of Easements contained on the scheme plan attached as Appendix G. The easements are proposed to protect the current rights to services such as water, power and access. The easements provide for:

- Rights of way over the existing driveways from Motuiti Road to maintain access to the existing dwellings.
- Rights for the existing telecommunications connections to Motuiti Road for the existing dwellings.
- Rights for the existing electricity connections to Motuiti Road for the existing dwellings and existing farm buildings.
- Rights for the existing electricity connections to Wall Road for the existing dwellings.
- Rights of way for the access to the solar farm lots over the existing driveways from Motuiti Road.
- Rights of way over the existing driveway from Wall Road to maintain access to the existing dwellings.

The proposed new lots to be created around the existing dwellings will include the dwellings, accessory buildings, farm buildings and areas used for on-site servicing.

The proposed subdivision will result in one additional title (plus a utility lot) being created than currently exists with the combined Motuiti Farms block and the Seymour block. This additional title will be created around an existing dwelling on the Motuiti Farms block to provide a separate title for this dwelling.

RM501/2020/181 was approved on 22 May 2020 to construct a fourth dwelling on 304-508 Wall Road. This dwelling will be contained within proposed Lot 4. The other three dwellings on the Motuiti Farms block will be contained within proposed lots 1, 2 and 5.

## 4.20 Operations and management

During the operational stage of the solar farm there is likely to be 4-6 permanent staff on site. These will include a site manager, electrical engineer(s), mechanical engineer(s), vegetation technician and/or general maintenance personnel. There will also be additional visits from contractors and other service persons, as detailed in the ITA attached as Appendix M.

During operations, contractors visiting the site would predominantly use light vehicles and enter via the main access (A02). However, where it is more practical, due to the location of work, other access points to the site may be utilised.

The site would be subject to continuous remote monitoring, which will alert the operator in the unlikely event that there is a need for any urgent maintenance. Remote monitoring will help to minimise general operational, and maintenance requirements associated with the solar farm and will be a key part of the safety and monitoring programme for the site.

An Emergency Response Plan will be prepared for the site which will identify potential hazards that exist on the site (for example ignition sources and hazardous substances). The



Plan will detail responses to any incident, and the monitoring and maintenance that will occur on site to reduce the likelihood of any incidents requiring a response.

## 4.21 Signage

The proposal includes permitted signage under the District Plan, being:

- Required health and safety signage.
- Temporary construction and directional signage.
- A single permanent sign, with a maximum size of 1.5m<sup>2</sup>, stating the name of the solar farm and site contact details will be erected at each of the entrances to the solar farm.

## 4.22 Conditions of consent

A set of proposed draft consent conditions is provided in Appendix T. The proposal is to be undertaken in accordance with these conditions, and these conditions form part of the proposal. The FTA imposes additional restrictions on the Panel imposing conditions, if any. Any conditions must be in accordance with Clause 5, schedule 18 and 19 of the FTA.

The proposed conditions have been shared with Ngā Hapū o Himatangi, Horizons Regional Council, Horowhenua District Council, Transpower, NZ Transport Agency and Fire and Emergency NZ, either in full or in part as relevant. Feedback received has been incorporated into the conditions.

The applicant looks forward to providing comments on the revised set of draft conditions that will be provided by the Panel.<sup>46</sup>

## 5.0 Consultation and Landowner Details

Appendix F contains a list of all adjacent and affected landowners and a corresponding map showing the location of these to meet the requirements of the FTA.

Appendix D contains records the consultation that was undertaken. The contact addresses used to initiate consultation are in Appendix F. Māori land and the contact address used for this land is also included. Summary details are provided in the sections below.

### 5.1 Horowhenua District Council

Pre-application engagement with HDC commenced in August 2024.

Pre-application meetings were held in August 2024, November 2024, March 2025 and November 2025.

Over that time, meetings and correspondence have included:

- Project overview and process updates
- A copy of letters sent to neighbours
- Draft technical assessments provided for review and comment
- Draft rules assessment and conditions provided for review and comment

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<sup>46</sup> FTA, s 70(1)(a).



HDC has not provided any feedback on the application documents but Genesis will continue to engage through the Fast-Track process.

In accordance with section 30(3) of the FTAA, Genesis requested written notice confirming that there are no existing resource consents to which sections 124C(1)(c) or 165ZI of the Resource Management Act 1991 (RMA) would apply if approval for the Project were to be applied for as a resource consent under the RMA

HDC replied on 9 December 2025 to acknowledge the notice and to confirm that there are no existing resource consents. This response is included in Appendix D.

## 5.2 Horizons Regional Council

Pre-application engagement with Horizons commenced in July 2024.

Pre-application meetings were held in July 2024, November 2024, August 2025, and December 2025.

Over that time, meetings and correspondence have included:

- Project overview and process updates
- Discussion of stream classification, treatment of natural inland wetlands, and treatment of watercourses with flood and drainage control values
- A copy of letters sent to neighbours
- Draft technical assessments provided for review and comment
- Draft rules assessment and conditions provided for review and comment

Horizons provided feedback on several documents. The list below notes where changes have been made in response to comments as well as matters where agreement is outstanding:

- Rules assessment
  - Query regarding compliance with LF-LAND-R5 (3)(b) (vegetation clearance within 5m of a permanently flowing stream): as outlined below, the watercourses on site are considered to meet the definition of artificial watercourse therefore are excluded from the definition of "river" and LF-LAND-R5 (3)(b) does not apply. However, no vegetation clearance will be required within 5m of any of the larger watercourses (other than any removal of grass required to establish riparian planting)
  - Query whether consent is required under LF-AWBD-R68 (Activities affecting RP-SCHED2 Value of Flood Control and Drainage): regardless of which watercourse is correctly identified as having flood control and drainage values, fencing will be required parallel and perpendicular to the drain and therefore consent will be required under Rule LF-AWBD-R68. The Rules Assessment in Appendix P has been updated to reflect this requirement.
- Watercourses:
  - The classification of watercourses on site as modified vs artificial watercourses remains an outstanding matter.
  - The Ecological Impact Assessment in Appendix I assesses all watercourses on site as artificial farm drains. This assessment is based on historic aerial imagery, the lack of natural headwater sections, and the site topography. Nonetheless, it is



- proposed to provide at least 5m of riparian planting along either the northern side or both sides of the larger of the drains (referred to as Main Drain 1, 2 & 3).
- Horizons has provided feedback that some of the watercourses on site may be considered modified waterways. Notwithstanding the classification, there is broad agreement on the effects assessment and agreement that management of sediment through an Erosion and Sediment Control Plan will be the key mechanism for managing instream effects.
  - Wetlands:
    - Horizons has advised support for the conclusions and approach taken in respect of wetlands and the proposed planting (recognising that the planting is not required as mitigation for a significant residual effect).
    - Changes were made to the structure of wetland related condition requirements in response to feedback.
  - ESCP:
    - Feedback provided was that the draft ESCP was of reasonable standard and well laid out. There are a number of placeholders, therefore, the ESCP will not be able to be pre-certified with the consent and will need to be reviewed and certified by Horizons prior to land disturbing works commencing. Conditions of consent are proposed for finalisation and certification of an ESCP prior to any land disturbance.
  - Indigenous fauna:
    - Feedback from Horizons' ecologist generally supports conclusions regarding potential effects on native birds, lizards, and bats, including incidental avifauna monitoring.
    - Horizons' ecologist has recommended broadening the incidental monitoring condition to include an Avifauna Monitoring Plan with specified trigger values for actions. The Ecological Impact Assessment does not support the need for more specific requirements and therefore no change has been made to proposed conditions at this time.
  - Activities affecting RP-SCHED2 Value of Flood Control and Drainage:
    - There is a swale drain / overland flow path on site that is shown in the Regional Plan as having flood control and drainage values (see Figure 28 below). There is a drain further to the north that appears to be the main drainage for that area of the site.
    - Neighbours advise that this drain (labelled Main Drain 3) feeds a pond on their property and needs to be occasionally cleaned of sediment. The design has been amended to include planting only on the northern side of Main Drain 3 which will provide riparian and shading benefits while allowing for continued maintenance of the drain.



**Figure 28: Regional Plan Maps showing Drain with flood control value (Schedule 2)**



Figure 28 shows the main drains apparent on site. The section of Main Drain 3 considered likely to be the actual drain intended to be captured by Schedule 2 is highlighted yellow.

- Conditions:
  - Draft conditions were based on a standard set of land disturbance conditions provided by Horizons. A number of changes were made following Horizons comments including amendments to ensure pre-construction activities occur and the Erosion and Sediment Control Plan is in place prior to soil disturbing activities (including those that may occur during enabling works activities) and to include requirements for working in natural inland wetlands into a standalone condition.

In accordance with section 30(3) of the FTAA, Genesis requested written notice confirming that there are no existing resource consents to which sections 124C(1)(c) or 165ZI of the RMA would apply if approval for the Project were to be applied for as a resource consent under the RMA.

Horizons replied on 8 December 2025 to acknowledge the notice and to confirm that there are no existing resource consents. This response is included in Appendix D.

### **5.3 Relevant iwi authorities, hapū, and Treaty settlement entities**

The Foxton Solar Farm sits within an area of interest to Ngāti Raukawa ki te Tonga, Rangitāne o Manawatū, and Muaūpoko. With the direct proximity of the proposed solar farm to Motuiti Marae, Rangitāne o Manawatū and Muaūpoko have provided their support, in writing, for three hapū of Ngāti Raukawa ki te Tonga (Ngāti Rakau, Ngāti Te Au, and Ngāti Turanga – together Ngā Hapū o Himatangi) to take the lead in respect of the project. That support is included in Appendix D.

Genesis has been working with Ngā Hapū o Himatangi since April 2024. Ngā Hapū o Himatangi have confirmed their support for the Project (included in Appendix D) and consider that any adverse cultural effects of the Project will be appropriately addressed.

Sections of this application relating to cultural effects have been reviewed by Ngā Hapū o Himatangi. The sections relating to the Rangitāne o Manawatū Claims Settlement Act 2016 and Rangitāne o Manawatū Environmental Management Plan have been reviewed by Rangitāne o Manawatū.



## 5.4 Adjoining landowners and community

### Initial letter drop

Engagement with neighbours and potentially interested community organisations was commenced in October 2024. A letter, location plan, concept layout, and information sheet (refer Appendix D) was delivered via letter drop to all adjacent properties as well as properties along Motuiti and Wall Roads where a letterbox was available. Where no letterbox was present, best endeavours were used to find publicly available contact details.

The initial community consultation pack was also provided via email and/or posted to:

- Te Tumu Paeroa (in respect of properties administered by the Māori Trustee)
- Foxton Community Board
- Foxton Futures
- Foxpine Airpark
- Manawatu Aviation Club
- Palmerston North Airport
- Foxton Golf Club

Residents were invited to get in touch via email or phone if they had any questions, concerns or queries regarding the proposal. A number of residents reached out to the project team, and in December 2024 members of the project team met with these neighbours individually at their properties to discuss the proposed project. A meeting was also held with Te Tumu Paeroa.

Matters raised during these meetings included:

- Expressing support for the solar farm
- Enquiring about opportunities for leasing additional land to the solar farm project
- Expressing concerns about potential impacts of the solar farm including visual impacts, glare, noise, effects of traffic during construction, EMF, and pest control. A number of these concerns were able to be resolved during face-to-face discussions and changes to the landscape and visual planting were incorporated as a result. In addition, an additional visual simulation was prepared from a potential future house site at 125 Motuitu Road.

### Community open day

In March 2025, a community drop-in session was held at Motuiti Marae. Invites (refer Appendix D) to the drop-in were circulated via letter drop or post to the same footprint as the initial letter drop as well as emailed to residents who had previously reached out to the project team.

At the drop-in, project team members presented a slide pack with an overview of the project and were available to respond to questions and have one-on-one conversations. An offer was presented to provide draft technical reports, including the draft planting plan, to anyone on request. A number of attendees requested reports, which were provided by email.

Key matters raised during the drop-in session included stormwater runoff, water supply, property values, visual screening, construction noise and vibration, construction traffic, fire risk, end of life considerations, and operational noise. A further response to these matters was provided via email following the drop-in session. This also includes a number actions in



response to feedback including changes to riparian planting. A copy is provided in Appendix D.

### **Community update**

Following transition of the project from Solar-Gen to Genesis, an update was provided to the same footprint as the initial letter drop and emailed where possible.

## **5.5 Other potentially interested parties**

### **Transpower New Zealand**

Transpower owns and operates the Bunnythorpe to Haywards (BPE-HAY-A and BPE-HAY-B) 220kV National Grid transmission lines that traverse the eastern portion of the site. Multiple single circuit steel tower National Grid support structures (towers) are also located on site (BPE-HAY-A0090 to BPE-HAY-A0095 and BPE-HAY-B0086 to BPE-HAY-B0090).

Transpower has therefore been engaged with:

- As part of the grid connection approvals process;
- As the intended future owner of the proposed sub-station (which will be consented and constructed by Genesis before being transferred); and
- As the operator of the national grid assets that run through the site.

The grid connection process is continuing in parallel with this Fast-Track process and is independent of obtaining the necessary resource consents.

Key matters raised by Transpower in respect of avoiding or minimising potential impacts on the national grid corridor and assets include:

- Provision of appropriate setback from the National Grid Yard for all solar farm infrastructure including in particular the solar panels and any BESS units
- Provision of suitable access to all National Grid support structures
- Compliance with relevant separation distances between buildings / structures and conductors (including conductor high wind deflection blowout), ground to conductor clearances, minimum safe clearances for mobile plant operation, and fencing.
- Maximum vegetation height within and in proximity to the National Grid Yard
- Provision of relevant draft management plans to Transpower for comment prior to any council certification

Further detail, including requested amendments to conditions are set out in the correspondence in Appendix D. All Transpower's requested amendments have been incorporated into the proposed conditions included in Appendix T.

### **NZ Transport Agency Waka Kotahi**

While the proposed solar farm will not have direct effects on the state highway network, vehicle movements associated with construction activities will use the state highway network.

Pre-application engagement with NZTA commenced in November 2024 and an initial draft of the Integrated Transport Assessment (ITA) was provided for comment. The draft ITA, proposed construction traffic routes, and measures proposed to minimise impacts on the state highway network were discussed at an online meeting in December 2024.

Key outcomes of that meeting included:



- Confirmation that the volume and distribution of traffic is unlikely to cause issues to the state highway network and no state highway upgrades will be required.
- A condition of consent will require development of a Construction Traffic Management Plan.
- Construction traffic from the south will use Motuiti Road (via the existing right-hand tuning bay). No construction traffic will be permitted to turn right from SH1 into Wall Road unless specifically allowed by the Construction Traffic Management Plan in consultation with NZTA.
- Overdimension and overweight permits will be required for delivery of the substation transformer.

An updated ITA and draft Glint & Glare Assessment were provided to NZTA in March 2025. A follow up email was sent along with proposed draft conditions for the Construction Traffic Management Plan. A final response from NZTA was not received but Genesis will continue to engage as necessary through and post the Fast Track Approvals process.

### **Fire and Emergency NZ**

The initial community consultation pack was provided via email to FENZ in November 2024 (and again in November 2025). A meeting was held with Fire and Emergency NZ representatives in November 2025 to discuss the proposed solar farm and seek feedback from FENZ. A number of fire risk management measures were discussed including site access, water supply, alarm monitoring, and battery safety. A summary of proposed fire risk management measures to be implemented at the site are included in Appendix D.

The proposed conditions of consent (refer Appendix T) require preparation of an Emergency Response Plan that would include detail of proposed response measures in the event of a fire or other incident. It is expected that this plan would be developed in consultation with FENZ, including in respect of site specific training for staff and FENZ representatives.

Genesis will continue to engage with FENZ through consenting and design of the proposed solar farm.

### **Heritage New Zealand Pouhere Taonga**

While the project is not seeking Archaeological Authorities under the Heritage NZ Pouhere Taonga Act 2014, the applicant has engaged with Heritage NZ to confirm there are no known archaeological sites at the project site.

Heritage NZ confirmed that an initial desktop assessment did not identify any recorded archaeological sites within the project area but recommended an archaeological authority be commissioned.

A copy of the Archaeological Assessment was provided, with no further comments received.

### **Department of Conservation Te Papa Atawhai**

While the project is not seeking Wildlife Act Approvals and is expected to have a very low level of effect on ecological features present at the site, Genesis has sought to provide DoC the opportunity to comment on the proposal.

The initial community consultation pack was provided via email to DoC Wellington in October 2024, with a follow up in November 2024, and the community update provided in November 2025. No comments were provided.



## 6.0 Reasons for the application

An assessment of the proposal against the relevant statutory documents has been undertaken, and the following consent requirements have been identified. A detailed rules assessment is provided in Appendix P.

### 6.1 National Environmental Standards for Freshwater 2020

The Resource Management (National Environmental Standards for Freshwater Regulations 2020 (NES-F) regulates activities that could affect wetland quality and ecological values. The proposal requires the following resource consents under the NES-F:

- **Discretionary** activity resource consent under Regulation 45(1) for vegetation clearance within or within a 10m setback from a natural inland wetland for the purpose of constructing specified infrastructure.
- **Discretionary** activity resource consent under Regulation 45(2) for earthworks or land disturbance within or within a 10m setback from a natural inland wetland for the purpose of constructing specified infrastructure

For clarity, it is considered that Regulations 45(3), 45(4) and 45(5) are not triggered for this proposal as no discharge of water is proposed, and proposed works will not result in the partial drainage of any wetland. In particular, rainwater running off the solar panels is not considered a discharge, and stormwater running off the newly created impermeable surfaces will not change the water level range or the hydrological function of wetlands.

### 6.2 One Plan

The proposal requires resource consent under the Manawatū-Whanganui Regional Council One Plan (One Plan) for the following reasons:

- **Controlled** activity resource consent for large-scale land disturbance under Rule LF-LAND-R6 as the earthworks volume exceeds 2,500m<sup>2</sup> per property. This includes any ancillary diversion of water on the land. The activity will comply with the controlled activity standards.
- **Discretionary** activity resource consent for the construction of an open wire fence perpendicular to a drain identified for flood control purposes and for cables that will be thrust beneath the drain pursuant to LF-AWBD-R68. A cable has been considered to be a structure on a precautionary basis for the purpose of this rule.
- **Discretionary** activity resource consent for the disturbance of land and vegetation adjacent to the farm drains on a precautionary basis should they be considered permanently flowing streams under LF-LAND-R8. Consent is sought for vegetation clearance, land disturbance, cultivation or forestry that does not comply with Rules 13-1 to 13-6.

All other activities are a permitted activity under the One Plan.

### 6.3 Operative Horowhenua District Plan

The proposal requires resource consent under the operative Horowhenua District Plan (HDP) for the following reasons.

#### 6.3.1 Rural Zone – District Wide Matters

- **Discretionary** activity resource consent for the solar farm as the activity is not otherwise provided for in the Plan (RURZ-GRZ-R24).



(Note that the earthworks proposed as part of this activity are permitted, as the permitted activity standards in Rule 19.6.13 are not exceeded for the Foxton Dunefields landscape Precinct. All earthworks are a permitted activity as they do not involve more than 3m vertical cut and all permitted activity standards will be met).

### 6.3.2 Utilities and Energy

- **Restricted Discretionary** activity resource consent for the substation as it is defined as a network utility but does not meet the standard in terms of maximum voltage or maximum height. (Rule EIT-UE-R5).
- **Restricted Discretionary** activity resource consent for the electricity lines and support structures that have a voltage exceeding 110kV (EIT-UE-R5).
- **Restricted Discretionary** activity resource consent for network utilities not complying with the permitted activity rule standard relating to the height of the tower on the substation. This exceeds the 13.5m threshold set by EIT-UE-S8. The height of the tower is 23.5m.

### 6.3.3 Hazardous Substances

- **Discretionary** activity resource consent as the proposal does not comply with the Discretionary Hazardous substances limits under Rule HAZ-HS-R2, as the volume of oil stored on the site exceeds the Discretionary volume of oil listed in the “Classification of Hazardous Substances Table”.

### 6.3.4 Noise

- **Restricted Discretionary** activity resource consent for the operation of the BESS at the same time as the solar farm as this will infringe the noise standards (NOISE-R1) in respect to 449 Wall Road and the dwellings internal to the site after subdivision.

### 6.3.5 Subdivision

- **Discretionary** activity resource consent for subdivision as shown on the scheme plans attached as Appendix G that does not meet the requirements of Rule SUB-25 as previous lots have been created from the parent title and the lot size around the substation exceeds that provided for utility services (SUB-S1(a)).

## 6.4 Overall activity status

Overall, resource consent is required for a **discretionary activity**.

The consents have been “bundled” for the purpose of the activity status. Overall, the consents are considered a discretionary activity under the NES-F, One Plan and the HDP and accordingly section 104B of the RMA applies.

As a discretionary activity, there is no limitation in the matters that the Panel can consider providing they are resource management related. The Panel may grant resource consent with or without conditions or decline resource consent. However, as this application is progressing through the FTA, the Panel can only decline resource consent on limited grounds as set out in section 2

## 6.5 Consent term and lapse date

Genesis requests:

- Unlimited term for land use activities



- A 10-year duration for all resource consents granted solely for construction activities
- A 35-year duration for any other consent

Genesis requests a lapse date period of 10 years for any resource consent granted, including subdivision.

## 7.0 Assessment of effects on the environment

### 7.1 Introduction

Having reviewed the relevant district and regional plan provisions and taking into account the matters that must be addressed by an assessment of effects on the environment as outlined in clause 7 of Schedule 5 of the FTA, the effects that warrant consideration as part of this application are listed below.

As this application is for a **discretionary activity**, the relevant effects that the Panel can consider are not restricted. Notwithstanding the ability of the Panel to consider all effects, only the following effects are considered relevant:

- Positive effects
- Ecological effects
- Glint and glare effects
- Landscape and visual effects
- Effects on soil resource and rural productivity
- Effects on natural hazards and flooding
- Hazardous substances
- Effects on water quality
- Archaeological effects
- Cultural effects
- Construction noise and traffic effects
- Operational noise and traffic effects
- Subdivision
- Effects on rural character and amenity

#### 7.1.1 Existing environment and the permitted baseline

The "existing environment" and the "permitted baseline" are relevant to the Panel's assessment under s 104(1)(a) of the RMA.

When determining whether to grant resource consent, the Panel must have regard to any actual and potential effects on the environment of allowing the activity. To determine the scale of the actual and potential effects, an environmental baseline – the "existing environment" – needs to be ascertained. The "existing environment" is not a term used in the RMA but is a shorthand reference to the baseline starting point against which to assess effects. Section 3 of the AEE describes the existing environment.

The Panel also has discretion to disregard an adverse effect on the environment if a national environmental standard or the plan permits an activity with that effect. This is the permitted



baseline. It is only the adverse effects over and above those forming a part of the baseline that are relevant when considering an application.

The purpose of the permitted baseline test is to isolate, and make irrelevant, the effects of activities on the environment that are permitted by the plan. If the permitted baseline is applied, such effects cannot be taken into account when assessing the effects of a particular resource consent application.

Whilst there is no permitted baseline relevant to the establishment and operation of the solar farm and associated activities, the HDP enables primary production activities to occur as a permitted activity, which include activities such as forestry, dairy, beef and sheep farming, as well as horticultural activities, and associated structures, buildings and shelterbelts. These permitted primary production activities are a relevant consideration when considering this application, particularly the effects that these permitted activities would have on the environment.

Furthermore, it is recognised that there are individual components of the proposal which are a permitted activity under the HDP:

- All earthworks proposed as part of the activity are permitted (consent is required for a controlled activity under the One Plan).
- Buildings are permitted up to 15m in height.
- A total of 11 dwellings and family flats would be permitted on the total site in the present title configuration (this relates to the subdivision)
- Sheep grazing under the solar panels, if undertaken, is permitted.
- Shelterbelts greater than 20m in length are permitted up to 6m height if further than 10m from any site boundary or road.
- Oil up to 1,000 litres per transformer is a permitted activity (HAZ-HS-P8).
- Oil in the substation is a permitted activity (HAZ-HS-P8).
- Noise from any activity is permitted up to 55 dB LAeq (15 mins) in the daytime and 40 dBA LAeq (15 mins) at night; when measured at any point within any neighbouring site zoned General Rural.

Of key relevance in the consideration of this activity is that all earthworks are permitted under the HDP, noise from any activity up to the levels specified are permitted, forestry is permitted to occur over the whole site where located 10m from boundaries and 30m from dwellings and shelterbelt planting more than 20m in length and up to 6m high is permitted 10m from the boundaries. These effects of the activity may therefore be disregarded.

## 7.2 Positive effects

### 7.2.1 Sustainable electricity generation

The proposed solar farm will generate positive effects through the provision of a significant new renewable energy generation activity which will contribute to New Zealand's efforts to transition more quickly to a low-emissions economy. The proposal will allow for a decrease in the reliance on coal or new hydroelectricity generation in responding to the increased energy needs of New Zealanders. It will also contribute to diversifying New Zealand's energy supply, in terms of both location and type. Once operational, the solar farm could supply electricity to 47,000 New Zealand homes annually.



The purpose of Genesis' solar farm projects is to displace baseload coal-fired generation at the Huntly Power Station with renewable energy and, in doing so, free up the Huntly generation capacity to provide firming and backing of renewable energy.

The Foxton solar farm project will generate energy close to where it is consumed (Palmerston North and Foxton) and will increase efficiency and resilience of the electricity network because it results in lower energy losses that would occur with more distant sources of supply and less likelihood of outages caused by failures occurring in the national transmission network. To an extent it will also add some diversity to the local Horowhenua District economy and increase the rates income for the Horowhenua District Council

Solar panels produce electricity from the photons in sunlight, but do not need direct sunlight. Panels function in ambient sunlight including on cloudy days, although sunny days will produce more energy than cloudy ones. The annual output of any solar farm can be ascertained to a high degree of accuracy and is highly predictable because the annual variance in solar irradiation anywhere in the world is between 1% and 3%.

Solar farming is a reliable source of energy and can be located away from high-risk areas. In particular, solar farms can tolerate a degree of flooding, due to the mounting of panels and other infrastructure above ground level.

The increase in diversity and resilience will result in greater security in electricity supply. A secure supply of electricity sufficient to meet the demands of the population is essential to ensuring economic success and productivity. New Zealand's energy demand has grown steadily, and growth is forecast to continue. While solar generated electricity will take up some of this demand it is unlikely to be sufficient to displace all fossil-fuelled generation.

Solar farming has the lowest emissions of CO<sub>2</sub> of any energy generation method on a per kilowatt-hour (kWh) of energy basis, with only 6g of CO<sub>2</sub> produced per kWh of energy. By comparison, onshore wind produces 10g, hydro power 97g, and coal 109g. Further, the components used in the manufacture of solar energy (e.g. steel, glass, copper, cobalt) can be recycled at the end of life<sup>47</sup>.

### **7.2.2 Local employment**

The proposal will also have considerable economic benefits through providing local employment opportunities through the employment of an average of 103 construction workers during the construction stage, who may travel from areas as far afield as New Plymouth to the north and Wellington to the south. Once operational, the solar farm will provide ongoing employment opportunities for an anticipated three to five full-time equivalent staff members who would reside locally.

### **7.2.3 Economic benefits**

Upon the granting of resource consents and subject to final investment decisions, an 18–24-month construction programme would commence. A report on the economic benefits of the proposal has been prepared, and this is attached as Appendix B. This report summarised the economic benefits of the proposal as:

- Of the total construction cost over an 18–24-month period 17.5% is expected to be spent within the Horowhenua District and 25% within the Manawat-Whanganui Region (including the Horowhenua District).

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<sup>47</sup> 2017. Arvesen, Humpenoder, Pepp et.al



- The types of local businesses within the district to benefit from this expenditure will include transport providers, civil engineering service providers, mechanical and electrical service providers, aggregate and cement suppliers, landscapers, nurseries, accommodation providers, retail (tool and trade suppliers) and waste collection and disposal services.
- Indirect economic benefits from the proposal will also occur such as benefits to suppliers of goods and services to the local economy and the construction employees.
- The project will create 3-5 permanent ongoing jobs,

In addition to this the project will have positive benefits through the provision of a significant new renewable energy generation source that will

- generate around 345,000 MWh/year of electricity per annum. This can power around 47,000 homes or power additional transport from electric vehicles by around 1.8 billion vehicle-kilometres travelled
- potentially remove equivalent emissions to 18,000 petrol powered vehicles on New Zealand roads or avoid emission of an estimated 25,000 tonnes of CO<sub>2</sub> per annum.

In summary the project will deliver significant regional and national benefits and provide additional employment, incomes and expenditure within the Horowhenua District and Manawatū-Whanganui Region's economies during its construction and will add diversity to the local economy.

#### **7.2.4 Reduction in discharges to land and water**

The development of the site for the solar farm will replace the current use of the majority of the large site as a dry stock and dairy farm. Some small areas of the site outside the solar farm area that will be retained by the current landowners will still be used for dairy support or sheep and cattle grazing activities. Sheep may be grazed under and around the panels if and when practicable. Compared to cattle or dairy farming, sheep farming reduces environmental pressure on the land and reduces associated downstream effects from nutrient runoff.

In summary the changes in land use will result in the following discharges<sup>48</sup> which are currently permitted by way of regional council consents, no longer occurring on the parts of the site that will be developed as the solar farm:

- 39kg Nitrogen/hectare/year from 280,000 litres of stockyard effluent per week.
- Discharge of 25m<sup>3</sup> of treated rendering stickwater (from the rendering of fish, poultry and meat waste) per week; and
- The take of 14,694m<sup>3</sup> of groundwater at 120L/sec for irrigation per day, resulting in an expected loss of 20kg/ha/yr of Nitrogen leaching.

A positive effect of the proposal will therefore be a reduction in these discharges and a corresponding improvement in the quality of water on the site and in the tributaries around the site that the water discharges into.

Overall, the proposed change in land use to the solar farm and sheep grazing will have a positive effect on discharges to land.

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<sup>48</sup> But which are currently permitted by way of regional council consents



## 7.2.5 Ecological enhancement

In addition to the removal of existing farm discharges, the site's ecological values will be enhanced through the establishment of 26ha of various areas of native and non-native planting over the site. The planting proposed is detailed in the Plans and details in the Assessment of Landscape Effects attached as Appendix H. The key planting areas are:

- Approximately 11.5km (9.9ha) of landscape boundary planting with a mix of indigenous and exotic species. Species mixes can be altered to suit neighbouring landowner preferences, where appropriate.
- Approximately 6.5km (3.3ha) of riparian planting along the larger internal drains.
- Approximately 1.15ha of wetland protection, within three areas of wetland, riparian, and native planting
- Approximately 0.4ha of scrub planting on dunes.

### 7.2.5.1 Wetland restoration and enhancement

While the EIA concludes that the magnitude of effect on wetlands across the site is very low, three inland wetland areas in the centre of the site, have been set aside for wetland restoration and enhancement. This area totals approximately 5.6ha of wetland and surrounding planted area after restoration.

These wetland restoration and enhancement areas are based around 1.15ha of existing low value inland wetland located adjacent to Main Drain 2. The existing wetland areas and a riparian margin of approximately 10m will be planted with appropriate eco-sourced wetland and riparian species that have been historically present in this area. Additional native planting will surround the three wetland restoration and enhancement areas. The selected planting mix proposed is to suit the existing landscape. Plants utilised near the solar panels will be low growing herbaceous or wetland species and shrubs that will not generate shading effects.

The wetland restoration area planting will mitigate potential very low effects on wetlands across the site, provide nutrient filtration and localised flood attenuation benefits, provide habitat and food sources for birds and insect life, and act as a visual break in the site, improving the landscape character.

### 7.2.5.2 Drain riparian planting

While the EIA concludes that effects on drains across the site is low and as such no mitigation is required, riparian planting is proposed on the larger of the drains present on site to provide positive environmental outcomes. A total area of approximately 3.3ha with a 6.5km length of riparian planting is proposed made up of:

- Main Drain 1: 5m riparian planting either side of the drain with an additional 10m of native planting on the northern side.
- Main drain 2: 5m riparian planting either side of the drain between the wetland restoration area and the site boundary.
- Main Drain 3: 5m riparian planting on the northern side of the drain only (to allow maintenance access for drain clearing, if required).

Riparian planting will typically be comprised of species reaching up to 2.5m high on the northern side of the drains and 1.5m high on the southern side to minimise shading of solar panels.



The drain riparian planting will provide shading to the drains, improve stability of the drain banks, provide habitat and food for native fauna, and act as a visual break in the site providing landscape character benefits.

### 7.2.5.3 Landscape boundary planting

The primary purpose of the landscape boundary planting is to screen the solar farm from neighbouring properties, reduce potential visual effects, and provide landscape mitigation; however, the planting will also support biodiversity benefits. The boundary planting has a length of around 11.5km with indigenous, low flammability species used where suitable.

### 7.2.6 Maintenance and monitoring of planting

Ongoing maintenance monitoring of plantings is proposed to ensure plants establish and reach self-sustaining maturity. It takes between 3-5 years before native plantings are well established and their certainty of survival is assured, after which monitoring and maintenance requirements will decrease.

During the first 5 years after planting, monitoring and maintenance will comprise:

- Watering: provision for watering all planting during the first 12-months after establishment, if required by weather conditions
- Weeding: Removal of grass and weeds by hand or chemical as required up to 9 times annually in the first 12-months following establishment and 4 times annually for the remainder of the 5-year period.
- Replacement of dead or damaged plants: All dead or diseased plants must be replaced in the next planting season (April-October) with new plantings appropriate to the planting area. The replacement programme will continue for the 5-year maintenance period, with plants of the same species and grade until a canopy cover of no less than 90% has been achieved.

After the first 5 years, maintenance and monitoring will decrease to bi-annual monitoring in summer to check for plant disease and in March/April to identify any infill or plant replacement requirements to maintain 90% plant cover.

## 7.3 Cultural effects

The Foxton Solar Farm sits within an area of interest to Ngāti Raukawa ki te Tonga, Rangitāne o Manawatū, and Muaūpoko. With the direct proximity of the proposed solar farm to Motuiti Marae, Rangitāne o Manawatū and Muaūpoko have provided their support, in writing, for three hapū of Ngāti Raukawa ki te Tonga (Ngāti Rakau, Ngāti Te Au, and Ngāti Turanga – together Ngā Hapū o Himatangi) to take the lead in respect of the project.

Ngāti Raukawa hapū are tangata whenua of their iwi region – tiaki whenua, tiaki awa, tiaki wairua, hau kāinga and ahi kā. They are fuelled by their tūpuna responsibility to improve the health and wellbeing of the whenua and awa.

The Foxton Solar Farm is within the rohe of Ngā Hapū o Himatangi. Through direct whakapapa with te taiao, hapū maintain their connections to their natural environment, their ātuatanga, and to each other. It is through these connections that Ngā Hapū o Himatangi have developed a comprehensive system of environmental management upheld through tikanga and kawa.

Genesis recognises that the Foxton Solar Farm project will impact on Ngā Hapū o Himatangi, given the proximity of the project to Motuiti marae, kāinga, and archaeological sites.



For Ngā Hapū o Himatangi, from a Te Ao Māori perspective, the impacts of the project are not limited to the physical environment but extend to cultural, spiritual, social and intergenerational dimensions.

The site is connected to Motuiti marae and other wāhi tapu, urupā, kāinga and archaeological features. These are significant taonga that embody the hapū's identity, tikanga, and tūpuna connections. Development and disruption to the landscape can impact on whakapapa (genealogical connection), wairuatanga (spiritual values), whanaungatanga and manaakitanga (relationships and care) and the cultural landscape. Development can also have adverse effects on soil, waterways, taonga species, ecosystems, and the community. The effects may affect the ability of Ngā Hapū o Himatangi to fulfil their role as kaitiaki.

Genesis and Ngā Hapū o Himatangi have worked together to recognise Ngā Hapū o Himatangi, to reflect our partnership and to mitigate the impacts of the project on Ngā Hapū o Himatangi including through design to avoid further loss of dunescape, management of potential effects on waterways and ecosystems, planting to minimise visual impact and support natural biodiversity, engagement and a commitment to an on-going partnership through construction and operation of the proposed solar farm.

Ngā Hapū o Himatangi have confirmed their support for the Project and consider that any adverse cultural effects of the Project will be appropriately addressed.

Ngā Hapū o Himatangi, Rangitāne o Manawatū and Muaūpoko have provided written support (Appendix D).

## 7.4 Archaeological effects

An archaeological assessment of the whole site area was undertaken by Clough and Associates in June 2024. The full report is attached as Appendix L.

The report concludes that the proposal will not have any adverse effects on archaeological values and therefore no conditions of consent are required relating to archaeological monitoring. Typical accidental discovery protocol conditions are however recommended, and these have been included in the proposed draft conditions of consent attached as Appendix T.

Overall, the proposal is considered to generate no adverse effects on archaeological values.

## 7.5 Landscape and visual effects

An Assessment of Landscape Effects (ALE) has been prepared by SLR Consulting Ltd and is appended in Appendix H. The ALE adopts a design-led and responsive approach to this project. The initial landscape review findings informed the project design, setbacks and landscaping locations to best, integrate the development into the environment. The attached ALE assesses the overall landscape effects of the proposal and should be referred to for a full assessment of the landscape and visual effects. The ALE summarises that the key matters that influence the assessment are:

- The application site sits within the “Foxton Dunefields” landscape Precinct of the District Plan. This precinct is assessed as not reaching the criteria to be considered outstanding. The dunes on this site have largely been removed to enable the use of pivot irrigators. Small areas of dune remnants exist only in the NE of the site and the southern margins of the site. Leaving these remnants undeveloped has been integral to project design.



- The application site is typically level to undulating and has been modified for centre pivot irrigation and dairy grazing.
- The site is dissected by the National Grid transmission lines which form a key feature of the area.
- A desktop topographical analysis, on-site visual envelope mapping and field visits have determined the zone of visual significance of the proposal to be 500-600m from the site boundary despite the scale of the application site.
- Due to the generally flat through to undulating topography, any landscape features and elements such as sand dunes, buildings, forestry blocks and shelterbelts contribute to breaking up views of the application site in its entirety beyond the 500-600m distance, and in some locations can truncate the view completely.
- The location of the solar farm is within a modified rural environment which does not have a high degree of visual amenity nor sensitivity, noting that the land and surrounding area are outside of any outstanding natural features or landscapes.
- Collectively the value attached to the local landscape has been considered as moderate/medium with an overall sensitivity to change being considered as moderate/medium.

Several key design measures have been used to prevent and reduce landscape and visual amenity effects of the proposal. These key aspects are:

- A minimum setback distance of 100m between neighbouring residential dwellings and solar panels.
- Retention of undeveloped areas in the vicinity of lifestyle properties on Motuiti Road.
- Excluding remnant dune features from the development footprint.
- Reducing the maximum height of solar panels from 5.5m (in a 2-Portrait Arrangement) to a maximum of 3.5m (in a 1-Portrait arrangement).
- Setting back security fencing behind proposed perimeter mitigation plantings, rather than on the site boundary.
- Retaining 14 hectares closest to Motuiti Road as undeveloped.
- Providing a central feature of 12 hectares as undeveloped pasture, wetland restoration and ecological enhancements
- Use of boundary landscaping to screen the development from key receptors and key road frontages while maintaining the open and expansive landscape as far as practicable.

The level of landscape and visual amenity effects generated by the proposal are summarised in the ALE. The short-term landscape effects are rated as moderate-high and adverse in nature. After mitigation measures this effect is assessed a moderate. The creation of lot boundaries around the substation and four existing dwellings on the site do not alter the landscape or visual effects of the proposal.

Views of the development are primarily limited to three of the more immediate neighbours and road users. The development will not be visible in its entirety from any one viewpoint.

A summary of the effects from each of the key viewpoints are summarised in Table 12 below. Overall, the adverse visual effects of the proposal are assessed as being moderate-moderate high in the short term, reducing to low-moderate to moderate in the long term, depending on the view point.



**Table 12: Summary of effects and mitigation from key viewpoints**

Viewpoint	Visual Rating (Short-Term /Unmitigated)	Visual Rating (Long-Term /with Mitigation)	Notes/Mitigation Proposed etc
Viewpoint 1 238-286 Wall Road	Low-moderate (adverse)	Low (adverse)	Approx 400m from panels 6m high planting along northern boundary. No planting on 418m RHS boundary and some intermittent planting on 318m boundary length
Viewpoint 2 Wall Road	Low-moderate (adverse)	Low (adverse)	Approx 400m from panels 435m RHS boundary length unplanted, remainder of boundary intermittently planted
Viewpoint 3 337-371 Wall Road	High (adverse)	Moderate (adverse)	10m to site Hedgerow planted on boundary to screen. Open views lost
Viewpoint 4 Wall Road Users	Moderate-High (adverse)	Moderate (adverse)	15m from site Planting on some of the boundary. Substation and buildings in view
Viewpoint 5 Wall Road users	Moderate-High (adverse)	Moderate-High (adverse)	7m from site No landscaping proposed to retain broad views over site
Viewpoint 6 Himatangi Block Road users and land in between	Very Low (benign)	Very Low (benign)	1.2km from site No mitigation
Viewpoint 7 346-368 Motuiti Road	Low (adverse)	Very Low - low (adverse)	300-600m from site Removal of hedgerow and replacement with some boundary planting
Viewpoint 8 251-293, 240-296 Motuiti Road	Low-Moderate	Low	180m from site 6m planting on boundary
Viewpoint 9 187 Motuiti Road	Moderate-Moderate-High (adverse)	Low (adverse)	510m and 170m Planting on both boundaries designed in consultation with owner. Elevated future building site
Viewpoint 10 Motuiti Pa and 274-282 SH1	Very-Low (adverse)	Very Low (benign)	650m Landform and proposed planting screens site

The ALE considers that, whilst the existing landscape does not have a high degree of visual amenity or sensitivity, the key landscape matter for the proposal is the scale of the



development and the effect of the number of structures proposed in this rural setting, albeit low in height and subservient to the distant views to the Tararua Ranges.

The proposal has been designed with features to mitigate the landscape effects as well as complement the character of the existing area and the wider rural setting by including large setbacks from roads and boundaries and utilising significant boundary planting to screen and soften the development that will be consistent in character with the shelterbelt and boundary planting that exists in the area at present.

Whilst the proposed landscaping has focused on mitigating views from the most sensitive viewpoints, such as neighbouring dwellings, it is not possible to completely eliminate public views toward the project. However, with the establishment of the proposed planting, given the flat nature of the site and the low profile of panels, the entire development would not be visible from any one viewpoint, and some distant views of the project will occur for some road users. It is notable that whilst 40% of the site has direct road frontage, which would be landscaped, the remainder of the site is set back well over 500m from adjacent roads.

While the ALE determines that the comprehensive mitigation measures proposed do not reduce the effects to very low or low - moderate because of the expansive built form and scale of the project, overall, the integrated mitigation and enhancement measures are considered to provide an acceptable response to the local landscape values (Section 3.3).

The assessment concludes in section 7.0 that the mitigation measures proposed reduce the level of adverse effect on the landscape, but that the introduction of infrastructure at this scale cannot be fully mitigated.

Mitigation planting is assessed as helping to reduce these effects, particularly for individual receptors, however the overall consequence of the large scale of planting is assessed as adversely affecting the open space and expansive valued landscape. The project is of a scale to tip the balance from a predominantly vegetated local landscape into a local landscape dominated by infrastructural built form. This landscape change also affects the working rural environment attribute.

The creation of lot boundaries around the substation and four existing dwellings on the site do not alter the landscape or visual effects of the proposal. The assessment notes that the landscape effects of a project of this scale cannot be fully mitigated.

The landscape assessment concludes that on balance, the application is considered acceptable in the receiving landscape setting with an overall effects rating of moderate to moderate -high (more than minor in RMA terms) in the short-term reducing to 'moderate' (more than minor in RMA terms) level of adverse effects in the long term after planting has established.

## 7.6 Glint and glare effects

A full assessment of the proposal's potential Glint and Glare effects is attached as Appendix Q. The report identifies parties that may experience glint and glare effects and includes a full description of the methodology used in its assessment. The receivers modelled in this assessment are shown in Figure 29 below.

The assessment concludes:

- Aviation glare: The project would not result in any glare at the Foxton Airpark (3km to the southwest of the site). No glare impacts would be possible at the Palmerston North Airport, located over 25km to the northwest of the site.
- Road traffic disability glare: Without considering boundary planting or intervening topography, reflections may occur at times along Motuiti Road and Wall Road;



however, the reflections would be of low angle incidence which do not constitute glare as a motorist would be looking directly at the sun at the same time as any associated reflections. Boundary planting, once established, would eliminate the potential for reflections. No glare would be experienced on Hickford Road, Himatangi Block Road or Shate Highway 1.

- Residential nuisance glare:
  - Prior to establishment of boundary planting, potential glare may occur from early morning reflections at 282, 352A and 371 Wall Road and at Himatangi 3A3G1 Block (no address)<sup>49</sup> and from late afternoon reflections at 447 Motuiti Road.<sup>50</sup>
  - At all five receivers, reflections would occur for no more than several minutes each day over a limited period during summer. These reflections would fall within the New South Wales Large-Scale Solar Energy Guideline (2022) “Low” Impact Category, where reflections are experienced for less than 10 minutes on any one day and less than 10 hours total per year, and no mitigation is recommended by the Guidelines.
  - In addition, the reflections would be coming from the same general direction as the sun, meaning residents would be looking directly at the sun at the same time as any associated reflections and therefore a glare condition does not exist.
  - Additional assessment was undertaken at the site of a proposed dwelling at 187 Motuiti Road. Prior to establishment of boundary planting, sunrise reflections would be theoretically visible for several minutes per day in midsummer. Similar to other receivers above, to observe the reflection the resident would be looking directly at the sun. This would not constitute glare.
  - No potential for glare is predicted at any other receiver.
  - Once boundary vegetation is established, the potential for visible reflections is eliminated for all receivers (motorists and residents).

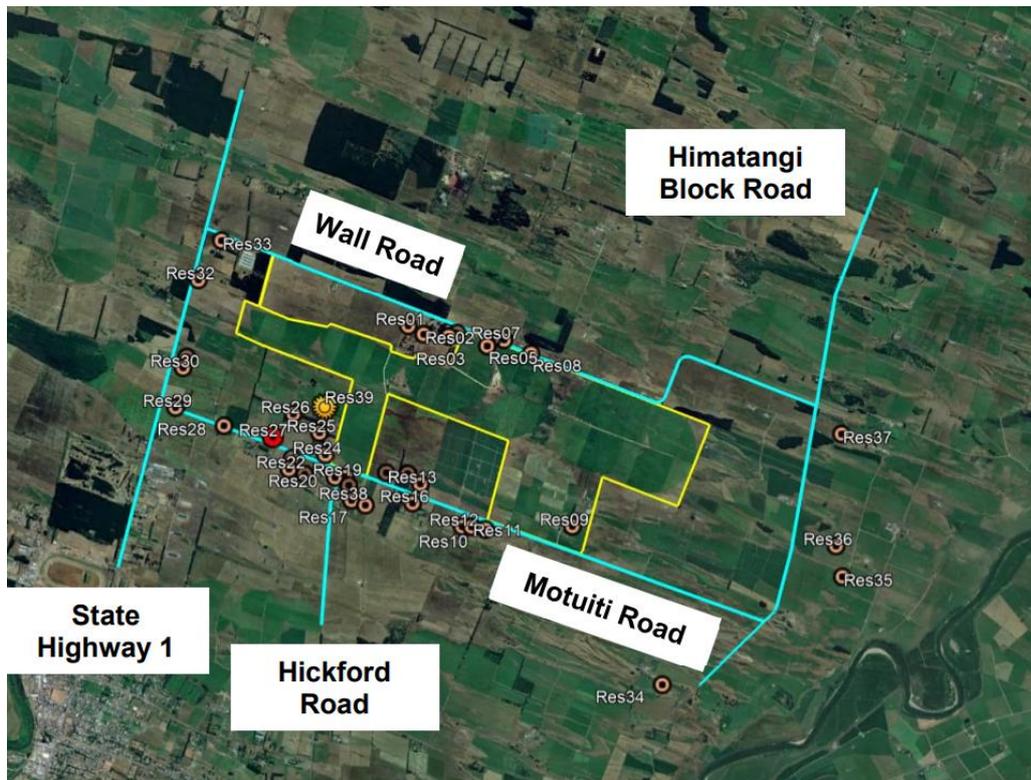
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<sup>49</sup> Referred to as receivers 3, 5, 6, and 8 in the Glint and Glare Assessment

<sup>50</sup> Referred to as receiver 9 in the Glint and Glare Assessment



**Figure 29: Locations modelled for glint and glare effects**



Overall, the technical assessment concludes there will be no “glare” during the interim vegetation growth period and once the planned vegetation reaches its mature height, even the theoretical visibility of the minor sunrise/sunset reflections will be totally eliminated. This effect is considered to be a less than minor, temporary effect on a small number of receivers and an overall negligible effect once planting is established.

## 7.7 Operational noise effects

Whilst solar farms are not inherently noisy developments, it is acknowledged that some of the project infrastructure can produce tonal noise that is typical of electrical infrastructure facilities. Noise-producing infrastructure that would be constructed at the site includes inverters, transformers, the substation, and the BESS facility. Noise from BESS units is typically associated with HVAC systems that are equipped to ensure that the equipment is appropriately cooled, particularly during charging and discharging, and does not typically occur over long periods of time.

The Acoustic Assessment, prepared by SLR and included in Appendix R addresses the predicted operational noise effects of the proposal. Monitoring of the existing environment at the site was carried out to establish baseline noise levels in the area. Existing noise levels were found to be typical of a normal rural environment. Noise output for the site was modelled using a worst-case scenario with all components operating as they would under clear and sunny conditions with high temperatures with an acoustic noise barrier in place on the north side of the BESS facility. When the temperature is cooler the noise from HVAC/cooling fans would be less. The noise model assumed that no “Special Audible Characteristics” adjustment was required as the distance to the nearest sensitive receiver is over 100m and there is a reasonable amount of existing noise in the existing environment such that this is not necessary.



Design elements that have been adopted to reduce noise effects as far as practicable on the surrounding environment include:

- Exclusion zones for all project infrastructure in the southern-most areas of the Site along Motuiti Road, which has a higher density of dwellings than other areas.
- Setting back the BESS and substation as far as possible from neighbouring properties (taking into consideration other constraints).
- Requiring further noise monitoring to ensure compliance with the proposed noise standards should any central inverters or transformers be proposed to be located within 150m from any neighbouring property boundaries

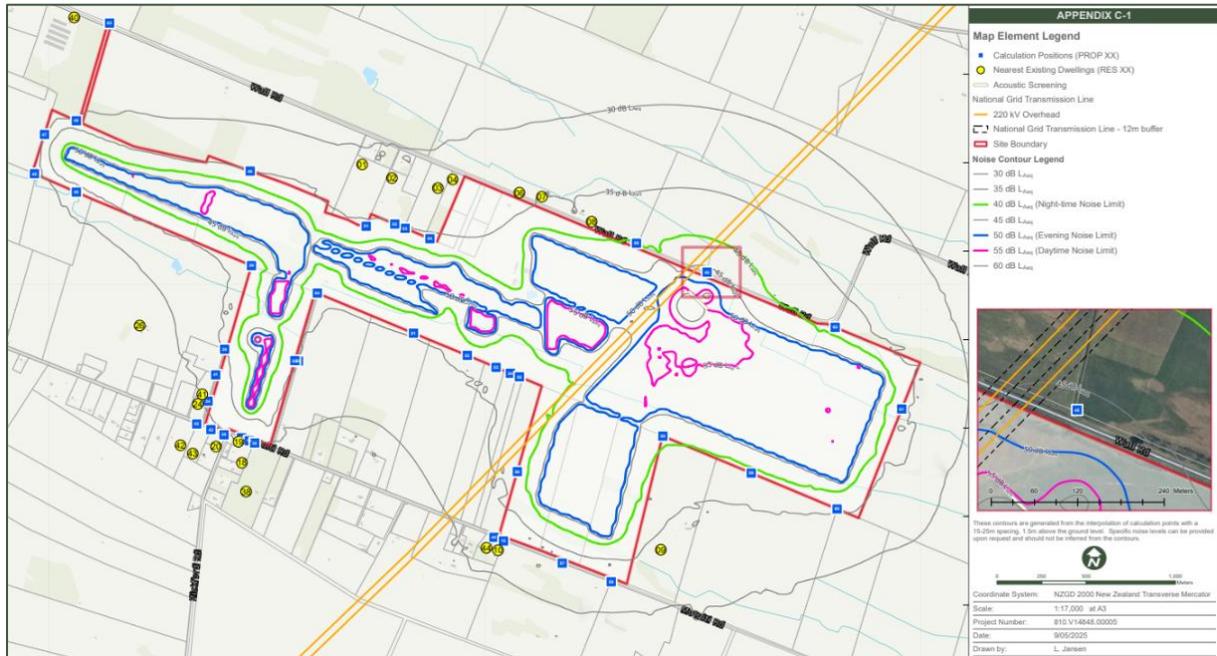
### 7.7.1 Noise levels

The noise levels modelled were worse case operating scenarios with a proposed acoustic wall in place (see section 7.8.2). The noise modelling concludes that the noise levels generated by the operating solar farm will be:

- Noise from likely peak operation of the solar farm (excluding the BESS) would comply with the relevant district plan daytime and night-time noise limits at all surrounding property boundaries. At the facade of the most exposed existing dwelling, 371 Wall Road, the predicted worst-case noise level is more than 15 dB below the daytime limit of 55 dB  $L_{Aeq}$ . On this basis the daytime noise effects are considered reasonable.
- Predicted worst-case noise levels of the solar farm (excluding the BESS) comply at all surrounding property boundaries except the undeveloped land located north of the site at 449 Wall Road (Part Himatangi 3A3F Block. PROP45). The nighttime noise limit of 40  $L_{Aeq}$  is exceeded by up to 5 dBA. (Noise is required to be measured at the closest site boundary).
- Nighttime noise limits are complied with at the nearest existing dwelling (371 Wall Road). The internal noise contribution from the proposed project at this dwelling is anticipated to be below 23 dB  $L_{Aeq}$  at all times, with windows partially open. This level is below the recommended internal noise level range specified in the relevant standards for “sleeping areas in rural zones with negligible transportation noise” (range between 25-30 dB  $L_{Aeq}$ ).



**Figure 30: Predicted noise contours for operation of solar farm from Acoustic report in Appendix R**



### 7.7.2 Noise mitigation measures proposed

The following mitigation measures are proposed as part of the proposal or can be used once the solar farm is operational to reduce noise below what was modelled.

- The maximum fan speed of the BESS HVAC systems may be able to be manually reduced below the levels modelled, where safe to do so. This may result in the operations achieving the permitted noise levels.
- It is proposed that at the time the BESS is constructed as part of stage 2, it is assessed whether the proposed 3m high acoustic barrier is required to meet the noise limits assessed in the model (5 dB above nighttime noise limits at 449 Wall Road). The location of this barrier is shown in Figure 31. To determine if the acoustic barrier is required it is proposed to undertake additional noise modelling prior to construction of the BESS using the constructed design details of the BESS and solar farm. A condition of consent is proposed to this effect.
- Due to the possibility that inverters solar panels or STS units may be located in slightly varied position around the site it is proposed to require a condition (see proposed condition B22) that should any central inverter or transformer be proposed to be located closer than 150m to an adjoining property boundary (excluding those subdivided from the solar farm as a result of this proposal) prior to any of these equipment pieces being established on the site, that an acoustic assessment is undertaken and submitted to Horowhenua District Council to demonstrate compliance with the required noise levels proposed.



**Figure 31: Acoustic Screening north of BESS facility**



### 7.7.3 Assessment of operational noise effects

When assessing the degree of effect that noise generated by the proposal creates, it is relevant that the District Plan states that the permitted noise standards apply to all activities in the zone and not just permitted activities. Therefore, all noise generated below this standard is within the permitted baseline of effects regardless of the nature of this noise. Only noise generated above the permitted standards need to be considered.

The technical report provided concludes that all noise generated by the solar farm complies with the daytime and nighttime noise limits. Noise generated from the BESS facility (when combined with the solar farm noise) proposed in Stage 2 is likely to exceed the nighttime noise limits at one property (with no existing dwelling) located on Wall Road located opposite the BESS facility with the proposed acoustic barrier in place. An online meeting was held with the owner of this property to discuss the modelled nighttime noise exceedance. A copy of the draft Acoustic Assessment was provided after the meeting. No specific feedback was provided but, as an adjoining landowner, the property owner will have a further opportunity to comment through the FTAA process.

A proposed condition of consent imposes the noise limit of 5 dB higher than the District Plan noise levels at the boundary of 371 Wall Road to require the modelled level of noise exceedance is complied with. This expected exceedance of the noise limits is assessed as having minimal effects and is required to occur for the operation of the solar farm.

A further condition is also proposed to require further modelling should noise generating equipment, such as central inverters, be proposed to be located within 150m of the boundary to give further certainty that the standards assessed in the acoustic report will be achieved.

The appended noise report assesses the degree of disturbance that results from the noise levels generated. The key points of this assessment are:

- Day time noise is expected to be largely inaudible during the daytime and evening period and sufficiently low to not affect speech in garden areas.



- There is not likely to be any sleep impact from noise in any existing dwelling with windows partially open.
- The property that experiences the 5 dB nighttime noise level exceedance is a large rural property utilised as a dairy farm. It does not have a dwelling constructed on it. Noise levels are required to be measured at the closest boundary to the solar farm. The area of the site subject to noise that exceeds the District Plan noise level is only a small front part of the site that is also adjacent to the National Grid lines. On the overall large site, it is considered unlikely that a dwelling would be constructed in the location where the noise levels are exceeded given there are many other alternative locations for a dwelling on the site.
- If a dwelling was constructed on this property near Wall Road, the level of noise experienced would be within the acceptable range for the avoidance of sleep impacts with windows open. The resulting internal noise level would be further reduced with closed windows, further minimising any potential effects.

Based on this assessment it is concluded that the level of noise generated by the solar farm does not create an adverse effect as it is not above the permitted baseline of effects for the area. The addition of the BESS potentially creates a nighttime noise exceedance of 5 dB with an acoustic barrier in place at one adjacent property and at the dwellings located within the site which will be subdivided onto separate lots as a result of the lease agreement. There is the potential that the actual noise generated will be lower than what was modelled given the design standards of the equipment installed and actual equipment operations being lower than modelled.

Therefore, there is considered to be some noise effects generated by stage 2 of the solar farm (the BESS facility) but these effects are limited to the current internal site dwellings and one neighbouring property that does not currently have a dwelling. Noise has however been proposed to be mitigated as far as practical and is considered reasonable.

The creation of the lot boundaries to give effect to the lease boundaries of the solar farm do result in technical infringements of the noise standards as the dwellings located within the solar farm area are also sensitive receivers close to the proposed work areas. However, the dwellings to be contained in the proposed lots 1,2, 4 and 5 are all existing (no vacant lots are created as a result of the subdivision on which a new dwelling could be located) and no new sensitive receivers are being or can be created. The owners of the existing dwellings are the lessors of the solar farm.

## 7.8 Operational traffic effects

Once the solar farm is established and operational there will be very low volumes of traffic to the site. These are fully described and assessed in the ITA attached as Appendix M. It is expected that there would be 4-6 operational staff that would travel to and from the site by private vehicle each day, in addition to a small number of occasional other maintenance contractors. In addition to these light vehicle movements, there would be occasional and infrequent heavy truck movements associated with the delivery of goods and spare parts or associated with maintenance.

Overall, the low level of operational parking and loading needs can be met on site and there will be a low volume of operational traffic. No adverse effects will be created by operational traffic related to the proposal.

The subdivision that occurs as a result of the lease does not create any additional traffic. Lot boundaries are around existing buildings and the existing accessways will be retained. No traffic effects are therefore created by the subdivision.



## 7.9 Effects on soil resource and rural productivity

The site is made up of Class 3, 4, 5 and 6 soils. Approximately 30% of the site has been classified as Class 3 soil. Due to the amendments made to the NPS-HPL in December 2025, Class 3 soils are no longer considered highly productive soils for the purposes of this application.

While the use of the site as a solar farm will reduce the level of productive output from the site, a reasonable level of agricultural productive output can still occur conjointly with the solar farm through the grazing of sheep. The changed land use activity will reduce adverse effects on the quality of the soil resource and surrounding watercourses by ceasing the discharges that occur from the current dairy activity. While operational, grazing of sheep at the solar farm would be possible, and grazing activities would be less intensive than those currently occurring on the site.

While this is a reduction in output, a change in land use can occur at any time and use of a site is not required to be and will not always necessarily be optimised. This reduction in productive capacity is not an adverse effect on the soil.

At the end of the project's operational life, the project's infrastructure (with the exception of the substation) can be decommissioned and removed, with the site returned to other productive use. As such, the proposal will not result in any long-term adverse effects on the soil resource.

The subdivision proposed as part of this application due to the lease agreement results in the four existing dwellings that exist on the farm area being contained in separate titles, which will include the dwellings, the existing surrounding domestication area and the farm buildings. The subdivision does not result in any further land being lost from productive use, other than the 0.9ha lot created to contain the substation.

In summary, the solar farm will have only minor adverse effects on the soil resource of the land area utilised with the adverse effects being able to be reversed through decommissioning of the solar farm in future. A more detailed discussion of the effects of the proposal on the highly productive soils occurs under Section 8.6 – National Policy Statement on Highly Productive Land.

## 7.10 Hazardous substances

The project would involve the use and storage of a large volume of oil in the transformers, inverters and the substation on the site. The oil stored in the substation is a permitted activity in the HDP, as is any oil up to 1,000 litres per transformer. However, the transformers that would be used as part of this proposal will contain a greater volume of oil and are therefore subject to further assessment as part of this application.

The proposal also involves up to 66 lithium-ion or lithium-iron-phosphate (LFP) BESS units. As part of their cooling system, these technologies also use ethylene glycol coolant, which also meets the definition as a hazardous substance under the HDP.

Appendix N contains a report detailing the nature and volume of hazardous substances on the site and the design and procedural details of the proposal that are intended to reduce and manage associated potential effects. This assessment has been undertaken to satisfy the requirements of Schedule 4, clauses 6(1)(c) and 7(f) of the RMA relating to the requirement to assess the risks of hazardous installations.

The report concludes that the oil stored and used onsite only occurs in equipment manufactured for its specific intended purpose and these have strict industry standards in relation to oil storage and use, including providing sufficient bunding.



The proposed conditions of consent also require the applicant to prepare an Emergency Response Management Plan prior to operations, outlining appropriate prevention, safety and management procedures relating to hazardous substances such as spills or temperature anomalies in key site infrastructure. This Management Plan will give confidence that appropriate mitigation, management and response procedures are in place to avoid associated potential adverse effects. The key requirements to include in the management plan are outlined in Section 5 of the Hazardous substances report appended to this application and include requirements to manage decommissioned batteries and staff training.

With implementation of the management plan, it is considered that the proposal would not generate any adverse effects or risks on the community, people or the environment that are more than minor.

## **7.11 Effects on natural hazards and flooding**

The site is a largely flat inland site that is crossed by many farm drains to carry water away from the site. These flow in both an east and west direction away from the approximate centre of the site. A drain in the south-western portion of the site is identified in the regional planning documents for its value in terms of flood control drainage.

A Stormwater and Flood Risk Assessment (hydrology report), attached as Appendix J, has deemed the site to have a low to moderate flood risk. The initial report was undertaken early in the design process and as a result of the analysis key buildings and infrastructure were located within the site away from areas subject to flooding risk. The hydrology report concludes that there is very low risk of flooding of the site from the Manawatū River and coast, but that the drains located on the site are important for conveying runoff. Smaller drains were assessed as not likely to be needed to protect the site from flooding once irrigation of the site ceases with the cessation of the dairy farming activity.

It is considered that two key drains on the site are the most important for preventing flooding by carrying water away from the site and that four further drains should be retained on the site to reduce risk of flood. The proposal has been designed taking into account these recommendations. An open wire fence will be installed perpendicular to the drain identified in the regional plan having the value of flood protection and consent is required for this. However, as the fence will be of open wire water will be able to pass through this and the fence will not impede flood waters. The locations of the key drains are shown in Figure 32 below.





Overall, the proposed conversion of the land from agricultural to solar farming is unlikely to result in negative adverse effects to groundwater and stream flow.

The creation of the lot boundaries to give effect to the lease agreement do not alter the stormwater management requirements of the site. The proposed boundaries are to be located around the development area of the solar farm and the boundaries of the residual smaller lots are located around the existing dwellings and buildings that the landowners will retain. The subdivision will not result in the ability to establish additional dwellings and therefore there is no potential for additional dwellings to be established in flood prone areas as a result of the subdivision proposed. This meets the requirements of section 106 of the RMA.

The boundary locations are proposed so that all existing stormwater and wastewater infrastructure and disposal areas are located within them. These lots range in size from 5,340m<sup>2</sup> to 2.07ha and 16ha, which is sufficient area for this to occur. No new driveways or other impermeable areas are required to be created because of the proposed lot boundaries.

## 7.12 Ecological effects

An Ecological Impact Assessment (EIA) is attached in Appendix I. Overall, the ecological report concludes that the level of effects associated with the solar farm is low/very low before mitigation and very low to net gain post mitigation.

As the proposal includes placing solar panel piles and cable trenching through wetlands the proposal requires consent under the NES- F. For consent to be granted under this NES the proposal must demonstrate that the effects management hierarchy has been applied. Compliance with this required hierarchy is specifically discussed in section 8.7.3 below, but the key conclusions from this assessment are included in this overall assessment of effects.

A summary of the key matters in this assessment and conclusion are:

- All ecological values (ecosystems and habitats) present within the proposed site are 'Negligible' to 'Low' based on the highly modified nature of the site and predominant pasture cover with small areas of exotic trees and shrubs.
- The farm drains on the site provide little shelter for habitat and only "Not Threatened" native and introduced fish were found with the eDNA results from the watercourses. Subject to implementation of appropriate erosion and sediment controls, the effects generated by the proposed earthworks (including any sediment laden discharges) on the drains will be very low. No areas of ecological value near the drains are to be disturbed.
- Numerous wetlands that meet the definition of "Natural Inland Wetland" under the NPS-F are scattered across the site. These wetlands are within pasture areas and are actively grazed by cattle. They are generally small in size, have low floral diversity and limited biodiversity value. The ecology report states that as the wetlands are small and scattered, avoidance of all wetland areas is not practicable, and it is proposed to locate panels and cables in them (a total area of 0.79ha of wetlands will have panels located in them). The ecology report states that these wetlands are not habitat for indigenous flora and fauna and their remaining values lies only in the remnant wetland hydrology, but the potential of these wetlands for future restoration must also be considered. The piles and cabling (once appropriately backfilled) has been assessed in the ecological report as not impacting the value or extent of these low value wetlands. With implementation of specific controls during construction (refer Section 7.14), effects on this exotic grass dominated wetlands will be very low. The location of these wetlands is shown in Figure 33 below.



- While earthworks may result in minor changes to overland flow paths, these are not expected to result in changes to the water level range or hydrological function of the wetlands (note however that there will be a change as a result of removing the existing irrigation).
- If no construction mitigation is carried out the effects on the wetlands is assessed in the ecology report as being low to moderate. With the proposed mitigation in place this is assessed in the ecology report as being very low.
- The collection of wetland areas located close to the main drain on the site has been set aside to be protected and enhanced, along with the northern margin of the main drains. This restoration will create a collection of benefits including improved water quality, cooler water temperatures, and enhanced indigenous habitat area, and will establish an ecological corridor on the site. This will result in net positive effects.

**Figure 33: Natural inland wetlands with Infrastructure located in them**



- The bird species observed and recorded using eDNA sampling were all either locally common and either “Introduced” or “Not Threatened”, and the potential effect of the solar panel arrays on any bird species in the area was concluded to be low. A 6-week bat survey carried out on the site did not record any bats utilising the site. As avifauna and bat values are low on the site, the only monitoring condition recommended is to require the recording of any morbidity that occurs as the solar farm creates a low risk to any indigenous species in this location.
- Vegetation clearance associated with the development is limited to pasture vegetation and exotic trees in the shelterbelts and scattered individual trees and will result in a negligible ecological effect (a total area of 0.6ha of exotic trees is proposed to be removed). Planting (as per the landscape and restoration plan) will improve habitat values on the site resulting in an overall net benefit.
- Proposed plant and animal pest control proposed as a condition of consent will provide benefits for existing indigenous fauna and those that are attracted to the site in the future due to the 26ha of planting proposed. which will provide for additional habitat



- A key potential effect of the proposal relates to the placement of solar panels and cabling within a combined area of approximately 0.79ha of scattered wetlands. The ecology report concludes that there will be minimal change in the integrity of the affected wetland habitat compared to the currently observed conditions.
- The EIA assesses that the cessation of irrigation of the site may result in the current managed pasture area reverting to sparse herbaceous cover similar to that observed onsite that was out of reach of the pivot irrigators and that ceasing irrigation may reduce the size of some of the wetland areas. This cannot be considered an adverse effect if it occurs as this change in extent will be a restoration to more of the natural state.
- The solar panels are considered disconnected surfaces which do not impact on the amount of rainfall reaching the wetlands and therefore would not change the wetland hydrology. Within wetland areas, piles supporting solar panels and trenched cables will also not significantly alter the movement of water to, within, or out of the wetlands, particularly given the specific consent conditions proposed for these works.

The ecological report concludes that the site is of very low existing ecological value and the proposal will create very low adverse effects on these values during its construction and operation. This outcome is also the case on the low value natural inland wetlands identified on the site and the planting and restoration proposed will create positive ecological effects for the site and locality.

## 7.13 Construction effects

### 7.13.1 Erosion and sediment

Construction activities, particularly earthworks, have the potential to adversely affect water quality on sites traversed by open water bodies. Potential effects can be created by discharges from earthworks creating increased levels of sediment that flow into the water bodies.

The proposal includes approximately 129,000m<sup>3</sup> of earthworks from various construction activities over the site. The details of these earthworks are outlined in section 4.17 of this report. The risk of potential effects on water quality from construction of the project is considered to be low, as very limited areas of bulk earthworks are required, with the majority of earthworks being for the establishment of internal tracks and trenching of cables. The only area of bulk earthworks is in the northern area of the site for the creation of the main access, operation and maintenance building and the BESS and substation foundation areas.

The release of sediment from the site will be suitably controlled by implementing erosion and sediment controls in accordance with the ESCP attached as Appendix O. As the construction period is 18-months it is proposed that construction occur all year round including through the winter season.

A condition of consent has been proposed to require that the ESCP be finalised and submitted to the Council for approval once the contractor is appointed, but prior to any land disturbance commencing. The ESCP will be submitted by the contractor appointed to do the work and will specify the measures to be implemented on specific areas of the site. Particular care will be taken when earthworks are undertaken near wetlands or drains on the site, and specific requirements for the timing of stabilisation of areas will be proposed. Additional requirements to notify the Council of winter works and increased inspection times are included for the winter works.

With implementation of measures outlined in the draft ESCP, the effects of sediment run off into waterways are deemed to be no more than minor.



In the short term the proposal is expected to create a small level of increased sediment into the drains on the site during construction. However, when solar farm operation commences there will be a reduced volume of discharges to land, earth worked areas will have stabilised, and plantings along the drain margins will be established. As a result, there will be an overall positive effect on the quality of water within the site and leaving the site discharging into the surrounding tributaries.

### **7.13.2 Management of construction effects on wetlands**

Ninety-nine low value wetlands are scattered across the site. The solar panel arrays will be installed across a combined area of approximately 0.79ha of these wetlands (noting these are small wetlands that are scattered and disbursed across the site) with a further 1.15ha of wetlands set aside for restoration and protection. These wetlands are described more fully in the ecology report and section 3.0.

It is not practicable to avoid these wetland areas and while the piles that will support the solar panel arrays and the associated cable trenches will not have a long term impact on the hydrology, extent or value of these wetland areas (as discussed in Section 7.2.5), there is the potential for construction related effects if construction is not carefully managed. The construction effects on the wetlands must be seen against the existing environment in which these wetlands currently exist. That is one of a working farm regularly subject to heavy livestock trampling and machinery such as tractors and quadbikes going through them. Periodic pasture renewal also involves more extreme disturbance such as ploughing or discing. The removal of these activities from the wetlands will also create benefits for them.

The key measures to be used to avoid or minimise effects are:

- Works within and tracking through the wetland areas will be restricted to that necessary to install piles, solar arrays, and cabling.
- Minimise length of tracking through wetland by taking the most direct route.
- Where tracking of machinery is required within wetland areas, bog mats will be laid to prevent vehicle tracking.
- Any trenches in wetlands will be backfilled and re-grassed as soon as practicable.
- Hard packing will be avoided when back filling to avoid effects on the wetland hydrology.

With the proposed erosion and sediment controls in place and the specific controls proposed for construction works in wetlands, the proposal is expected to have only minor or less than minor adverse effects on the wetlands.

### **7.13.3 Dust**

There is the potential for dust to be generated by the exposure and/or stockpiling of soil and other materials during construction activities, with possible effects on the surrounding environment. In particular, the exposure of soil surfaces and movement of construction machinery across these surfaces creates the potential for mobilisation of dust particles and subsequent air quality effects, especially during dry and windy conditions. When considering potential effects, it is important to note that the proposal requires very little bulk earthworks, and that most earthworks will be in small areas spread across the large site.

Methods will be employed to reduce dust risk, such as:

- Staging of works (to reduce the extent of soil exposed).
- Use of a water tanker to dampen exposed surfaces during dry periods.



- Covering of exposed soils and stockpiles.
- Avoidance of work during windy weather conditions.
- Progressive stabilisation and reinstatement of exposed soil.

These measures will be incorporated into the Construction Management Plan (CMP) that will be required as a condition of consent, with the site manager being responsible for monitoring and managing dust on site. It is noted that the requirement to control dust will not apply at the boundaries of the sites created around the existing dwellings of the site as a result of the subdivision that is part of this proposal.

Draft conditions of consent are proposed by the applicant to require that these methods are adopted. These proposed conditions include:

- Approval of a CMP, which will include details of the proposed staging of works and measures to control dust; and
- Dust being managed so as not to cause a nuisance at or beyond the boundary of the site.

It is anticipated that these conditions, and the methods outlined above, will result in dust effects being appropriately managed. In addition, a condition requiring the consent holder to maintain a complaints register will ensure that, in the unlikely event of dust effects arising, these will be noted and addressed.

As such any potential adverse effects in relation to dust will be less than minor.

#### **7.13.4 Contaminated soils**

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS) apply to this piece of land as there are areas of soil on the site that may have been subject to activities that caused soil contamination that is still present on the site. The effects of disturbing this potentially contaminated soil needs to therefore be considered.

A detailed Preliminary Site Investigation (PSI) report has been prepared for the site and is attached as Appendix S. The PSI report identifies several Hazardous Activities and Industries List (HAIL) activities that have previously occurred on the site including the storage of bulk fertiliser, above ground fuel storage tanks and a potential sheep dip. Only the potential historic sheep dip is located within the proposed solar farm development area.

The area around the sheep dip is proposed to be developed for solar panels and underground cables and therefore soil will be disturbed in this area. The proposed activity will not result in soil disturbance that is of a volume that would require consent to be obtained under the NESCS. The potential effects of this disturbance can therefore be adequately avoided by conditions of consent.

The conditions of consent proposed to achieve this certainty require sampling of the contamination level in the area of HAIL activity (if soil disturbance is required in the HAIL area after final design), and to require a management plan to be submitted for the management and disposal of this soil if unsuitably high levels are found.

With these practices in place there will be no more than minor adverse effects created by construction effects being undertaken on the site, including within the area of the previous sheep dip.

The potential HAIL areas that are located within the areas of land that will be retained by the landowners and contained within the proposed rural-residential lots to be created are subject to regulation 8 (4) of the NES-CS. The PSI appended states that the use of the site for a



proposed solar farm and the subdivision proposed is highly unlikely to pose a risk to human health. Based on this expert assessment it is therefore concluded that the proposal does not result in more than minor adverse effects in relation to contaminated soils.

### 7.13.5 Construction traffic

An ITA has been prepared by SLR and is attached as Appendix M. The appended ITA describes the level of traffic that is expected from the construction stage of the project and how it will be managed to avoid effects on the surrounding State Highway and local roading networks. The ITA recommends that a condition of consent require that a Construction Traffic Management Plan (CTMP) be prepared and approved prior to substantial construction commencing to manage the key potential areas for traffic effects.

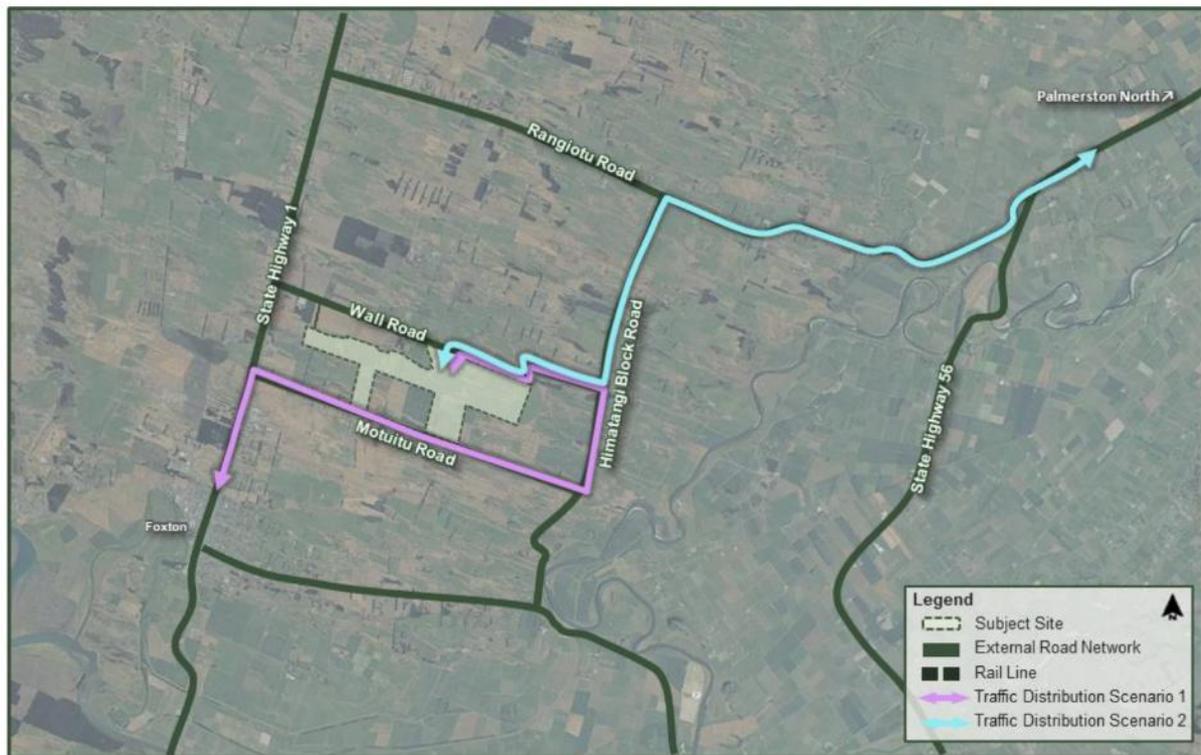
The key requirements for this CTMP and the key conclusions in the ITA are:

- The construction phase of the project is expected to take approximately 18-months and will be the part of the project that generates the highest volume of traffic.
- The peak construction period will be over 5-months.
- Workers will form a key part of the construction traffic and will likely come from either Foxton, Levin or Palmerston North.
- Peak construction hour traffic on SH1 is anticipated to be an 8% increase in the morning peak and a 6% increase in the evening peak. It is notable that the construction traffic peak is not likely to overlap with the evening or morning traffic peaks on the surrounding roads.
- The road network will continue to operate within the acceptable environmental capacities.
- During construction, no construction vehicles will turn right from State Highway 1 into Wall Road.
- Consultation has occurred with NZTA and they concur with the proposed direction of construction traffic to the site.
- The CTMP to be prepared should include, details of the approved construction traffic route including no right hand turn from State Highway 1 unless using the right hand turning bay into Motuiti Road; the preparation of a drivers code of conduct; the preparation of a Traffic Management Diagram; site management requirements; heavy vehicle requirements; noise management; dust management; responsibilities for mitigation management; risk assessments; monitoring and review; incident management, contingency plan; and a communications strategy.

The report concludes that with the required details in the CTMP and these approved and in place, that the construction traffic volume that will occur as a result of constructing this proposal, can be adequately managed within the existing roading network. Figure 34 below shows the likely construction traffic distribution scenarios.



**Figure 34: Construction traffic distribution scenarios**



Any concern regarding safety issues that may be created due to an increased degradation of the roading surface is avoided due to the applicant proposing to repair any damage that occurs to the road surface as a result of the activity.

The recommended CTMP is proposed to be required as a condition of consent to manage the details of traffic management during the peak construction periods. This condition requires the CTMP to be approved by HDC with input from NZTA where traffic relates to the State Highway.

The ITA attached as Appendix M to this report has concluded that the proposed distribution and levels of construction traffic that will occur will not create adverse effects on the roading network and can be appropriately managed with no upgrades required.

#### 7.13.5.1 Road condition survey

The level of construction traffic created by the project will increase heavy truck movements in the area over approximately 18-months. This increase in movements has the potential to increase the wear and tear on the roads and increase the rate at which the pavement quality is degraded. Road maintenance is funded from Council rates, and effects on road surfaces is not an area that needs to be considered or mitigated in RMA consent applications.

However, the applicant has proposed a condition of consent requiring it to:

- Prior to construction commencing, undertake a survey of the surfaces of all roads that will be used during construction.
- At the conclusion of construction, undertake a further survey of the surfaces of all roads that formed the basis of the original survey; and
- Repair any damage to the road surface related to construction traffic to the same or better standard than existed prior to construction activities.



This requirement will avoid adverse safety effects on road users by requiring that any damage that does occur to the road surface as a result of the construction traffic for the proposal is rectified.

#### **7.13.5.2 Site access**

Construction traffic will primarily utilise a new access point constructed off Wall Road (Access A02). Secondary construction access will be from existing access points further west along Wall Road and two existing farm access points on Motuiti Road. The ITA attached as Appendix M assesses these access points against the District Plan requirements. The report concludes that all proposed access points comply with the requirements, particularly in relation to sight distances and separation distances.

#### **7.13.6 Construction noise and vibration**

An Acoustic Assessment for the project has been prepared by SLR and is attached as Appendix R. The acoustic report includes a specific section (5.1) on the construction noise and vibration that will be generated by the project. The assessment found that the project will comply with construction noise and vibration requirements based on the following assumptions and recommendations:

- Construction activities associated with the solar farm project include activities such as creating internal roads, trenching for cables, forming foundations for buildings, piles for the PV arrays and establishing the substation. The loudest of these activities will be the impact piling of the structural supports for the solar arrays.
- Where sensitive noise receivers are located within 150m of the works area, or significant noise generating equipment is to be used in close proximity to each other, noise management techniques may be required. The Construction Management Plan (CMP) will require that construction noise levels are monitored at sensitive receivers and will outline the measures that can be utilised to achieve this compliance if required.
- The loudest construction activity will be the impact piling of the structural support for the solar panel arrays. In the event that two piling rigs operate in close proximity to each other, a setback of 220m for sensitive receivers would be required to comply with the required noise standards. As dwellings are located closer to the site boundaries than this, it is recommended that impact piling is proposed to only occur on Mondays to Fridays between 7.30am and 6pm. Compliance with the noise limits will be able to be achieved with appropriate site management. This will be required as a condition of consent through the construction management plan that is to be approved by Council. (Condition B13).
- General construction works will take place between 7:00am and 7:00pm Monday to Saturday. High noise generating equipment will only operate between 7.30am and 6.00pm. No high noise generating motorised equipment is proposed to operate on the site before 7.30am or on Sundays and public holidays and impact piling will be further limited as described above.

A condition of consent requiring compliance with the construction noise standards is recommended. Achieving compliance with this is likely to require utilising some construction noise mitigation measures, which will be outlined in the required Construction Management Plan. The requirement for this has been included in the draft conditions.

As the standard requirements relating to noise and vibration for long term construction projects can be met it is concluded that the construction noise and vibration effects from the proposal are no more than minor.



## 7.14 Effects on rural character and amenity

The RMA defines amenity values as *“those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes”*.

The objectives and policies of the HDP require that the rural character and amenity of the rural zone is *“enhanced and maintained”* (RURZ-GRZ P01, P10, P11). The HDP also identifies that the key feature of the Foxton Dunefields Precinct is the large parabolic dunefields.

To assess the effect of the proposal on the rural character and amenity of the area, these policies are relevant in determining the level of change or effect that the area can absorb given that the requirement is to “enhance and maintain”. The nature of the existing environment as an active working rural environment as described in section 3 is also relevant. To inform this assessment the summary of the valued natural and physical qualities that are included in the description of the Rural Zone in Part 3 of the HDP has been used to guide this. It is also notable that most of the dunes on the site have been previously removed although some small areas of dunes still exist on the site edges (which will not be modified) and on adjoining sites.

The valued natural and physical qualities of the sites area are described as:

- The rural environment has been, and continues to be, used in many different ways to support and provide for those living in the Horowhenua. Although over time the activities undertaken within the rural environment have changed, evidence of historic activities including the development of the early agricultural and pioneer industries, such as flax and timber milling are still present.
- The rural environment currently supports a diversity of land based primary production activities, particularly dry stock, dairying, cropping, horticulture, exotic forestry and small niche primary production land uses. Infrastructural and other industrial-type activities also occur in the rural environment, such as network utility facilities, gravel extraction and quarrying/aggregate processing. These activities are critical to the functioning of the district. Providing for a range of land use activities in the Rural Zone is also important for ensuring diversity and resilience to the rural economy by providing additional employment and economic opportunities.

It is key in the assessment of the effects of this proposal on rural character and amenity that:

- The rural landscape and character of the area is shaped by the interaction between human activities and the natural and physical resources in the area.
- The rural environment has a rural character which includes a high degree of open space with vegetation predominating over built elements, productive working landscapes, including the potential to create nuisance effects such as noise, odour and dust, the occasional reasonably large utilitarian building associated with primary production.

The above description acknowledges that, in this District, the Rural Zone is valued for its ability to provide a wide range of necessary activities to support and provide for those living in Horowhenua. It is further acknowledged that provision of such facilities and land uses may create localised amenity effects. Electricity is essential for the local and wider community, and solar farms by their nature must be located on large, flat sites. They must therefore be most often located in rural zones. Due to the growing regional and national significance of renewable energy generation, it is anticipated that solar farms will soon become a common feature within the wider low country rural environments, as they rely on the solar resource in the area and needing the large flat land of the rural area to produce energy.



In assessing the overall effect of the proposal on rural character, the assessment must be guided by the key relevant objective for the zone being to “enhance and maintain” the rural character and that the expert landscape report concludes that the proposal has an overall long term, moderate (more than minor) adverse effect on the landscape of the area and the proposal introduces a built infrastructural landscape of a large scale into the area. These effects are acknowledged, however based on the proposed mitigation these effects have been assessed in the attached landscape assessment to be acceptable.

The description of the rural zone in the District Plan notes that the rural landscape and character is shaped by the interaction between human activities and the natural and physical resources in the area and that these activities are expected to change over time. Significant change on a large scale has occurred in the past as the productive use of the area responds to changing community and regional needs and demands. The change in land use resulting from this proposal away from the current dairy use to something else, cannot therefore be considered an unexpected or necessarily an adverse change. The HDP acknowledges these changes are expected. A previous example of this is how the use of the site has changed from native vegetation to pasture, to forestry and then to dairy through time. The next step in the change process is the establishment of sustainable electricity generation.

It is acknowledged that the change proposed by this application introduces more infrastructural character elements than other usual change in rural land use of the site and that the landscape effect of this change has been assessed to be more than minor. The direction given by the District Plan that rural land use will change over time to provide for the changing needs of the community and the priorities given in higher order policy documents to provide for sustainable energy projects, allows an overall assessment that these changes to the rural amenity appreciated at this locality, if mitigated as proposed, may be acceptable and appropriate.

The local effects of the solar farm on the site will diminish through time as the construction activity ceases, and the mitigation planting starts to mature. The solar farm and the specific characteristics of its operation will begin to form part of the landscape and character of the area. Other specific aspects of the solar farm that may adversely impact on rural amenity are discussed below. The ability for sheep farming to continue on the site, under, between and around the panels will maintain a certain level of traditional farming character to the site.

The solar farm will result in a background level of ambient noise that will comply with the District Plan noise limits, except for when noise is added by the proposed BESS system at the boundary of 371 Wall Road. (Note that the dwellings that will exist in separate titles as a result of the subdivision currently lie within the subject site so do not technically infringe the noise standards). The majority of noise generated therefore falls within the permitted baseline of effects. Whilst the BESS may result in a minor exceedance of these limits at the boundary of one property, it is noted that the relevant site is a commercial dairy farm activity and does not contain a dwelling.

The majority of the proposed boundary shelter belt planting falls within the permitted level of effects. Some planting is however proposed closer to the boundary and higher than permitted but has been proposed for particular landscape mitigation reasons.

The project also only creates a low level of operational traffic, no adverse glint and glare effects and positive ecological effects. These components do not therefore contribute to a loss of rural character or amenity.

The project will create up to 250 vehicle movements per day in the 18-month construction period. However, the project will not introduce a volume or nature of traffic considerably out of character for the location, even though this traffic does create a level of effect that must be managed. This minimal effect is due to the site being located almost adjacent to SH1, which



carries a significant volume of traffic, and being on roads determined to be of a suitable carrying capacity for the proposal.

Some specific adverse effects will be created on adjoining property owners in the short term as the project is constructed and bedded into the site and its surrounds. The landscape assessment report appended to the application concludes that the visual and landscape effects of the proposal reduce to a low-moderate to moderate level in the long term as the boundary planting around the site grows to screen the majority of open views to the site.

The subdivision that forms part of this proposal due to the lease agreement results in the four existing dwellings on the Motuiti Farms block being located in small titles of between 0.5ha and 16ha. While the creation of small lots is not generally in accordance with the character effects that the objectives and policies seek to achieve, the proposed boundaries do not create any additional effects, as the dwellings already exist. The solar farm lease that results in the subdivision will result in these existing houses being located on separate rural-residential titles (one of 16ha) but does not create any additional effects on rural amenity.

Taking into account the expert reports prepared on each relevant component of amenity values for the area, it is concluded that the rural amenity effects of the proposal have been avoided as far as practical in the design, and remedied or mitigated as far as practical by the proposed landscape, riparian and restoration planting, and other proposed conditions of consent, and are therefore acceptable in the context of this environment.

## 7.15 Subdivision

Subdivision itself does not create adverse effects on land or people but it is the change in land use enabled by the creation of new titles that potentially creates adverse effects.

In the case of this application, the proposed boundaries are generally required to be established due to the proposed land use activity of the solar farm and the agreements reached with the landowners to enable this. The lots are proposed to reflect the proposed land use and the existing rural-residential land use areas. The location of the proposed boundaries maintain the existing access arrangements to the existing dwellings.

The subdivision of the Moutiti Farms property will result in:

- The majority of the solar farm being within one large 'balance' title of ~336ha (Lot 3).
- A utility lot created around the substation of ~1 ha (Lot 6).
- Four rural residential titles of between 0.5ha and 16ha created around the existing dwellings. These are created by changing the boundaries of two access lots (approx. 0.9ha each) and one land locked title (Lots 1, 2, 4 & 5).

The subdivision of the Seymour property will result in:

- One title containing the solar farm (Lot 7)
- A 'balance' title containing land to be retained by the landowner (Lot 8).

The existing title boundaries will be moved so that they are located around the landowner retention areas, which contain the existing dwellings, accessory buildings, farm buildings and supporting on-site infrastructure. The adjustment of these boundaries will separate the dwellings currently located on the same titles into separate lots, with one additional title (excluding the utility lot) being created so that all the existing dwellings are located on their own titles.

As a result of these changes the large 'balance' title created (Lot 3 -336ha) for the solar farm will have no dwellings.



As a result of the proposed subdivision there will be one additional title created, which will be a rural-residential site containing a dwelling, as well as the additional title for the utility lot. While the boundaries themselves do not create effects, the smaller separate titles will enable the land areas on which the dwellings exist to be sold separately from the adjoining farmland and will enable four owners to move into the area that will not be directly involved in production activities. These lots moving into separate ownership has the potential to create reverse sensitivity effects on the solar farm and any future productive use of the farm area should the land revert to this use in the future.

The utility lot is created around the substation and does not create any additional effects above those created by the substation itself. The separate lot for the substation enables efficient ownership and management of this infrastructure into the future.

The ability for the balance lot containing the solar farm to be able to establish three further dwellings under the current District Plan rules in the future, will potentially result in the small loss of future productive land noting that approximately 30% of the farm is LUC 3 soils. However, there are numerous possible sites where future dwellings could be located that are not on LUC3 land and if this proposed development should occur in the future, it will be assessed against the development rules and policies at that time.

The effects of the subdivision are therefore the reverse sensitivity effects created by the existing future dwellings being located within four small separate lots that could introduce reverse sensitivity effects on the solar farm and future productive use of the site.

These effects are not considered to be significant and enable the existing landowners to retain the land and dwellings that they currently own outside of the solar farm development area. Not creating the additional rural-residential lot would result in there being two dwellings on one small title, which is also a common occurrence in the rural zone.

Overall, the subdivision as proposed creates additional effects over and above the solar farm proposal, but these are not significant in the context of the proposal.

## 7.16 Effects Conclusion

The proposed solar farm is nationally significant infrastructure, and its adverse effects have, through the location, design and recommended conditions of consent, been avoided, remedied or mitigated to the best extent practicable.

The solar farm will provide a significant and ongoing contribution towards electricity supply and resilience in New Zealand, through a decrease in the reliance of coal or new hydroelectricity generation and responding to the increased energy needs of New Zealanders. It will contribute towards diversifying New Zealand's electricity supply through the utilisation of a renewable resource (sunlight).

As expected, the proposal will create some adverse local effects. Each of these potentially relevant effects has been assessed by a qualified expert. The reports by these experts are appended to this report and have been summarised in this report. Table 13 below shows the overall level of effects assessed to result from the proposal based on the conclusions of the experts before and after mitigation measures and summarises the key mitigation measures proposed.

**Table 13: Summary of environmental effects**

Environmental Effect	Pre-mitigation level of effect	Mitigation	Post Mitigation Effect Summary
Ecological effects on vegetation	Very low		Very Low



Environmental Effect	Pre-mitigation level of effect	Mitigation	Post Mitigation Effect Summary
Ecological effects on watercourses including wetlands	Low or very low	ESCP and construction techniques for works in wetlands, planting of drain margins, wetland restoration area.	Positive
Ecological effects on aquatic fauna	Very Low		Very Low
Ecological effects on terrestrial fauna	Very low		Very Low
Glint and glare effects	Minor theoretical glare	Boundary planting as proposed in mitigation and enhancement plans.	Negligible
Landscape and visual effects	Visual effects moderate-moderate high  Landscape effects moderate-moderate high.	Setbacks form roads and boundaries. Boundary and internal planting.	Visual effects low-moderate to moderate  Landscape effects moderate
Effects on highly productive land and soils	Less than minor		Less than minor Not long term
Effects on contaminated soils		Management plan if sampling shows required.	No effect
Effects on natural hazards and flooding			Low
Cultural effects			Appropriately addressed
Archaeological effects			No known effects
Construction traffic safety and efficiency effects			Low
Construction noise and vibration effects	Reasonable (less than minor in RMA terms)	CMP to detail mitigations for dwellings within 150m of site.	Reasonable (less than minor in RMA terms)
Construction related effects - dust		CMP	No more than minor
Operational traffic effects			No effect
Operational noise effects	Minor	3m noise barrier if required for BESS in stage 2.	Less than minor
Effects on rural character and amenity	Moderate-moderate-high	Screen planting	Low-moderate



Environmental Effect	Pre-mitigation level of effect	Mitigation	Post Mitigation Effect Summary
		Noise reduction measures and acoustic barrier Construction Traffic Management Plan	
Effects of hazardous substances		Emergency Response Plan	No more than minor.
Reverse sensitivity			Minor

When assessing the overall effects of the proposal, the Regional Policy Statement (RPS) is used as a guide. The RPS requires Regional Council and Territorial Authorities when assessing proposals for new infrastructure of regional or national importance to:

- allow minor adverse effects (EIT-P3(2))
- avoid, remedy or mitigate more than minor adverse effects (EIT-P3(3))
- take into account the need for the infrastructure (EIT-P3(3 a))
- take into account the functional and technical constraints that require the infrastructure to be located as proposed (EIT-P3(3b)) and
- whether there are reasonable alternative locations (EIT-P3(3c))

A project of this scale will have local environmental effects. However, due to the careful selection of this site, and based on the technical assessments undertaken, the only residual effects considered to be adverse and that are required to be managed are those that relate to noise, landscape and visual effects.

The project has been designed to locate noise generating components of the solar farm well inside the site and an acoustic barrier is proposed for the BESS facility.

Due to the low value, small size and scattered nature of the wetlands, combined with the careful design and construction methodology, the overall effects on the wetlands will be less than minor and biodiversity from both wetland and boundary planting will be enhanced.

The landscape report has concluded that the overall effect on landscape and visual effects is low-moderate to moderate (more than minor). These effects of the proposal are unavoidable as the large-scale change in land use of the site must inevitably change its visual qualities. It is notable that this change does not result in any adverse effect in terms of glint and glare, and targeted planting of boundaries, drains and wetland areas internal to the site is proposed to assist in minimising the overall effects. The landscape effects of the proposal have therefore been managed to the extent practicable and do not present a barrier to the application being approved.

The visual changes that do occur, will over time reduce in effect as boundary planting establishes and people become used to the solar farm forming part of the landscape. The solar farm will integrate into the landscape and people's expectations of the rural environment.

The subdivision that occurs because of the lease agreements does not result in any additional adverse effects other than the potential for reverse sensitivity effects due to rural residential landowners occupying the site and one additional lot for this purpose being created.



As discussed elsewhere in this report, the generation of renewable electricity is a matter of national significance. A solar farm of this scale must be located on a large flat site adjacent to the National Electricity Grid. These technical constraints require the proposal to be located in the rural environment, and therefore the landscape and visual effects of the proposal cannot be avoided or mitigated other than through landscaping. This is proposed in a manner considered to be the most suitable for this environment. Taking into account these technical constraints, that there is no reasonable alternative that will not generate similar landscape effects, in the context of the national significance of the proposal, the level of effects arising are considered to have been managed to the best extent practicable and are not inappropriate and acceptable.

The proposal is a sustainable electricity generation project of regional and national significance that does create some local adverse effects in terms of landscape, noise and construction traffic. It also creates local positive effects in terms of ecology, water quality and the generation of significant electricity by sustainable means.

Overall, the careful site selection and design of the proposal results in no local effects that are not avoided or mitigated as far as practicable. The residual landscape and visual effects are not of a level that create a barrier to this consent being approved.

## 8.0 Statutory assessment

The criteria the Panel must apply in making its decision under the FTA are explained in Section 2 above.

Under section 104(1) of the RMA, the Panel must have regard to the matters set out in subsections (1)(a), (ab), (b) and (c). These matters are addressed below, and all are subject to Part 2.

### 8.1 Section 104(1)(a) (Actual and potential effects)

Section 104(1)(a) requires the Panel to have regard to “any actual and potential effects on the environment of allowing the proposed activity of construction, operation and decommissioning of a solar farm as described in this application document.

As assessed in Section 7.0 of this report above, all actual and potential effects of the proposed activity on the environment have been avoided, remedied or mitigated as best as practicable and are reasonable for the proposed activity. The activity also creates positive effects for the site and wider environment due to being a significant sustainable energy generation project.

### 8.2 Section 104(1)(ab) (Offsetting or compensation)

Section 104(1)(ab) requires the Panel to consider “any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity”.

In this case, the proposed activity does not require specific offsetting or environmental compensation measures to ensure positive effects on the environment. The proposal has been designed in a manner to avoid, remedy or mitigate adverse effects that are created as far as practicable. The application documents outline how this has been proposed and no offsetting is required.

The extensive suite of proposed conditions of consent included in Appendix T to this application provide further details on how the proposed avoidance, remediation or mitigation of potential effects will be effectively managed.



### 8.3 Section 104(1)(b) (Statutory documents)

Section 104(1)(b) requires the Panel to have regard to any relevant provisions of the following:

- a national environmental standard;
- other regulations;
- a national policy statement;
- a regional policy statement or proposed regional policy statement; and
- a plan or proposed plan.

An assessment of the relevant statutory documents that corresponds with the scale and significance of the effects that the proposed activity may have on the environment is provided below.

### 8.4 Section 104(1)(c) (Other matters)

In addition to the matters of regard covered under subsections (1)(a), (ab) and (b), subsection (1)(c) states that consideration must be given to "any other matters that the consent authority considers relevant and reasonably necessary to determine the application."

The Rangitāne o Manawatū Environmental Management Plan and the Rangitāne o Manawatū Claims Settlement Act 2016 are considered relevant matters under this section. These are discussed in section 9.2

### 8.5 National Policy Statement for Renewable Electricity Generation 2011

The National Policy Statement for Renewable Electricity Generation 2011 (with amendments coming into force in January 2026) (NPS-REG) recognises the national significance of renewable electricity generation activities and the benefits that it provides. The relevant provisions of the NPS-REG have been strengthened to ensure greater clarity and clearer direction for decision-makers.

Renewable electricity generation (REG) activities are defined in the amended NPS-REG as:

*include[ing] the full range of activities required for REG, including small-scale and community-scale REG, including:*

- (a) the investigation, construction, operation, monitoring, maintenance, upgrade, repowering, decommissioning and removal of REG assets;*
- (b) the storage of generated electricity, whether connected to REG, the electricity network or directly to a site or community;*
- (c) the conveyance of generated electricity to electricity networks or directly to end users;*
- (d) all ancillary REG activities; but*
- (e) does not include electricity network assets as defined by the National Policy Statement for Electricity Transmission 2008 and its amendments.*

Ancillary renewable electricity generation activities are defined as:

*an activity that supports and is subsidiary to a REG activity, including but not limited to:*



- (a) vegetation clearance and tree trimming;*
- (b) earthworks and land disturbance;*
- (c) construction, maintenance, repair and upgrading of access tracks, bridges and culverts; and*
- (d) construction, maintenance, repair and upgrading of power supply and telecommunication cables and devices.*

Accordingly, the NPS-REG applies to all activities associated with the project, including its construction, operation and management as well as the associated activities such as vegetation clearance and earthworks.

The objective of the NPS-REG is to

- (a) ensure the national, regional and local benefits of REG are provided for;*
- (b) enable REG capacity and output to significantly increase;*
- (c) enable REG to support the social, economic and cultural wellbeing of people and communities, and for their health and safety;*
- (d) enable REG to provide greater security of electricity supply and resilience to supply disruptions to all people and communities;*
- (e) enable REG to support achieving New Zealand's emission reduction target and implementation of the emissions reduction plan under the Climate Change Response Act 2002; and ensure REG is developed and operated in a safe, efficient and effective manner while managing the adverse effects from or on REG activities.*

For the reasons discussed below, the Project strongly aligns with the NPS-REG as well as its recognition of the regional and national significance of renewable electricity generation activities and provision for and enabling of their associated benefits.

#### National, regional and local benefits (Policy A)

Decision makers on REG projects must recognise and provide for the national significance and national, regional and local benefits of REG (Policy A (1)) and recognise the benefits of REG including those listed in Policy A (2)(a)-(h).

As a renewable electricity generation project that will add approximately 345GWh of electricity to the National Grid each year, the proposed Foxton solar farm is of national significance with national, regional, and local benefits. These benefits include:

- Avoiding greenhouse gas emissions<sup>51</sup> and reducing reliance on imported and domestic coal and gas<sup>52</sup> by offsetting use of finite thermal generation with renewable energy<sup>53</sup>
- Contributing to security, resilience, and independence of electricity supply including by increasing the diversity of energy generation type and location<sup>54</sup> and offsetting the use of hydro and thermal generation allowing that more flexible generation to be retained for peaking and firming during times with low solar and wind availability

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<sup>51</sup> Policy A(2)(a) of the NPS-REG.

<sup>52</sup> Policy A(2)(e) of the NPS-REG.

<sup>53</sup> Policy A(2)(d) of the NPS-REG.

<sup>54</sup> Policy A(2)(b) of the NPS-REG.



- Reducing electricity losses by locating the solar farm adjacent to the National Grid and close to major sources of electricity demand in Palmerston North and Wellington<sup>55</sup>
- Utilising a form of REG with low on-going adverse effects on the environment which are temporary and reversible – the solar farm and its infrastructure (excluding the new substation) can be removed at end-of-life.<sup>56</sup>
- Economic and employment benefits for the Horowhenua District, Manawatū-Whanganui Region and New Zealand through the construction and operation periods.<sup>57</sup>

Other positive effects of the proposed solar farm are discussed in [SECTION 7.2], however in summary, the project supports Policy A.

#### Cumulative gains and losses of REG capacity (Policy B)

Policy B (as amended) requires decision-makers to consider cumulative gains and losses of REG capacity by recognising and providing for the importance of *"enabling cumulative increases of REG capacity and output at any scale and any location, including small-scale and community-scale REG assets and activities"* and *"avoiding, where practicable, any overall or cumulative losses of REG capacity and output from a region or district or existing REG assets and activities."*<sup>58</sup> It also requires decision-makers to *"have regard to any potential and reasonably foreseeable reduction in the utilisation of renewable electricity resources from inappropriate subdivision, use and development."*<sup>59</sup>

The Project is consistent with Policy B in helping to achieve the Government's target of doubling renewable electricity by 2050, which requires significant investment in REG activities. In particular, the project will contribute to achieving this by allowing for a decrease in the reliance on coal or new hydroelectricity generation and helping to diversify New Zealand's energy supply. Once operational, the solar farm could supply electricity to 47,000 New Zealand homes annually.

#### Functional and operational need (Policy C)

The recent amendments to the NPS-REG now require that *"decision-makers [must] recognise and provide for REG assets and activities that have an operational need or functional need for renewable electricity generation activities to be in particular locations and environments."*<sup>60</sup> As set out in Policy C(2), that "operational need or functional need" includes (but is not limited to) the need to:

- *Be located where the renewable electricity resource is located and available at a viable scale and quality to sustain the REG activity.*  
The solar resource is located across New Zealand, with some areas receiving higher sunshine hours than others.
- *Be accessible and to connect to electricity networks and be nearby to electricity demand*  
For a grid connected solar farm, the site generally needs to be close to an existing

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<sup>55</sup> Policy A(2)(g) of the NPS-REG.

<sup>56</sup> Policy A(2)(f) of the NPS-REG.

<sup>57</sup> Policy A(2)(c) of the NPS-REG.

<sup>58</sup> Policy B(1) of the NPS-REG.

<sup>59</sup> Policy B(2) of the NPS-REG.

<sup>60</sup> Policy C(1) of the NPS-REG.



Transpower high voltage (220kV or 110kV) transmission line to avoid the significant costs and potential additional adverse effects associated with construction of new transmission. Further, the existing transmission infrastructure needs to have capacity to take the additional electricity load.

- *Have sufficient and accessible land available to support all associated current and reasonably foreseeable future REG activities at that particular location*

A solar farm connecting to a 220kV line and which requires construction of a new substation typically needs at least 400ha of developable land. The land needs to be predominantly flat (to reduce shading) with minimal non-developable areas, landowners need to be interested in the opportunity to develop their land into a solar development, and for efficiency, the site needs to split across no more than a few landholdings.

Importantly, Policy C(3) confirms that an assessment of alternative sites is not required to demonstrate that an operational or functional need exists.

The site selection process for the proposed solar farm utilised solar resource availability, GIS mapping, transmission lines capacity, and slope data to generate a list of potential sites. Owners of those potential sites were approached and further due diligence conducted on each property that showed interest.

The proposed site:

- Is in an area of sufficient solar resource
- Is adjacent to a 220kV transmission line with capacity to accept the generated electricity
- Is of sufficient size to be economically viable with landowners interested in the opportunity and willing to sign up to lease options
- Is flat (especially compared to neighbouring properties), with limited non-developable areas (including limited existing vegetation), good access from both Wall Road and Motuiti Road, and easy access from State Highway 1,
- Has suitable geotechnical and flooding risk characteristics

The site selection process and summary of the required characteristics demonstrates that there is a functional need for the solar farm proposal to be established on this site. A large flat site with proximity to the national grid lines with capacity to transmit the electricity is essential, is provided by this site and is not commonly available.

#### Recognising and providing for Māori interests (Policy E)

Policy E (new since the 2025 amendments) seeks to recognise and provide for Māori interests by requiring decision-makers to "*tak[e] into account the outcome of any engagement with tangata whenua on a relevant resource consent, notice of requirement or private plan change*" and "*recognis[e] the opportunities tangata whenua may have in developing and operating their own REG activities at any scale or in partnership*".<sup>61</sup> It also requires local authorities to "*provid[e] opportunities for tangata whenua involvement where REG assets and activities may affect a site of significance or issue of cultural significance to Māori*" and "*operat[e] in a way that is consistent with any relevant iwi participation legislation or Mana Whakahono ā Rohe*".<sup>62</sup>

<sup>61</sup> Policy E(1)(a)-(b) of the NPS-REG.

<sup>62</sup> Policy E(1)(c) of the NPS-REG.



As set out in Section 12, Rangitāne o Manawatū and Muaūpoko have provided their support, in writing, for three hapū of Ngāti Raukawa ki te Tonga (Ngāti Rakau, Ngāti Te Au, and Ngāti Turanga – together Ngā Hapū o Himatangi) to take the lead in respect of the project. Ngā Hapū o Himatangi, Rangitāne o Manawatū and Muaūpoko have provided written support.

#### Enabling and managing the effects of REG assets and activities on the environment (Policy F)

Policy F sets out requirements for managing effects of REG on the environment.

Policy F (1) requires that REG assets and activities are enabled in all locations and environments. Where assets and activities are located in or are likely to have adverse effects on environments and values provided for in section 6 of the Act, the provisions of the NPS-REG must be read alongside other relevant national direction. The site is not located in an area where any section 6 matters apply and must be considered other than potentially the preservation of the natural character of wetlands and rivers and their margins.

Consideration of the National Policy Statement for Freshwater Management is provided below.

In all other environments, adverse effects are required to be, where practicable, avoided, remedied, or mitigated with regard given to offsetting and compensation of any residual adverse effects. As outlined in section 7 effects of the proposed solar farm can be appropriately avoided, remedied or mitigated with no offsetting or compensation required. The project has been designed and located such that local impacts are not significant, recognising some adverse effects are created on local landscape and amenity values. While an area of wetland and indigenous planting is proposed in the middle of the site, this is not offsetting or compensation.

#### Policies D, G, and H

These policies are aimed at existing REG assets and activities and are therefore not relevant to this project except to the extent that they will apply once the project is constructed.

#### **Summary**

The NPS-REG seeks to enable an increase in REG capacity and output while managing potential adverse effects. The proposed solar farm will provide national, regional and local benefits while managing adverse effects and is therefore consistent with the NPS-REG.

## **8.6 National Policy Statement for Highly Productive Land 2022**

The National Policy Statement for Highly Productive Land (NPS-HPL) came into force in October 2022 and was amended in August 2024 with further amendments coming into force in January 2026. Its objective is to ensure that "*Highly productive land is protected for use in land-based primary production, both now and for future generations.*"

As the operative Regional Policy Statement for the Manawatū-Whanganui Region does not yet contain maps of highly productive land in the region, clause 3.5(7) is relevant for determining whether the site contains highly productive soils for the purposes of the NPS-HPL:

*"Until a regional policy statement containing maps of highly productive land in the region is operative, each relevant territorial authority and consent authority must apply this National Policy Statement as if references to highly productive land were references to land that:*

(a) is:



- (i) *zoned general rural or rural production at the commencement date; and*
  - (ii) *LUC 1, 2 or 3; but*
- (b) *is not:*
- (i) *identified for future urban development at the commencement date; or*
  - (ii) *subject to a council initiated, or an adopted, notified plan change to rezone it from general rural or rural production to urban or rural lifestyle at the commencement date; or*
  - (iii) *subject to a resource consent application for subdivision, use or development on LUC 3 land for any activity other than rural lifestyle, where that consent has been lodged at or after the commencement date”*

The site is zoned general rural and contains isolated areas of LUC 3 soils as shown in Figure 34 below.

The site is subject to a resource consent application for subdivision, use and development (this application) for an activity that is not rural lifestyle. (Other than the creation of the Rural-Residential titles around the existing dwellings).

The subdivision aspects of this application (outlined in section 4.19) are necessary to enable registration of a lease in excess of 35 years. The proposed scheme plan in Figure 34 below, and Appendix G, contains eight proposed lots as described in Table 14 below. Lots 3-8 either do not contain LUC1, 2 or 3 soils or are clearly excluded from the definition of highly productive land by subclause 3.5(7)(b)(iii) as outlined above.

Proposed Lots 1 and 2 are created around existing dwellings. While the subdivision of these parcels is considered necessary for the purposes of developing the solar farm, it could also be considered subdivision for a rural lifestyle activity. In that case, the LUC Class 3 soils within those proposed lots would be considered highly productive land. From the overlay plan in Figure 34 it does not appear that these proposed lots contain any LUC 3 soils except for what is contained within the existing access ways to these lots. Therefor on a conservative basis, an assessment against the provisions of the NPS-HPL is provided below.

#### Rural lifestyle subdivision

Policy 7 may be relevant for consideration of the subdivision of Lots 1 and 2. Policy 7 states:

*“The subdivision of highly productive land is avoided, except as provided in this National Policy Statement.”*

Clause 3.8 then gives clear direction in terms of the outcomes sought. This clause states:

*“(1) Territorial authorities must avoid the subdivision of highly productive land unless one of the following applies to the subdivision, and the measures in subclause (2) are applied:*

- (a) *the applicant demonstrates that the proposed lots will retain the overall productive capacity of the subject land over the long term...*
- (c) *the subdivision is for specified infrastructure... and there is a functional or operational need for the subdivision*



- (2) Territorial authorities must take measures to ensure that any subdivision of highly productive land:
- (a) avoids if possible, or otherwise mitigates, any potential cumulative loss of the availability and productive capacity of highly productive land in their district; and
  - (b) avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on surrounding land-based primary production activities.”

The area of highly productive land (LUC Class 3 soils) on proposed Lots 1 and 2 is limited to the access ways that connect the lots to Motuiti Road. This area is a metalled driveway used to access the existing dwellings. The proposed subdivision will therefore not impact the overall productive capacity of the land (clause 3.8(1)(a)) nor will it result in any cumulative loss of the availability or productive capacity of highly productive land in the district (as this land is already unavailable for productive use).

Therefore, the requirement to avoid subdivision does not apply to proposed Lots 1 and 2 and the project is consistent with the NPS-HPL.

**Figure 34: Location of Class 3 soil in relation to the proposal**

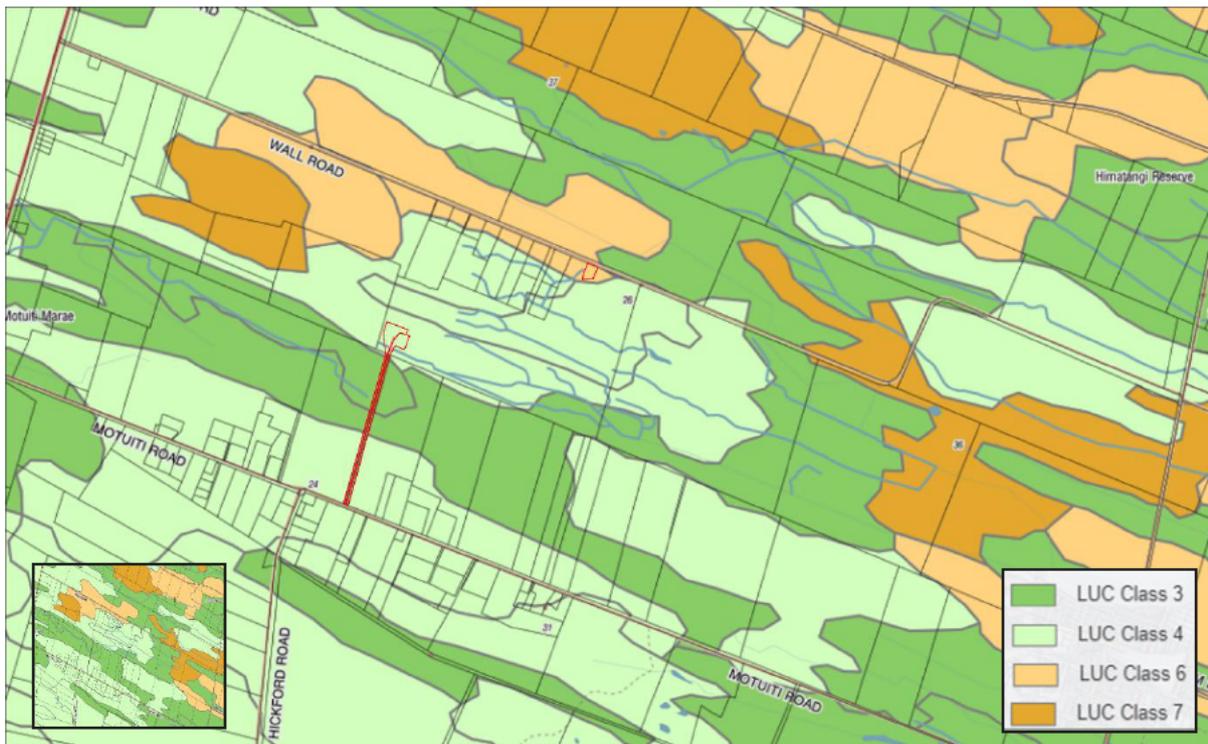
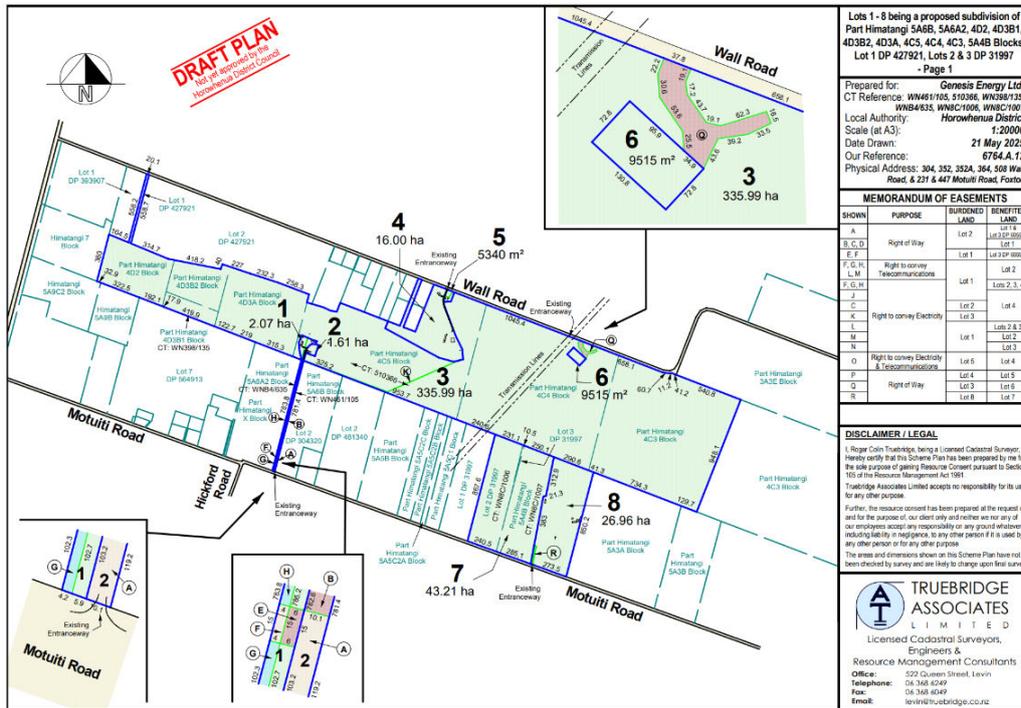


Figure 35: Proposed Subdivision Boundaries



Lots 1-8 being a proposed subdivision of Part Himatangi 5A6B, 5A6A2, 4D2, 4D3B1, 4D3B2, 4D3A, 4C5, 4C4, 4C3, 5A4B Blocks, Lot 1 DP 427921, Lots 2 & 3 DP 31997 - Page 1

Prepared for: Genesis Energy Ltd.  
CT Reference: WNB41105, 610398, WNB41125, WNB4433, WNB41006, WNB41007  
Local Authority: Horowhenua District  
Scale (at A3): 1:20000  
Date Drawn: 21 May 2025  
Our Reference: 6764.A.12  
Physical Address: 304, 352, 352A, 364, 508 Wall Road, 6 227 & 447 Motuiti Road, Foxton

MEMORANDUM OF EASEMENTS			
SHOWN	PURPOSE	BURDENED LAND	BENEFITED LAND
A		Lot 1	Lot 1
B, C, D	Right of Way	Lot 2	Lot 2 (DP 30993)
E, F	Right of Way	Lot 1	Lot 3 (DP 31997)
F, G, H, I, M	Right to convey Telecommunications	Lot 2	Lot 2
J, K	Right to convey Electricity	Lot 2	Lots 2, 3, 4
L		Lot 3	Lot 4
N		Lot 1	Lots 2 & 3
O	Right to convey Electricity & Telecommunications	Lot 5	Lot 4
P		Lot 4	Lot 5
Q	Right of Way	Lot 3	Lot 6
R		Lot 8	Lot 7

**DISCLAIMER / LEGAL**  
I Roger Colin Truebridge, being a Licensed Cadastral Surveyor, hereby certify that this Scheme Plan has been prepared by me for the sole purpose of gaining Resource Consent pursuant to Section 165 of the Resource Management Act 1991.  
Truebridge Associates Limited accepts no responsibility for its use for any other purpose.  
Further, the resource consent has been prepared at the request of and for the purpose of our client only and neither we nor any of our employees accept any responsibility or any ground whatsoever, including liability in negligence, to any other person if it is used by any other person or for any other purpose.  
The areas and dimensions shown on this Scheme Plan have not been checked by survey and are likely to change upon final survey.

**TRUEBRIDGE ASSOCIATES LIMITED**  
Licensed Cadastral Surveyors, Engineers & Resource Management Consultants  
Office: 577 Queen Street, Levin  
Telephone: 04 368 4249  
Fax: 04 368 4049  
Email: lev@truebridge.co.nz



**Table 14: Proposed Lots and Soil Class**

LOT	PURPOSE	CONTAINS LUC 1, 2 OR 3 SOILS?	CONTAINS HIGHLY PRODUCTIVE SOILS
Lot 1	Retained land with existing dwelling and associated structures	Yes	Potentially
Lot 2	Retained land with existing dwelling and associated structures	Yes	Potentially
Lot 3	Solar farm lease area	Yes	No – excluded under 3.5(7)(b)(iii)
Lot 4	Retained land including farm buildings which will remain in rural use	No	No – excluded under 3.5(7)(b)(iii)
Lot 5	Retained land with existing dwelling and associated structures	No	No
Lot 6	Substation	No	Yes
Lot 7	Solar farm lease area	Yes	No – excluded under 3.5(7)(b)(iii)
Lot 8	Retained land including farm buildings which will remain in rural use	Yes	No – excluded under 3.5(7)(b)(iii)

## 8.7 National Policy Statement for Freshwater Management 2020

The National Policy Statement for Freshwater Management 2020 (amended October 2024 with further amendments taking effect from January 2026) provides guidance for local authorities on how to manage freshwater. The objective of the NPS-FM is

*“...to ensure that natural and physical resources are managed in a way that prioritises:*

- (a) first, the health and well-being of water bodies and freshwater ecosystems*
- (b) second, the health needs of people (such as drinking water)*
- (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future”*

Policy 6 requires:

*“There is no further loss of extent of natural inland wetlands, that their values are protected, and their restoration is promoted”*

The NPS- FM requires that any modification to wetlands proposed, must have a functional need to do so. Functional need is specifically defined in the NPS – FM. The functional need for the modification of wetlands to occur is discussed in section 8.7.2 below.



The ecological report attached as Appendix I concludes that the proposal creates positive effects on the health of adjoining water bodies and that the values of the wetlands to be modified are very low. The proposal results in minimal change to these values and an overall positive effect on water bodies occurs through:

- The planting of drain margins and a large wetland area through the site, which will cool water temperatures and reduce sediment entering the drains.
- The removal of dairy stock and significant effluent discharged to the site. This is expected to significantly decrease nitrogen, phosphorus, e. coli and sediment discharges to the receiving environment and therefore improve the quality of water in downstream water bodies noting that the drains on the site ultimately discharge to the Manawatū River. Any future conjoint grazing of sheep on the site will not reintroduce the same level of irrigation or discharges to the site.
- The proposal is also designed so that no loss of natural inland wetland extent occurs. Internal tracks and buildings have been purposefully located away from wetlands and construction methods proposed to specifically minimise risk of sediments for the wetlands. Solar panels and cabling will occur through the natural inland wetlands, but this will not result in the loss of their extent.
- The ecological report attached as Appendix I outlines that the key values of the natural inland wetlands on this site is their hydrological function as they contain largely exotic pasture species (note that the exotic pasture exclusion does not however apply to them, see ecology report in Appendix I). The report concludes they are currently of overall low value and this value will not be adversely affected by the construction of panels and cables in them. The hydrological value of the wetlands will also not be altered by any works proposed in or near them due to extensive earthworks not being proposed that will change ground contours or alter hydrological flows on the site near their location.
- The restoration of wetlands is also promoted by the proposal including the restoration of 1.15ha of low value natural inland wetlands near the southern boundary of the site (note that this is set within a wider area of riparian and terrestrial planting for improved sustainability).

The proposal therefore meets the policy intent of the NPS-FM.

## **8.8 Resource Management (National Environmental Standards for Freshwater) Regulations 2020**

The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F) came into force on 3 September 2020 and applies when any person wants to undertake earthworks within or adjacent to a wetland.

This proposal involves earthworks in and within 100m of natural inland wetlands. The ecology report in Appendix I outlines that the wetlands comprise more than 50% exotic pasture species. However as the species found are not identified in the “National-list-of-exotic-pasture-species” that is required to be used for the identification of wetlands as per the MFE Guidance for Identifying wetland, the wetlands on the site must be identified as “natural inland wetlands”. (Refer to the Ecology report in Appendix I for a full explanation of this.) The location of the 99 identified natural inland wetlands on the site are shown on the development concept plan in Appendix G.

The solar farm meets the definition of specified infrastructure; therefore, consent is required under regulations 45(1) and 45 (2) of the NES-F (as outlined in the rules assessment attached in Appendix P).



Regulation 45(6) requires that a consent for a discretionary activity under this regulation must not be granted unless the Panel has first:

- satisfied itself that the specified infrastructure will provide significant national or regional benefits; and
- satisfied itself that there is a functional need for the specified infrastructure in that location; and
- applied the effects management hierarchy

These items are discussed below to demonstrate that there is a consenting pathway to approve the consents required for works and discharges in and near the identified natural inland wetlands on the site.

### 8.8.1 Infrastructure has significant national or regional benefits

The proposed solar farm will have significant national and regional benefits. These have been fully described in Section 2.1.1. Having significant national or regional benefits is a key requirement under the NES- F (and NPS- FW Clause 3.22) for consent to be able to be granted for works in and near natural inland wetlands.

### 8.8.2 Functional need

Regulation 3 of the NES-F provides that 'functional need' has the meaning given by the NPS-FM. The NPS-FM defines **Functional Need** as:

*“the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment.”*

The functional need for the project to occur at the matters to which a decision maker must recognise in respect of functional need are discussed in the discussion of the NPS-REG in section 8.5 above. The key relevant matters are listed again below for consideration of the proposal against the NES-FW provisions and the proposals effects on wetlands. The site is;

- Located adjacent to the National Grid in a location where transmission infrastructure has available capacity for the additional generation associated with a solar farm;
- Predominantly flat and cleared, with little shading and of a sufficiently large size;
- Located near main roadways for ease of construction and to reduce roading effects on the community; and
- Having landowners who are willing to cease or adjust their use of the land to accommodate the project.

There is also a functional need for the cables and panels to be located in the identified natural inland wetlands. On a site design basis these works cannot be avoided in the wetlands as:

- Isolated wetlands within the site cannot be feasibly avoided as they are scattered throughout the entire site. Avoiding all isolated natural inland wetlands, with some being as small as 11 square metres, would require the removal of entire sections of the proposed area of array. Given that the trackers are manufactured in fixed lengths, this would detrimentally impact the generating capacity of the project, add cost and complexity to construction, and risk the project's overall viability.
- This would lead to functional disbenefits such as a reduction in electricity generation disproportionate to the size of the wetland.



- Avoiding the placement of solar panels over wetlands would not on its own, avoid works in wetlands as the cable trenches would still be required to pass through them.
- Cables within the site must be trenched underground and placed perpendicular to the rows of panels to carry the energy produced to the inverters, the BESS and substation. These cables must be constructed in generally straight lines. It is therefore unavoidable that some may pass through small sections of wetlands within the site.

The above illustrates that the proposed solar farm has a functional need to be located in its proposed environment and that the parts of the solar farm have a functional need to be located in and near the wetlands. Completely avoiding them would result in significant implications to the project design and cost of construction, whilst also reducing the overall generation capacity of the project.

Due to above, the functional need test for discretionary resource consents required under the NES-F is met by the application.

### 8.8.3 Effects management hierarchy

The NES-F then directs that a consent for works in and near wetlands may only be granted if the consenting authority is satisfied that the effects management hierarchy has been applied. Regulation 3 of the NES-F provides that 'effects management hierarchy' has the meaning given by the NPS-FM. Clause 3.21(1) of the NPS-FM includes the definition of the "effects management hierarchy":

***Effects management hierarchy***, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:

- *adverse effects are avoided where practicable; then*
- *where adverse effects cannot be avoided, they are minimised where practicable; then*
- *where adverse effects cannot be minimised, they are remedied where practicable; then*
- *where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then*
- *if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is not appropriate, the activity itself is avoided; then*
- *if aquatic compensation is not appropriate, the activity itself is avoided.*

An assessment of the effects on the wetlands and how this management hierarchy has been applied is in section 4.4.4 of the ecology report appended as Appendix I. A summary of each of these requirements is undertaken below to demonstrate that this hierarchy has been applied to this project and that consent is able to be granted.

#### 8.8.3.1 Avoided

The proposal has been intentionally designed to avoid adverse effects on natural inland wetlands on the site in the first instance. No wetlands will be drained or removed as part of the proposal and there will be no reduction in extent of any wetland. In addition, water flows will not be altered to the extent that the hydrological value of any wetland is affected.



This has been achieved by avoiding locating structures (buildings, BESS and substation), access tracks and earthworks in wetland areas. This was a key design focus of the proposal layout. Changes to ground levels, which could change rainfall runoff and therefore impact wetland hydrology and hydraulics, have also been avoided.

As discussed in Section 8.3.4.2 is not possible to avoid the placement of all solar panel and cable infrastructure within the identified wetlands as this would result in disproportionate loss of generating area in relation to the wetland areas, reducing the overall generation capacity of the project and impacts its overall viability. In addition, as many of the wetlands are small and scattered across the site and not located together, they are not considered suitable for protection and enhancement. If left isolated between the panels, even with no development on them, they would continue to be affected by the grazing of sheep and, once the irrigation ceased may be likely to become dryer. Leaving these small wetland areas undeveloped (i.e. the natural inland wetland areas) would have an impact on the viability of the solar farm but not necessarily result in the protection or maintenance of the natural inland wetlands.

Overall, an area of 0.79ha of low value natural inland wetlands will have panels and cables located in them and a 1.15ha area of natural inland wetlands will be left development free and will be enhanced with 1ha of wetland planting around it. The larger collection of wetland areas, located near the southern boundary are proposed to be protected and enhanced, along with the margins of the main drain.

### 8.8.3.2 Minimised

As discussed above, the project has been designed to avoid the effects on wetlands but not necessarily avoid works within all wetlands. The design minimises the effects created by proposing only low-impact infrastructure, such as piles or trenches, in wetland areas. These works only occur in minor or isolated wetland areas, whilst the larger, contiguous wetland would be excluded from the development and enhanced, resulting in a net gain to local wetland biodiversity values. Where the piles supporting the solar panels and the cabling connecting the panels need to be installed through wetland areas, measures are proposed to minimise potential effects.

The piles that support the solar panels have a small footprint and are able to be driven into the ground, minimising soil disturbance.

The construction methodology proposed would also minimise the potential effects of the works that may occur in and near the wetlands. Genesis has committed to implementing measures during construction to reduce impacts on wetlands, including:

- using bog mats for any vehicle movements in wetlands;
- reducing the time to backfill any trenches within wetlands;
- not placing or taking fill from in or within 20m of wetlands; and
- limiting the construction works that can occur within wetlands.

### 8.8.3.3 Remedied

There are some minimal effects related to construction activities in and around the wetlands. The appended ecology report concludes that these works do not generate any adverse effects on the values of the wetlands that would require mitigation, but on a precautionary basis the project has set aside a 1.15ha area enhanced with a surrounding 1ha of wetland planting. In addition, riparian planting is proposed along the larger drains within the site.

Collectively this restoration of wetland and drain margin areas would create an overall net benefit including improved water quality, cooler water temperatures, indigenous habitat area



and establish an ecological corridor on the site. The ecology report concludes that these measures are more than is required to remedy the very minor level of effect created on the wetlands.

#### 8.8.3.4 Offset

The ecology report attached as Appendix I concludes the overall level of effect on the site's natural inland wetlands is very low. Offset or compensation are therefore also not required under the NPS-FM.

#### 8.8.4 Conclusion

Overall, the design approach and the proposed construction methodology to be adopted results in the proposal being consistent with the effects management hierarchy.

### 8.9 Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS) came into force in January 2012 and applies to activities being undertaken on sites where potentially soil contaminated activities are being or have been undertaken.

A Preliminary Site Investigation (PSI) (attached as Appendix S) identifies a number of locations on the properties that have potentially been subject to HAIL activities<sup>63</sup> and are considered "pieces of land" under the NES-CS. Only one of these sites, a historic sheep dip, is in the proposed development area for the solar farm.

Although no evidence of this historic sheep dip was able to be found during the site visit, further investigation would be required to demonstrate that the site is not a "piece of land" under the NES-CS and therefore until this occurs the provisions of the NES-CS apply.

The volume of soil that will be disturbed in this area by the proposal does not however exceed the permitted area or volume thresholds under the NES-CS and therefore consent will not be required under the regulations.

The appended PSI report assesses that there are three potential "pieces of land" within the solar farm site. Those "pieces of land associated with Homestead 1 and 2 are within the land area to be retained by the existing landowners. The "piece of land" associated with Homestead 3 is within the solar farm development area and contains the potential old sheep dip.

The proposal is therefore consistent with the NES-CS and no consent is required under this National Environmental Standard.

### 8.10 Manawatū-Whanganui One Plan

The One Plan is a combined regional policy statement and regional plan for the Manawatū-Whanganui Region. An assessment of the proposal against the relevant objectives and policies of the Regional Policy Statement and Regional Plan is provided below.

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<sup>63</sup> **HAIL** means the current edition of the *Hazardous Activities and Industries List*, Wellington, Ministry for the Environment



## 8.10.1 Regional Policy Statement

### 8.10.1.1 Resource management issues of significance to iwi authorities (RMIA)

Chapter RMIA of the Regional Policy Statement sets out objectives and policies relating to the resource management issues of significance to iwi and hapū, which at a high level seek that:

- Regard is given to the mauri of natural and physical resources to enable hapū / iwi to provide for their social, economic and cultural well-being (RMIA-O1,1).
- That particular regard is given to kaitiakitanga and the relationship of hapū / iwi to their ancestral lands, water, sites, wāhi tapu and other taonga, which must be recognised and provided for through the resource management process (RMIA-O1,2).
- That kaitiakitanga and the relationship between hapū and iwi and their ancestral lands, water, sites, wāhi tapu and other taonga are enabled and fostered through increased involvement of hapū / iwi in resource management processes, including the following in relation to resource consent decision making (RMIA-P1):
  - That regional councils have regard for iwi management plans;
  - That iwi / hapū are involved in resource consent decision making and planning processes as per an agreed memoranda of partnership and/or joint management agreements;
  - That regional councils encourage applicants to consult directly with hapū / iwi where necessary to identify the relationship of Māori to their culture and traditions with their ancestral land, water, sites, wāhi tapu and other taonga; and the actual and potential adverse effects of proposed activities on those relationships (RMIA-P1).

#### Assessment:

Genesis and Ngā Hapū o Himatangi have worked together to recognise Ngā Hapū o Himatangi, to reflect their partnership and to mitigate the impacts of the project on Ngā Hapū o Himatangi with respect to effects on land, water, and sites of significance consistent with the direction of objective RMIA-O1 and policy RMIA-P1.

Ngā Hapū o Himatangi have confirmed their support for the Project and consider that any adverse cultural effects of the Project will be appropriately addressed. Rangitāne o Manawatū and Muaūpoko have also provided written support (Appendix D).

### 8.10.1.2 Energy, Infrastructure and Transport

Chapter EIT of the Regional Policy Statement sets out objectives and policies relating to infrastructure and renewable energy projects which at a high level:

- Recognise that electricity generation facilities of more than 1MW of electricity and supporting infrastructure have regional or national significance where the electricity generated is supplied to the electricity distribution and transmission networks, and recognise the benefits derived from this infrastructure (EIT-O1 and EIT-P1).
- Requires an improved efficiency of the end use of energy and increase in the use of renewable energy resources in the region (EIT-O2).
- Requires the regional council and territorial authorities to have particular regard to the benefits of renewable energy resources, the region's potential for renewable



energy resources, the need for these activities to be located where the resource is located, and the benefits of enabling increased electricity generation capacity:

- Ensuring that in managing adverse environmental effects arising from the establishment, operation, maintenance and upgrading of infrastructure, the regional council and territorial authorities must:
  - Recognise and provide for the operation, maintenance and upgrade of such activities once they are established;
  - Allow minor adverse effects from establishing new infrastructure; and
  - Avoid, remedy or mitigate more than minor adverse effects arising from establishing new infrastructure, taking into account the need for the infrastructure; any functional, technical or operational constraints that require the infrastructure to be located or designed in the manner proposed; any reasonably practicable alternative locations or designs; and whether any more than minor adverse effects that cannot be adequately avoided, remedied or mitigated by services or works can be appropriately offset, including through the use of financial contributions (EIT-P3).
- Requires the Regional Council and territorial authorities to have particular regard to the benefits of the use and development of renewable energy resources including contributing to reduction in greenhouse gases, reduced dependency on imported energy sources, reduced exposure to fossil fuel price volatility, and supply security for current and future generations. Regard must be given to the region's potential for renewable energy use and development, benefits of enabling increased generation capacity and efficiency of renewable energy generation facilities, and logistical or technical practicalities for developing, upgrading, operating or maintaining an established renewable energy generation activity (EIT-P4).

#### Assessment:

The Regional Policy Statement is directive in its approach to require that the District and Regional Councils have regard to the benefits of renewable energy and facilitate the construction of new renewable energy sources in order to improve electricity supply and security. It also directs that more than minor adverse effects must be avoided, remedied or mitigated; however, it states this must be done whilst having regard to the need for the infrastructure.

The proposal includes design details and conditions proposed to avoid or manage effects and the technical reports conclude these effects are minor with the exception of landscape. The ALE report concludes there is an overall low-moderate to moderate adverse landscape and visual effects, but these are avoided and mitigated as far as practical by boundary screening, and the planting of drain margins and some wetland areas.

The noise report concludes that there is a minor effect on one property, but this is minimised by the construction of an acoustic barrier and the requirement for noise monitoring for construction and operation noise.

The proposal is clearly one of national significance due to the magnitude of its generation capability, (the proposal will generate 180MW when the RPS signals that a generation of over 1MW is considered significant), and therefore aligns with objectives EIT-O1 and EIT-O2 and policy EIT-P1. The proposal has clear benefits to improving energy supply and security to those living within the Manawatū-Whanganui Region.

The proposed solar farm aligns with the direction of policy EIT-P2 as it has been designed and located to avoid adverse effects on the ongoing operation and maintenance of the



National Grid network which traverses through the site. A substation will be constructed as part of this application, to ensure that the energy supply generated by the solar farm is injected into the national grid in a safe and efficient manner.

The proposal aligns with the intent of policy EIT-P3, as due consideration has been given to the design and location of the solar farm both in terms of its location on a regional and site-specific scale, and in ensuring that adverse environmental effects are minimised to a practicable extent.

The proposal aligns with the directive of policy EIT-P4 as the solar farm will make a substantial contribution to the provision of renewable energy, thereby contributing towards reducing New Zealand's reliance on the use of fossil fuels for energy production. Renewable energy generation will facilitate reduced production of greenhouse gases and provide greater electricity security for current and future generations. Solar farms are one of the more reliable forms of renewable energy as it is not reliant on certain weather conditions.

The proposal is clearly consistent with the Energy, Infrastructure and Transport section of the RPS.

### 8.10.1.3 Natural character

Chapter NATC of the Regional Policy Statement sets out objectives and policies relating to the preservation of the natural character of the coastal environment, wetlands, rivers, lakes and their protection from inappropriate use and development. At a high level, these seek that:

- The characteristics and values of the region's ONFs and ONLs and the natural character of the coastal environment, wetlands, rivers and lakes and their margins are protected from inappropriate land use and development (NATC-O1 and NATC-P1).
- Adverse effects, including cumulative adverse effects, on the natural character of the coastal environment, wetlands, rivers and lakes and their margins are avoided where:
  - It is in areas of outstanding natural character;
  - Where they would significantly diminish the attributes and qualities of areas that have high natural character; and
  - Avoided, remedied or mitigated in other areas (NATC-O1).
- That the rehabilitation and/or restoration of the natural character of the coastal environment, wetlands, rivers, and lakes and their margins is promoted (NATC-O1 and NATC-P1).
- In regard to the natural character of wetlands, rivers and lakes and their margins, land use and development is generally considered appropriate if it:
  - Has a functional need to be located in or near the wetland, river or lake and no reasonably practicable alternative locations exist;
  - Is of an appropriate scale, form and design which is compatible with the existing landforms, geological features and vegetation;
  - Will not, by itself or in combination with effects of other activities, significantly disrupt natural processes or existing ecosystems; and
  - Will provide for the restoration and rehabilitation of natural character where that is appropriate and practicable (NATC-P2).



### Assessment:

The solar farm is situated outside of the coastal environment and coastal marine area. The site is not identified in an area of outstanding or high natural character values or as an outstanding natural landscape. The ecology report concludes that no streams exist on the property as none of the farm drains meet the definition of a stream. The only potential natural features within the project area relevant to these objectives and policies are the natural inland wetlands scattered across the site and limited exotic mature vegetation. These objectives and policies are not therefore relevant to the application other than in the consideration of the natural character of wetlands. The proposal is consistent with these as:

- The ecology report identifies that all natural inland wetlands on the site are of low ecological value.
- The proposal has a functional need to be located in these natural inland wetlands.
- There are no streams on the site and the solar farm has been designed to avoid or minimise works in natural inland wetlands and reduce impacts on these to the extent practicable.
- Works within natural inland wetlands have been designed to minimise disturbance to the extent practicable and the loss of natural inland wetland extent will be avoided.
- The proposal will not alter the hydrological function of the project area, thereby the hydrological function of the existing natural inland wetlands and water bodies will be maintained.
- Enhancement of drain margins and areas of natural inland wetlands are proposed which will help to rehabilitate and enhance the natural character of these water bodies and create an overall net benefit in terms of biodiversity values.

If the drains on the site were deemed to be modified water courses or streams it is considered the intent of the policy direction would still be met as they are not modified, panels are adequately set back from them and some of their margins have been planted to improve water quality and biodiversity on the site.

#### **8.10.1.4 Historical and cultural values**

Chapter HCV of the Regional Policy Statement sets out objectives and policies addressing the importance of historic heritage, in particular sites of significance to Māori. At a high level, these seek to:

- Protect historic heritage from activities which would significantly reduce their heritage qualities and from inappropriate subdivision, land use and development (HCV-O1, HCV-P1 and HCV-P2).

### Assessment:

As detailed in the Archaeological Assessment (see Appendix L), no recorded archaeological sites or historic heritage sites are present within the project area which is in part due to the highly modified landform. The assessment determined that it is highly unlikely that any unidentified sites will be uncovered during project works. In the unlikely event that sensitive material is uncovered during works, the applicant will follow the accidental discovery protocols. The proposal therefore aligns with these objectives and policies.

#### **8.10.1.5 Ecosystems and indigenous biodiversity**

Chapter ECO of the Regional Policy Statement sets out objectives and policies relating to ecosystems and indigenous biodiversity which, at a high level, seek that significant



indigenous vegetation and significant habitats of indigenous fauna are protected, that indigenous biodiversity is maintained, and promotes enhancement (ECO-O1).

**Assessment:**

The proposed site does not contain any areas of significant indigenous vegetation or fauna. The proposal will, as discussed in objective ECO-O1, more than maintain indigenous biodiversity, as the solar farm has been designed to avoid or minimise works in streams, drains and wetlands and to reduce impacts on the sites low-value natural inland wetlands to the extent practicable. Drain margins and areas of wetlands are also enhanced in places to create an overall net benefit in terms of biodiversity.

The proposal will enhance indigenous biodiversity by the establishment of 26ha of various types of planting, with some enhanced habitat for indigenous fauna. The plant and pest animal control provisions also proposed will reduce animal pests on the site to further protect indigenous fauna on the site.

### **8.10.1.6 Land and freshwater**

Chapter LF of the Regional Policy Statement sets out objectives and policies relating to land use and freshwater management which at a high level direct:

- To the extent practicable, the avoidance or otherwise remediation or mitigation of accelerated erosion and increased sedimentation in water bodies caused by vegetation clearance and land disturbance and seeks a reduction in sediment loads entering water bodies from accelerated erosion (LF-LAND-O2 and LF-LAND-P2).
- That surface water bodies and their beds are managed in a manner which safeguards their life supporting capacity and recognises and provides for their values in RP-SCHED2 (LF-FW-O3 and LF-FW-P25).
- That land adjacent to the bed of reaches with value for flood control and drainage is managed to provide for flood mitigation purposes, maintain the existing degree of flood hazard and erosion protection, and avoiding, remedying and mitigating adverse effects on the flood control drainage network (LF-FW-O6 and LF-FW-P27).
- That activities in, on, under or over the beds of rivers that have environmental benefits are allowed, including the restoration and enhancement of natural habitats (LF-FW-P28).

**Assessment:**

The proposed earthworks will be undertaken in a manner which aligns with the direction of objective LF-LAND-O2 and policy LF-LAND-P2, as a comprehensive ESCP has been submitted with the application and will be required to be updated and adhered to by contractors as a condition of consent. Few areas of bulk earthworks are proposed and the site is flat so the standard methods proposed will achieve consistency with these objectives.

Particular care will be taken during earthworks near wetlands and drains (as required by proposed conditions of consent for works in these areas) to avoid sedimentation effects.

The proposal aligns with the intent of objective LF-FW-O3 and policy LF-FW-P25, as the design and location of the solar farm infrastructure and internal roads avoid the main drains on the site in the event that they may be considered modified water courses. No works are proposed in the drains, and their margins are proposed to be planted which will enhance the natural values of water quality increased by vegetation and improved habitat.

The proposal is consistent with objective LF-FW-O6 and policy LF-FW-27 as the project has been designed to avoid the drain on the site that has flood control value, and the solar



panels are set back from this drain. The project will not impact on the ability of this drain to continue to fulfil the same function for flood control purposes and will maintain the existing degree of flood hazard protection.

The proposal does not create tension with these objectives and policies.

#### **8.10.1.7 Hazards and risks**

Chapter HAZ of the Regional Policy Statement sets out objectives and policies relating to the management and use of hazardous substances and contaminated land, which seek to manage adverse effects from contaminated land and from the use, storage, disposal and transportation of hazardous substances and contaminated land (HAZ-WC-O1, HAZ-WC-P5 and HAZ-WC-P8).

##### Assessment:

The proposal is consistent with the intent of objective HAZ-WC-O1 and policy HAZ-WC-P5 as the use and storage of oil in transformers and inverters and the use of ethyl glycol coolant will be undertaken in accordance with industry standards and practice, including containment. The proposed conditions of consent require preparation of an Emergency Response Plan that sets out measures to be put in place to prevent, and in the unlikely event these occur, manage and respond to leaks and spills to minimise potential effects. The plan would also detail requirements for the storage and disposal of faulty panels to avoid potential effects of substances leaking from these into the environment.

The proposal aligns with the direction of objective HAZ-WC-O1 and policy HAZ-WC-P8 as the PSI report (refer to Appendix S) has identified that there is potentially contaminated soil on the site from previous land use activities. The proposed soil disturbance is not at a level such that consent is required under the NES-CS. Conditions of consent are however still proposed to manage the HAIL areas on a precautionary basis to ensure that any disturbance of contaminated land is undertaken in a manner which avoids effects on the environment and human health.

The proposal is consistent with these objectives and policies.

#### **8.10.1.8 Regional Policy Statement Summary**

In summary, the proposal is considered to align with the objectives and policies of the Regional Policy Statement and provides for an outcome that is consistent with the overall direction.

There is no tension with the Natural Character policies as these focus on areas of outstanding features or values or the margins of the coast, rivers, lakes and wetlands. The proposal will provide, as directed by the policies, for renewable energy generation on a site that is suitable for that nationally significant purpose, without significant modification or adverse effects.

### **8.10.2 Regional Plan**

#### **8.10.2.1 Land and Freshwater**

Chapter LF in the Regional Plan sets out objectives and policies relating to land use and their impacts on freshwater, and seek that:

- Increased sedimentation in water bodies as a result of human activity is avoided as far as reasonably practicable, or otherwise mitigated (LF-LAND-O1).



- That the loss of extent of natural inland wetlands is avoided, that their values are protected, and their restoration is promoted, except where the loss of extent or values arises from any of the following:
  - The maintenance or operation of specified infrastructure, or other infrastructure (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020); or
- The Regional Council is satisfied that:
  - The activity is necessary for the construction or upgrade of specified infrastructure; and
  - The specified infrastructure will provide significant national or regional benefits; and
  - There is a functional need for the specified infrastructure in that location; and
  - The effects of the activity are managed through applying the effects management hierarchy (LF-WETL-P3).
- That discharges to land or directly into water or from land use activities affecting groundwater and surface water quality are managed to;
- Safeguard the life supporting capacity of water and recognises and provides for the values and management objectives in RP-SCHED2: Surface Water Management Values;
- Provides for the objectives and policies of the Regional Policy Statement relating to surface water and groundwater quality; and
- That discharges onto or into land are managed to avoid, remedy or mitigate adverse effects on surface water or groundwater; and
- That when making decisions on resource consent applications, the Council must consider:
  - The objectives and policies contained within the Regional Policy Statement relating to land and freshwater; and
- Have regard to:
  - Avoiding discharges containing persistent contaminants that are likely to accumulate in a waterbody or bed;
  - The appropriateness of adopting the best practicable option to prevent or minimise adverse effects in circumstances where:
    - It is difficult to ascertain the discharge parameters for a particular discharge that give effect to the management approaches to water quality and discharges set out in the Regional Policy Statement land and freshwater provisions; or
    - The potential adverse effects are likely to be minor, and the costs associated with adopting the best practicable option are small in comparison to the costs of investigating the likely effects on land and water; and
    - The objectives and policies of the Regional Policy Statement relating to resource management, energy, infrastructure and transport, ecosystems and biodiversity, historical and cultural values, and hazards and risks (LF-LW-02, LF-LW-P12).
- That activities in artificial watercourses are managed to have regard to the purpose of the watercourse, that adverse effects on any significant ecosystem intrinsic to the



watercourse is avoided, remedied or mitigated, and that regard is had to the extent to which the activity is consistent with best practice management purposes (LF-AWBD-05, LF-AWBD-06, LF-AWBD-P22 and LF-AWBD-P23).

#### Assessment:

The proposal aligns with objective LF-LAND-O1 as the project earthworks will be managed to minimise erosion and control sediment discharge to drains and wetlands. This will be achieved through the implementation and monitoring of erosion and sediment controls during construction works, as detailed on the submitted draft ESCP (see Appendix O). Furthermore, all exposed areas will be stabilised upon completion to prevent erosion. Particular care will be taken during earthworks near wetlands and drains to avoid discharge of sediment. The site is also currently flat which minimises the earthworks required for the proposal.

The proposal aligns with the outcome sought in policy LF-WETL-P3 as the solar farm has been designed to avoid works in drains and minimise works in wetlands. The existing low values of the drains and natural inland wetlands are not further reduced by the proposal (the ecology report concludes they are enhanced) and no extent of them is lost. For the avoidance of doubt, if it is considered that some extent or value may be lost, it is noted that the policy allows loss of extent where it relates to construction of specified infrastructure with a functional need to be in the location, which is demonstrated in Section 8.7.2.

The project will not conflict with objective LF-LW-02 and policy LF-LW-P12 as the solar panels are not considered to create new impervious areas and there is minimal change to existing rainfall infiltration or overland flow processes. Furthermore, any impacts on groundwater or surface water quality during construction of the solar farm is avoided by the ESCP controls required as a condition of consent as discussed above.

The proposal aligns with the intent of objectives LF-AWBD-05 and LF-AWBD-06 and policies LF-AWBD-P22, LF-AWBD-P23 and LF-AWBD-P25, as the design and location of the solar farm infrastructure and internal roads will avoid surface water bodies within the site. The only surface water body on the site with an identified value is one drain identified for flood control purposes. This drain is not affected by the proposal and solar panels have been set back from it to not alter how it currently operates. The flood control values of this water body are not therefore modified by the proposal, as development or modification within this area of the site will be avoided.

Overall, the proposal is consistent with these objectives and policies.

#### **8.10.2.2 Ecosystems and Biodiversity**

Chapter ECO in the Regional Plan sets out objectives and policies relating to the management of ecosystems and biodiversity values. ECO-01 requires resource use activities to be regulated to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna or to maintain indigenous biodiversity, including enhancement where appropriate. The site does not contain any areas of significant indigenous vegetation or significant habitats of indigenous fauna and therefore none of the policies that sit

under this objective are relevant to the proposal.

#### Assessment:

The proposed site does not contain any areas of significant indigenous vegetation or fauna. The proposal will, as discussed in objective ECO-O1, maintain indigenous biodiversity, as the solar farm has been designed to avoid or minimise works in streams, drains and wetlands and to reduce impacts on the sites low-value natural inland wetlands to the extent



practicable and to enhance margins and areas of wetlands in places to create an overall net benefit in terms of biodiversity

Overall, the proposal achieves the intent of these objectives and policies.

### 8.10.2.3 Summary

In summary, the proposal is not considered contrary to any relevant objectives and policies of the Regional Plan, as the project satisfies the requirement to promote and provide for sustainable energy projects and has been designed to avoid, remedy or mitigate adverse environmental effects as far as practicable.

## 8.11 Operative Horowhenua District Plan

The HDP guides the Council with managing the environmental, social, cultural and economic effects of land use, development and the protection of land and associated resources.

The District Plan gives effect to the Regional Policy Statement and Regional Plans, which are directive in their approach to require that Councils have regard to the benefits of renewable energy. It also directs that adverse effects must be avoided, remedied or mitigated; however, it states this must be done whilst having regard to the need for infrastructure

Under the HDP, the project area is situated in the General Rural Zone. The description of this zone is reproduced below as it is considered it provides clear guidance on the outcomes sought for this zone and this clarity greatly assists in the assessment of effects and the following assessment of the objectives and policies. The key points are underlined. The Rural Zone description in Part 3 of the District Plan is:

*The rural environment covers the majority of the Horowhenua District and is an important land resource. The rural character, amenity values and productive use of rural land underpins the social, economic and cultural well-being of the people of the District.*

*The rural environment has been, and continues to be, used in many different ways to support and provide for those living in the Horowhenua. Although over time the activities undertaken within the rural environment have changed, evidence of historic archaeological and heritage features from Māori and early European settlement activities including the development of the early agricultural and pioneer industries, such as flax and timber milling are still present.*

*The rural environment currently supports a diversity of land based primary production activities, particularly dry stock, dairying, cropping, horticulture, exotic forestry and small niche primary production land uses. Infrastructural and other industrial-type activities also occur in the rural environment, such as network utility facilities, gravel extraction and quarrying/aggregate processing, and these are critical to the functioning of the District. Providing for a range of land use activities in the Rural Zone is important for ensuring diversity and resilience to the rural economy by providing additional employment and economic opportunities.*

*Overall, the rural landscape and character is shaped by the interaction between human activities and the natural and physical resources in the area. While the identified land precincts exhibit a range of qualities, there are common rural character and amenity values that are valued throughout the rural environment.*

*The rural environment has a rural character which includes a high degree of open space with vegetation predominating over built elements, productive working landscapes, including the potential to create nuisance effects such as noise, odour*



*and dust, the occasional reasonably large utilitarian building associated with primary production, and self-serviced properties with respect to water supply, wastewater disposal, and stormwater management. Remnant areas of indigenous forest and wetlands are also evident in the rural environment.*

The District Plan recognises the varied landscapes present within the rural environment, through separating the rural areas into landscape precincts. The project area is situated within the Foxton Dunefields landscape Precinct, which is characterised in Appendix 4.1.2 of the District Plan as:

### ***Landscape Character***

*The Foxton Dunefields landscape Precinct is located between the Coastal Environment Precinct and the Moutoa-Opiki Plains Precinct. The landscape is characterised by the dissected parabolic dunefields, large areas of pastoral grazing and pine forestry, resulting in an active topography with diverse vegetation cover.*

The Foxton Dunefields is the only landscape precinct within the Coastal Sand Country land type which is not identified as having a high level of amenity or character values.<sup>64</sup>

## **8.11.1 General Rural Zone**

### **8.11.1.1 Rural Environment Wide objectives and policies**

At a high-level, the relevant rural wide objectives and policies seek that:

- Development maintains and enhances the character and amenity values of the rural environment (RURZ-GRZ-O1).
- The open space and spacious character of rural areas is retained, with a dominance of open space and planting over buildings, and conflict between rural and residential activities minimised (RURZ-GRZ-P5).
- Development minimises obtrusive built elements in the rural environment through integrating building location and design with the surrounding landform and landscape qualities (RURZ-GRZ-P6).
- Avoid, remedy or mitigate the impact of buildings on the rural landscape and maintain an overall low building density and height throughout the rural environment (RURZ-GRZ-P30).
- Avoid, remedy or mitigate adverse effects of shading of roads and reduction in rural amenity from tree shelterbelts (RURZ-GRZ-P35).
- Avoid, remedy or mitigate adverse effects on residential properties or road safety from lighting or glare (RURZ-GRZ-P36).
- Regard is given to the elements of rural character to ensure that new activities locating in the rural area are of a nature, scale, intensity and location consistent with maintaining the character of the rural area and be undertaken in a manner which avoids, remedies or mitigates adverse effects on rural character, including rural productive values and potential reverse sensitivity effects (RURZ-GRZ-P10, P11)).
- That primary production and other rural based activities are able to function efficiently and effectively in the Rural Zone, whilst avoiding, remedying or mitigating the adverse effects of activities, including reverse sensitivity caused by new activities on

<sup>64</sup> APP 4.1 of the Operative Horowhenua District Plan 2015 – Rural Environment Landscape Assessment.



existing activities, in a way that maintains and enhances the character and amenity values of the rural environment (RURZ-GRZ-O3).

- Avoid, remedy or mitigate adverse effects of land use and development on areas or features of landscape, biodiversity, historic heritage or cultural value (RURZ-GRZ-P8).
- Provide for the establishment and operation of primary production activities which rely on the rural location, provided the activities avoid, remedy or mitigate adverse effects (RURZ-GRZ-P25).
- Provide for the establishment of new non-primary production activities where they are compatible and/or associated with rural production activities, and the activities avoid, remedy or mitigate adverse effects (RURZ-GRZ-P25).
- Avoid, remedy, or mitigate the impact of buildings on the rural landscape and maintain overall low building density and building height throughout the rural environment (RURZ-GRZ-P30).

#### Assessment:

The proposal creates tension with the objectives and policies (primarily RURZ-GRZ-P6). due to its large scale and that it introduces a large infrastructure and built element to the landscape, being a large area of solar panels elevated above the ground into this flat, farmed area. The proposal changes the use of the large rural site, from a productive dairy use that relies on flat open pasture that has been levelled and removed of vegetation to enable the irrigation of the land by pivot irrigators, to a land use that requires a large area of low built structures (solar panels) to enable the production of electricity from the sun. It is relevant that both land uses require modification of, or the introduction of built structures into the environment. However, due to the objectives and policies requiring that the existing rural character be “maintained and enhanced” (RURZ-GRZ-01), the proposed change creates tension with these policies. Additional tension occurs as open space becomes replaced with solar panels which are defined as buildings and it can no longer be considered that built elements in the landscape are minimised (RURZ-GRZ-P6) and that there is a dominance of open space and plantings over buildings (RURZ-GRZ-P5).

The proposal has tension with RURZ-GRZ-P10 and P11 as a change is often considered to not “maintain” character. These policies however also direct that the “elements of rural character” are given regard to. The key elements of rural character in this area have been described in the landscape report as the large dune remnants, the flat open nature of the area broken with occasional shelter belt planting, and the distant views to the Tararua ranges. This proposal does not impact any of these key elements as the panels are low (less than 3.5m at maximum tilt) and do not occur on any remnant dunes. This reduces the potential conflict that a large-scale solar farm could have with these policies in this particular instance.

The ALE concludes that the comprehensive mitigation measures proposed do not fully remedy the expansive built form and scale of the project, and that its scale is extensive enough to alter balance from predominantly vegetated to dominated by built form.

However, the tension with these objectives and policies has been sought to be reduced by the specific design of the proposal. Specifically:

- the use of setbacks, low-height solar panels and support buildings, spacing between solar panels and mitigation planting. These measures aid to integrate the development into the rural landscape, minimise the visual dominance effects and prevent any glint and glare effects.



- the use of mitigation planting placed to screen the development but avoid shading of roads and impacts on the amenity values of surrounding landowners and occupiers. Once established, the planting will appear similar to existing shelter belts that exist in the area and are permitted activities.
- security lighting designed to be minimal and so that light spill does not occur past the site boundaries. Glint and glare effects from the solar panels do not occur on surrounding dwellings and therefore this potential effect on amenity values does not occur and amenity is maintained (consistent with RURZ-GRZ-P36).

The landscape assessment concludes that on balance, the application is considered acceptable in the receiving landscape setting with an overall rating of a “moderate” (more than minor in RMA terms) level of adverse effect in the long term once planting has established. The proposal has not been considered to be overall contrary to these objectives and policies due to the extensively modified existing environment of the site, and Part 3 of the HDP (as discussed above in section 8.3.7) identifies that the key value of the rural zone in the district is to provide for the needs of people and communities in the area and that the use of land will change over time, for example from dairy to cropping to forestry. Therefore, the large-scale change in land use of an area for the purpose of providing for the needs of people and communities (which is what the solar farm provides) is signalled as not inappropriate in the zone.

The proposal is also considered to not be contrary to the remaining objectives and policies of the rural zone. In particular:

- The proposal will align with the direction of objective RURZ-GRZ-O3 and policy RURZ-GRZ-P25 as no reverse sensitivity effects will arise from the operation of the solar farm in the rural environment. The site will be able to have a dual purpose and will be able to be utilised for sheep grazing at the same time. After the technical lifespan of the solar farm (anticipated to be 40 years), the infrastructure is able to be removed and the underlying soil and land area will be able to be utilised for any desired range of rural production activities, allowing for the rural productive potential of the land and associated rural character values to be retained in the long term.
- The applicant has established and will continue a meaningful relationship with mana whenua and seeks to avoid, remedy or mitigate adverse effects on cultural values through the provision of consent conditions to address any concerns raised through a Cultural Impact Assessment.
- It will be possible for a conjoint productive rural use of the land to be retained as sheep will be able to be grazed on the land, under and around the panels and in areas not developed. After the technical lifespan of the solar farm (anticipated to be 40 years), the infrastructure will be able to be removed, and the underlying soil and land area will be able to be utilised for any desired range of rural production activities.
- In considering the overall tension the proposal has with the Rural Zone objective and policies it is relevant that a large-scale solar farm, whilst not a primary production activity, can only exist in a rural environment due to the large flat area of land required. Due to this it is therefore anticipated that solar farms will become a more common and expected feature within rural landscapes as New Zealand looks to improve renewable energy production to reduce reliance on fossil fuels as directed through national planning documents. As character and amenity is a changing and subjective assessment it is considered that when an activity is expected the appearance of it in an area is considered less adverse.



Overall, the proposal has tension with the objectives and policies of the rural zone but the degree of this is reduced by the highly modified nature of the site and the design features included to reduce the effects on character and amenity.

### **8.11.1.2 Rural Environment Wide Policies - Fragmentation of Soil Resources Policies**

The key policies relating to the fragmentation of soil resource seeks:

- To safeguard the life supporting capacity of soils to enable a wide range of primary production activities and provide a resource for future generations while recognising the finite nature of the versatile land resource (RURZ-GRZ-P14).
- That land use and development of versatile land (LUC 1 and 2) occurs in a way which retains the rural productive potential of the land and maximises the likelihood of the land actually being used for rural production purposes (RURZ-GRZ-P17).
- Fragmentation of versatile land is minimised and, where possible avoided (RURZ-GRZ-P18).
- Land use and development which has the potential to inhibit the efficient use and development of versatile (LUC 1 and 2) land for primary production should be minimised and, where possible avoided (RURZ-GRZ-P20).

#### **Assessment:**

The proposal will align with policies RURZ-GRZ-P14, P17, P18 and P20 as the solar farm development area does not contain LUC1 or LUC2 soil. It does contain LUC3 soil but those soils are not identified as a priority in these policies. As the site does not contain LUC 1 and 2 soils the subdivision of the site is not contrary to these objectives and policies. The subdivision does result in additional rural residential lots being created but the boundaries are proposed only around existing land that is already utilised for domestic purposes and do not incorporate land that would otherwise be used for productive purposes.

The long-term potential of the underlying rural land use will be retained and in the short-term productive use can continue to occur jointly by grazing sheep under and around the panels. After the technical lifespan of the solar farm (anticipated to be 40 years), the infrastructure can be removed, and the underlying soil and land area will be able to be utilised for any desired range of rural production activities.

### **8.11.1.3 Rural Precinct Policies – Foxton Dunefields Precinct Policies**

At a high level, the policies relating to the Foxton Dunefields Precinct seek to:

- Manage the scale, intensity, size and design of subdivision and land development to ensure that it reflects and retains the distinctive dune landform pattern, natural habitats and landscape character and qualities of the Foxton Dunefields Precinct (RURZ-GRZ-Prec2-P52).
- Minimise obtrusive built elements in the dune country landscape by integrating building location and design with the surrounding landform and landscape qualities, including by avoiding buildings on dune ridgelines and elevated sites (RURZ-GRZ-Prec2-P56).
- Ensure that the natural habitats of the parabolic dunefields and inter-dunal areas, particularly remnant indigenous forest areas and wetland areas, are identified and protected from inappropriate subdivision and development (RURZ-GRZ-Prec2-P57).



- Protect identified historic heritage and cultural values of the Foxton Dunefields Precinct by avoiding adverse effects of inappropriate land use and development (RURZ-GRZ-Prec2-P58).

#### Assessment:

The proposal aligns with the intent of these policies as the site is largely devoid of the historic duneland formations due to it having been levelled in the recent past to allow pivot irrigators to irrigate the land to improve dairy productivity. Where remnant dune formations are present within the site (such as the north-eastern fringe), the solar farm design has avoided these areas.

The solar farm integrates into the dunes that remain on adjoining sites, by being located off them and below them in height. While the solar panels meet the definition of buildings their height has been kept low (less than 1.8m when flat) and the proposal does not include large built elements. The dunes on surrounding sites will remain the dominant element in the area so while the proposal is of a large scale and is intensive it does retain the distinctive landform pattern (RURZ-GRZ-Prec2-P52 and P56).

While the proposal has tension with the overall Rural Zone objectives and policies it has less tension with the specific objectives and policies of the Dunefield precinct due to these relating specifically to the retention of and protecting the character of the dunefields that have already been removed from the site.

#### **8.11.1.4 Strategic Direction: Tangata Whenua**

At a high level, the objectives and policies in Chapter SD-TW of the District Plan seek that:

- Tangata whenua are provided with opportunities to actively participate in the resource consent process on matters which have the potential to affect their cultural values and well-being (SD-TW-O1).
- That the relationship of tangata whenua of Horowhenua to their culture and traditions, ancestral lands, coastal areas, waterways, heritage landscapes and cultural sites is recognised and provided for (SD-TW-O2).
- That where relevant, the interests of tangata whenua are taken into account when considering the sustainable use and development of land, waterways, resources and other taonga (SD-TW-P2).
- That the cultural and spiritual values held by Māori and their traditional practices is recognised in the management of natural and physical resources (SD-TW-P8).
- Recognise the desire of tangata whenua to maintain and enhance their traditional relationship with the natural environment (SD-TW-P10).

#### Assessment:

Genesis and Ngā Hapū o Himatangi have worked together to recognise Ngā Hapū o Himatangi, to reflect their partnership and to mitigate the impacts of the project on Ngā Hapū o Himatangi including through design to avoid further loss of dunescape, management of potential effects on waterways and ecosystems, planting to minimise visual impact and support natural biodiversity, engagement and a commitment to an on-going partnership through construction and operation of the proposed solar farm.

Ngā Hapū o Himatangi have confirmed their support for the Project and consider that any adverse cultural effects of the Project will be appropriately addressed. Rangitāne o Manawatū and Muaūpoko have also provided written support (Appendix D).



## 8.11.2 District-Wide: Energy, Infrastructure and Transport

### 8.11.2.1 Land Transport

At a high-level, the relevant objectives and policies in Chapter EIT-LT of the District Plan relating to land transport seek that:

- Land transport networks efficiently and safely move people and goods through and within the Horowhenua District to meet the current and future needs of the District (EIT-LT-O1).
- The safety and efficiency of the land transport network is protected from adverse effects on land use and development (EIT-LT-O3).
- Existing roads are maintained and upgraded to provide for new roads and related facilities where important to meet the District's current and future needs (EIT-LT-P4).
- State highways operate as a safe and efficient network (EIT-LT-P11).
- High volume and heavy traffic use is discouraged in areas where it would have adverse environmental effects on the local community (EIT-LT-P14).
- Adverse effects from increased traffic or changed traffic types which could compromise the safety and efficiency of a road or pedestrians and cyclists are appropriately avoided, remedied or mitigated (EIT-LT-P15).
- The vehicle crossings are located, constructed and maintained to standards appropriate to the anticipated traffic volume, pedestrian movement and speed environment of the roading network (EIT-LT-P16).
- That on-site parking and manoeuvring spaces are safe and visually attractive (EIT-LT-P18).
- That on-site loading and unloading is provided in a manner which is adequate and safe (EIT-LT-P19).
- That adverse effects generated by land use activities and development adjoining state highways or roads are avoided, remedied or mitigated, where they have potential to reduce the safety and efficiency for road users (drivers, pedestrians, cyclists) and railway users. Adverse effects include glare, inappropriate lighting, smoke, or discharges onto the road or railway corridor (EIT-LT-P24).
- Effects from increased or changed traffic types or changes to road access are managed to ensure that the activity does not compromise the safe and efficient operation of the road network or adversely affect the safety and convenient movement of people on public roads (EIT-LT-P26).

#### Assessment:

The proposal aligns with the intent of objective EIT-LT-O1 and policy EIT-LT-P4 as the quality of the roading networks utilised for the construction of the solar farm will be maintained and any damage incurred remedied through the use of pre and post-construction road surveys. Operational traffic will be relatively small-scale and will not impact on the quality of the roading network. The ITA (refer to Appendix M) determines that construction and operational traffic movements associated with the solar farm will be undertaken in a manner which continue to provide for the current and future needs of people and goods travelling through the Foxton area.

The proposal is in keeping with the intent objective EIT-LT-O3 and abovementioned policies EIT-LT-P14 to P26 as:



- The vehicle entrances have been designed in accordance with the Horowhenua District Plan standards in regarding to sight and separation distances.
- The quality of the roading network will be maintained through the use of pre and post-construction road surveys, which will enable the applicant to monitor and remedy any damage to public roads incurred during the construction period.
- Construction traffic will be managed to ensure that the safety and efficiency of the state highway and District road networks is maintained.
- Operational traffic movements will be small-scale and can be easily accommodated within the existing roading network.
- On-site parking, manoeuvring and loading has been designed and located in a functional, safe and efficient manner.
- An ITA (refer to Appendix M) has been prepared which determines that the proposed access, on-site parking and manoeuvring and traffic movements associated with the construction and operation of the solar farm will occur in a manner which maintains the safety and efficiency of the local and state highway road networks.

The proposal is in keeping the above policy EIT-LT-P11 as the construction and operation of the solar farm will be undertaken in a manner which maintains the safety and efficiency of the State Highway 1 network. The applicant has consulted with Waka Kotahi NZ Transport Agency in relation to the proposal. The Agency agrees that the proposed management of construction traffic will avoid impacts on the safety and efficiency of the state highway network.

### 8.11.2.2 Utilities and Energy

At a high-level, the relevant objectives and policies in Chapter EIT-UE of the District Plan relating to network utilities and energy seek that:

- The establishment, operation, maintenance and upgrading of network utilities is provided for and protected, while avoiding, remedying or mitigating adverse effects on the environment (EIT-UE-O1).
- The efficient use of energy and the development and use of renewable electricity generation infrastructure is recognised and provided for, where the adverse effects on the environment can be avoided, remedied or mitigated (EIT-UE-O2).
- The establishment and development of new renewable electricity generation facilities is managed to ensure the adverse environmental effects that are more than minor are avoided, remedied or mitigated (EIT-US-P12).
- The contribution of renewable energy use and development to the well-being of the District, Region and Nation is recognised (EIT-UE-P13).
- Adverse effects on the environment from renewable electricity generation and distribution activities are avoided, remedied or mitigated, specifically on those parts of the environment most sensitive to change (EIT-UE-P14).
- That effects of renewable electricity generation are managed by:
  - Avoiding significant adverse cumulative effects on the characteristics and values of outstanding natural features and landscapes; and
  - Avoiding any other adverse effects of renewable electricity generation facilities on the characteristics and values of the outstanding natural landscapes and



features. Where avoidance is not reasonably practicable, adverse effects should be remedied or mitigated (EIT-UE-P15).

- Land use and development adjoining the National Grid, are managed to avoid, remedy or mitigate any adverse effects on the safe and efficient operation of the electricity transmission (EIT-UE-P24).

#### Assessment:

The other objectives and policies not referred to in this assessment are not relevant to the proposal.

The proposal aligns with the direction of objective EIT-UE-O1 as the substation, which is a network utility, will be operated by Transpower. The design, construction and operation of the substation will be undertaken based on best practice and in a manner which avoids, remedies or mitigates adverse environmental effects of the network utility operations.

Whilst the solar farm is excluded from the definition of a network utility operator it is notable that these objectives and policies are supportive and facilitate the establishment and operation of new renewable energy.

Notable in the assessment of these policies is that the project is proposed on land that does not have outstanding natural features or values, (being in the Foxton Dunefields Precinct which is not one of these, nor a domain identified as having a high amenity value).

These objectives and policies identify the establishment of renewable energy facilities as a priority for the district in areas where the landscape is not identified as of key value. The proposal is entirely consistent with this desired approach and is entirely consistent with the outcomes sought in objectives EIT-UE-O1 and policies EIT-UE-P12, P13, P14 and P15.

The project also aligns with the intent of policy EIT-US-P24 as the solar farm has been designed to ensure that the ongoing operation and maintenance of the National Grid network is not compromised, noting that the proposal incorporates the establishment and operation of a substation to ensure that electricity generated by the solar farm can safely and efficiently enter the National Grid network. Careful consideration has been given to the design and location of buildings, structures and planting to ensure that adverse effects on the operation and maintenance of the National Grid network are avoided.

### **8.11.3 District-Wide: Hazards and Risks**

#### **8.11.3.1 Hazardous Substances**

The relevant objectives and policies in Chapter HAZ-HS relate to hazardous substances management and seek:

- That adequate measures are taken to avoid or mitigate adverse environmental effects from the use, storage and transport of hazardous substances (HAZ-HS-O1).
- That the use and storage of hazardous substances near the following areas is limited (points not relevant have not been included in this list):
  - Waterbodies or wetlands;
  - significant ecological sites;
  - sites of particular heritage or cultural value; and
  - dwellings, other than a dwelling on the same site as the activity (HAZ-HS-P4).



- That appropriate facilities and systems are provided to avoid accidental events involving hazardous substances that could result in unacceptable risks to human health and environment (HAZ-HS-P7).

#### Assessment:

The project has been designed so that the substation and BESS area is located away from waterbodies on the site and therefore the proposal is consistent with the policy. The Hazardous Substances Assessment attached as Appendix N outlines how the use and storage of hazardous substances on the site will occur in alignment with industry standards and equipment includes standard containment methods as the majority of equipment used on the site will be standard industry equipment that must be built to certain standards to control potential hazardous substances effects. In addition, it is proposed that a condition of consent will require an Emergency Response Plan to be developed and approved by Council that will detail the onsite processes and responses that will occur and how and who will manage these. These proposed systems and processes will introduce measures to avoid environmental effects from the hazardous substances involved with the proposal and it will therefore be consistent with these objectives and policies.

#### **8.11.3.2 District-Wide: Natural Hazards**

The objectives and policies in Chapter HAZ-NH relate to natural hazards and at a high level:

- Require adverse effects of natural hazards on people, property, the environment and well-being of communities to be avoided or mitigated (HAZ-NH-O1).
- That land use and development does not significantly worsen the risk of occurrence or the severity of natural hazards or compromise the effective functioning or integrity of natural hazard protection or mitigation works (HAZ-NH-O2).

#### Assessment:

The proposal does not conflict with these objectives as the only potentially relevant hazard for the site is flooding from the nearby Manawatū River or rainwater backing up on the site to cause flooding. The Stormwater and Flood Risk Assessment provided in Appendix J determines that the site is subject to minimal flooding and the proposal has been designed to avoid flood sensitive areas from these parts of the site. The proposal also does not significantly change the landform or stormwater runoff patterns on the site and does not therefore worsen the risk of flooding to any other properties as outlined in the Stormwater and Flood Risk Assessment attached as Appendix J).

The proposed lot boundaries are around existing dwellings and do not facilitate further future development other than on the large solar farm site in the future and do not therefore generate the potential for habitable dwellings that would be subject to natural hazards.

#### **8.11.3.3 District-Wide: Contaminated Land**

The objectives and policies in Chapter HAS-CL relate to contaminated land and seek to avoid or mitigate the risk of adverse effects from land use and redevelopment of contaminated or potentially contaminated land (HAZ-CL-O1 and HAZ-CL-P3).

#### Assessment:

The proposal aligns with the direction of objective HAZ-CL-O1 and policy HAZ-CL-P3 as the PSI report (refer to Appendix S) has identified that there are some potentially contaminated soil areas on the site from previous land use activities, one that is within the proposed land development area. Even though the soil disturbance proposed meets the permitted activity criteria, the PSI report appended to this application recommends that to appropriately



safeguard human health, that soil sampling is undertaken and if contamination is found, that a management plan is prepared to outline measures to manage the soil in a way that will avoid potential risk to human health during the development works.

This proposed condition gives certainty that the proposal will be consistent with these objectives and policies as the proposal can be undertaken in a manner which avoids effects on the environment and human health.

#### **8.11.3.4 District-Wide: Historic Heritage and Cultural Values**

The objectives and policies contained in Chapter HCV seek to:

- Identify historic heritage within the Horowhenua District which is representative of its historic occupation and settlement (HCV-HH-O1).
- That significant historic heritage that reflects the culture and history of the District is protected from inappropriate land use and development (HCV-HH-O2).
- That public awareness of, and support, for historic heritage in the District is promoted (HCV-HH-O3).
- That areas and sites of cultural significance, wāhi tapu, wāhi tupuna and other taonga are protected from adverse effects of inappropriate subdivision, use and development (HCV-SASM-O1 and HCV-SASM-P1, P2 and P4).

##### **Assessment:**

As detailed in the Archaeological Assessment in Appendix L, there are no recorded historic heritage sites, or archaeological sites. The site is also highly modified.

The proposal will not adversely impact known historic heritage items as appropriate protocols will be adhered to in the unlikely instance that sensitive material is uncovered during works, thereby avoiding impacts on the District's historic heritage. For these reasons, it is considered that the proposal aligns with objectives HCV-HH-O1 to O3.

The site does not contain any opportunities to raise public awareness and understanding of historic heritage, due to the absence of identified heritage values within the project area.

The proposal aligns with outcomes sought through objective HCV-SASM-O1 and policies HCV-SASM-P1, P2 and P4. While the wider area is considered to be of cultural significance the site itself is not known to contain any specific sites of historic heritage.

Genesis and Ngā Hapū o Himatangi have worked together to recognise Ngā Hapū o Himatangi, to reflect their partnership and to mitigate the impacts of the project on Ngā Hapū o Himatangi. Ngā Hapū o Himatangi, Rangitāne o Manawatū and Muaūpoko have provided written support (Appendix D).

#### **8.11.3.5 District Wide: Natural Environment Values**

##### **Ecosystems and Indigenous Biodiversity**

The objectives and policies contained in Chapter NEV-ECO seek to:

- Protect the areas of significant indigenous vegetation and significant habitats of indigenous fauna (NEV-ECO-O1) and manage the effects of land use and development to avoid, remedy or mitigate adverse effects on these. (NEV-ECO-P1), and



- Encourage land use and development that maintains and enhances indigenous biodiversity through the protection and enhancement of areas of significant indigenous vegetation and habitats of significant indigenous fauna (NEV-ECO-P2).

#### Assessment:

The proposal is not in conflict with objective NEV-ECO-O1 and policies NEV-ECO-P1 and P2, noting that the site does not contain any areas of significant indigenous vegetation or fauna. The proposal will, as discussed in objective ECO-O1, maintain indigenous biodiversity, as the solar farm has been designed to avoid or minimise works in streams, drains and wetlands and to reduce impacts on the site's low-value natural inland wetlands to the extent practicable. This is achieved through limiting works in low quality wetlands to the driving of piles and trenching of cables. As discussed in the effects assessment in Section 7.0 above and the EIA (refer to Appendix I), the proposal will not result in a loss of wetland extent or values and will have overall a positive effect on the site's ecology.

Furthermore, the proposal is considered to assist achieving policy NEV-ECO-P2, as the proposal incorporates enhancement of the site's biodiversity values through native planting along drain margins and the restoration of a cluster of low-value natural inland wetland areas. This area comprises of approximately 1.15ha of existing wetlands that will be enhanced to be a planted wetland area of 1ha with a further area of terrestrial vegetation on its margins.

#### **8.11.3.6 Natural Character**

The objectives and policies contained in Chapter NEV-NATC seek to protect the natural character of lakes, rivers and other water bodies and their margins for inappropriate use and development (NEV-NATC-O1 and NEV-NATC-P1 – P6).

#### Assessment:

Overall, the proposal will improve the site's ecological values. The proposal has been designed to minimise modification of the site's landform, avoid works within water bodies within the project area, minimise disturbance of wetland areas during construction, and undertake planting and enhancement of wetlands and drain margins. The proposal is therefore consistent with the intent of objective NEV-NATC-O1 and policies NEV-NAT-P1 to P6.

#### **8.11.3.7 Outstanding Natural Features and Landscapes and Domains with High Landscape Amenity**

The objectives and policies in Chapter NEV-NFL seek to ensure that outstanding natural features and landscapes are protected from inappropriate subdivision, use and development and that regard is given to other landscapes which have high amenity (NEV-NFL-O1).

#### Assessment:

The proposal does not conflict with the outcomes sought through objective NEV-NFL-O1 as the site is located outside of any outstanding natural features or landscapes, and is situated within the Foxton Dunefields landscape Precinct, which is not identified in the HDP as having high amenity values. Accordingly, no outstanding natural landscapes and features or high amenity landscapes will be impacted.

#### **8.11.4 District-Wide: Noise**

The relevant objectives and policies in Chapter NOISE relate to the management of noise associated with the construction and operation of land use activities, which in relation to the Rural Zone seek that the overall day and nighttime noise conditions are maintained at levels



compatible with the amenity and activity present in the Rural Zone (NOISE-P1). Objective Noise-01 refers to RURZ-GRZ-03 which seeks to avoid reverse sensitivity effects of noise on existing rural activities. This proposal, while emitting noise, does not prevent other rural based activities from continuing to be carried out as they are and therefore no tension is created with this objective.

Assessment:

The project will be in alignment with objective NOISE-O1 and policy as:

- In terms of construction activities, (as discussed in Section 7.0) the loudest construction activity will be impact piling of the structural supports for the solar arrays. Construction works will occur within standard construction hours and it is anticipated that construction noise will be within the allowable standards. A construction noise management plan is required as a condition of consent so that noise mitigation measures can be identified and put in place should they be required to keep construction noise within the required standards. As compliance with the standards is considered to maintain expected amenity levels, this will avoid impacts on the amenity values of surrounding sensitive receivers.
- Noise from the operation of the solar farm will comply with the allowable noise levels for the Rural Zone, however if the BESS is established in Stage 2, noise levels will be exceeded by 5 dB at the boundary of the property located immediately opposite the BESS and substation area and potentially at the dwellings that exist within the farm site that will be subdivided from the land as a result of the proposal.
- The proposal incorporates mitigation of this noise through the installation of a 3m high acoustic screen which will assist to reduce the noise experienced by this receiver. It is noted that the predicted exceedance occurs in the modelling of worst case operating scenarios and that the property that will experience this noise is a large commercial farm with no dwelling in the area near the solar farm. The potential amenity effects of the noise are reduced as there is no dwelling in the area of exceedance and the noise will not prevent the rural production activity from continuing to occur.

The proposal is therefore not considered contrary to the objectives and policies that relate to noise.

### 8.11.5 Subdivision

The objectives and policies relating to Subdivision are in Part 2, District Wide matters, Sub-Subdivision. Objective SUB-01 is to “*avoid subdivision in areas where there is a significant risk from natural hazards or where reverse sensitivity issues may compromise the efficient and effective operation of lawfully established and permitted rural activities including primary production activities and large-scale processing and infrastructure facilities*”.

Polic SUB-RURZ-P16 reinforces this. The other policies in this chapter are not relevant to the proposal.

Assessment:

The majority of the proposed subdivision is necessary to facilitate the proposed land use of the solar farm. The proposed subdivision creates one additional rural residential title around an existing dwelling above the existing titles that make up the Motuiti Farms block. The other rural residential lots are created around the four existing dwellings on the main farm block by relocating landlocked and access lots. One of these lots is 16ha with three lots being between 0.5ha and 2.07ha.



The establishment of these lots has the potential to create reverse sensitivity issues on the solar farm if the lots are on-sold and they become rural-residential sites owned by separate landowners and reduce future productive use of the site by removing this land from the larger parent title. These dwellings and their associated cartilage areas are however already existing and are located within the subject site which results in these elements of the subdivision not being contrary to the objectives and policies.

### **8.11.6 District Plan Objectives and Policies Conclusion**

In summary, the proposal is consistent with all objectives and policies in the rural zone but has tension with those that relate to rural character and amenity as well as subdivision due to the number of rural residential sites that will be created close to the solar farm. Notably there is no tension with the specific policies of the Foxton Dunefields landscape Precinct as the key features to be protected in this precinct have already been removed from the site. The dunes on the surrounding sites will remain the dominant feature in the wider landscape.

The nature and scale of the project's landscape and restoration plantings will reduce the visual prominence of the project whilst enhancing the biodiversity values of the site which results in the project being consistent with these objectives and policies. The project also creates a large-scale renewable energy generation project as directed as being important by the policies in the Utilities and Energy chapter and in the Regional and National level policy documents.

The project satisfies the directive to promote and provide for sustainable energy projects and has been designed to effectively avoid, remedy or mitigate adverse environmental effects.

The moderate degree of adverse change in the landscape that has been assessed as being created by the proposal may reduce over time as increasingly, solar farms are becoming a common feature in rural landscapes, both in the New Zealand and global context, successfully coexisting with agricultural and pastoral land uses. With appropriate design and mitigation measures, such as the setbacks and landscape plantings of this proposal, over time the project would integrate into the surrounding working environment and become part of expected character and amenity appreciated in this environment.

## **9.0 Statutory requirements relating to Iwi authorities**

Section 7 of the FTAA requires that all persons performing and exercising functions, powers and duties under this Act, must act in a manner that is consistent with:

- The obligations arising under existing Treaty settlements; and
- Customary rights recognised under the Marine and Coastal Area (Takutai Moana) Act 2011 and the Nga Rohe o Nga Hapu o Ngāti Porou Act 2019

This section discusses that relevant Treaty settlements that apply to the area. The other requirements of this section do not apply to the site.

### **9.1 Treaty Settlement provisions and redress**

Clause 5(1)(i) of Schedule 5 of the Act requires an application to provide:

- Information about any Treaty settlements that apply in the project area, including:
  - the identification of the relevant provisions in those Treaty Settlements; and
  - A summary of any redress provided by those settlements that affects natural and physical resources relevant to the project or project area.



There is one Treaty Settlement that applies to the area of the site. This is the Rangitāne o Manawatū Settlement. The requirements relating to this settlement are discussed in turn below.

### **9.1.1 Rangitāne o Manawatū settlement and Rangitāne o Manawatū Claims Settlement Act 2016**

The Rangitāne o Manawatū Claims Settlement Act 2016 gave effect to certain provisions of the deed of settlement signed by Rangitāne o Manawatū and the Crown on 14 November 2015. Other aspects of the settlement are provided for in the deed of settlement.

The Rangitāne o Manawatū Claims Settlement provides an acknowledgement of the Treaty breaches and an apology from the Crown. The Deed of Settlement settles the historical claims of Rangitāne o Manawatū and specifies the cultural redress including overlay classification, vesting of lands, deeds of recognition over lands as well as statutory acknowledgement and geothermal statutory acknowledgement.

The Land Settlement provided redress to Rangitāne o Manawatū in the form of land, money, the first right of refusal of certain Crown lands, facilitation of ongoing relationships with government agencies, imposition of overlay classification and statutory acknowledgements placed over land sites, place name changes and an apology from the Crown. The Act establishes an advisory board to provide advice to the Manawatu-Wanganui Regional Council on freshwater management issues relating to the Manawatū River catchment.

There is no relevant settlement land that applies to this proposal from this Deed of Settlement or claims settlement Act, however Statutory acknowledgement applies to the Manawatū River and its tributaries. The relevant catchment area referred to in the deed is shown in Figure 36 below. The deed describes that the Manawatū river was the main route for travel and communication for Rangitāne o Manawatū and was also a key food source. Any activity that disrupts the flow of the water way or pollutes the water course is seen as having a negative impact on the mauri which then in turn has a direct negative impact on Rangitāne o Manawatū land and people.

No direct tributaries flow through the site, however the water in the drains on the site will eventually flow to the Manawatū River. The proposed change to the use of the land will result in less contaminants being applied to the land and entering the waterways and will contribute to an improvement in the quality of water that leads to the Manawatū river. This is interpreted to be assisting to achieve this part of the intent and purpose of this deed. In addition the planting of the drain margins and 1.15ha wetland and surrounding area will assist reduce sediment entering these drains and reduce water temperature.



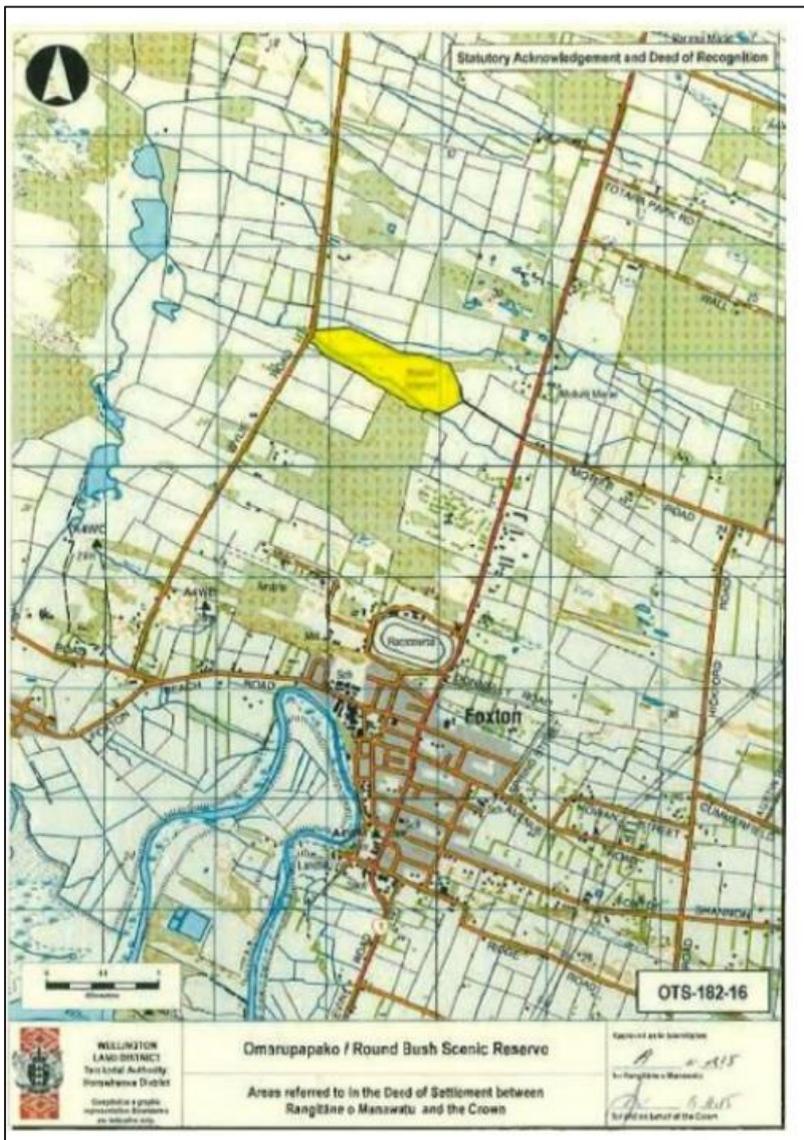


2019. This reserve is also subject to a deed of recognition recognising the special association of Rangitāne o Manawatū with the site.

The Himatangi Bush Scientific Reserve located to the northeast of the site is also subject to an overlay classification (whenua Rahui) which requires that the Crown acknowledge Rangitāne values in relation to that area.

The proposal will not have any impact on the statutory acknowledged land or that subject to an overlay. However, the establishment of 26ha of planting on the subject site will provide an area of significant ecological habitat to support any native birds or fauna that occupy the reserve sites and will support the ecological function of this reserve land.

**Figure 37: Omarupapako Reserve. Closest Statutory acknowledged land**



The Foxton Solar Farm is considered to be consistent with the Rangitāne o Manawatū settlement deed and Act 2016.



### 9.1.2 Rangitāne o Manawatū Environmental Management Plan

Clause 5(1)(h) and 5(2)(g) of Schedule 5 of the Act requires an application to provide an assessment against a planning document recognised by a relevant iwi authority and lodged with a local authority.

The Rangitāne o Manawatū Environmental Management Plan has been lodged with Horowhenua District Council and is therefore relevant to this application. The plan has been endorsed by Tanenuiarangi Manawatū Incorporated (Rangitāne o Manawatū Iwi Authority) and Rangitāne o Manawatū Settlement Trust. The Plan sets out a vision framework to support decision-making and to ensure that environmental management in the Rangitāne o Manawatū rohe is:

- Holistic in definition and design;
- Has a positive impact on lifestyles and ecosystems; and
- Can be easily tracked and monitored.

The key outcomes of the plan include, but are not limited to:

- Whānau exercise Rangitānenuirawa and kaitiakitanga over their natural environment and waterways, protecting the environment for future generations”.
- Ki uta ki tai is a whole-of-landscape approach, understanding and managing interconnected resources and ecosystems from the mountains to the sea.

The plan sets out relevant actions to achieving these outcomes with a traffic light review system to track how well Councils within the rohe are achieving the outcomes sought by the plan.

Of key relevance to this proposal is the plan seeks to provide guidance and leadership in the restoration of the catchment and the awa, which has been subject to environmental degradation due to past and current land uses. The Management Plan is stated to apply to “*the Manawatu Awa, their catchment, tributaries and connections including groundwater, wetlands and lagoons.*” While the site has no streams or rivers that run through it it does have wetlands within the catchment of the Manawatu Awa and farm drains that will discharge to tributaries of the Manawatu Awa.

The proposal is considered to be consistent with the visions framework of the Rangitāne o Manawatū Environmental Management Plan as the proposal will have a positive effect on ecosystems and water quality through the reduction in discharges to land and water, the restoration planting proposed along the margins of the drains to improve water quality and the protection and enhancement of a 1ha area of degraded inland wetland. Of note is that the Management Pan identifies that “*wetlands of scale*” need developing to protect water quality and provide for biodiversity. None of the wetlands on the site can be considered to be “of scale”, however the overall ecological enhancements of the site will work towards the identified priority of improving water quality in the Manawatu Awa.

It is considered the application is consistent with the relevant provisions of the applicable iwi management plan. Having regard to these provisions is considered to support the granting of the approvals sought.

## 10.0 Adjacent land and affected parties

### 10.1 Parties Likely to be affected

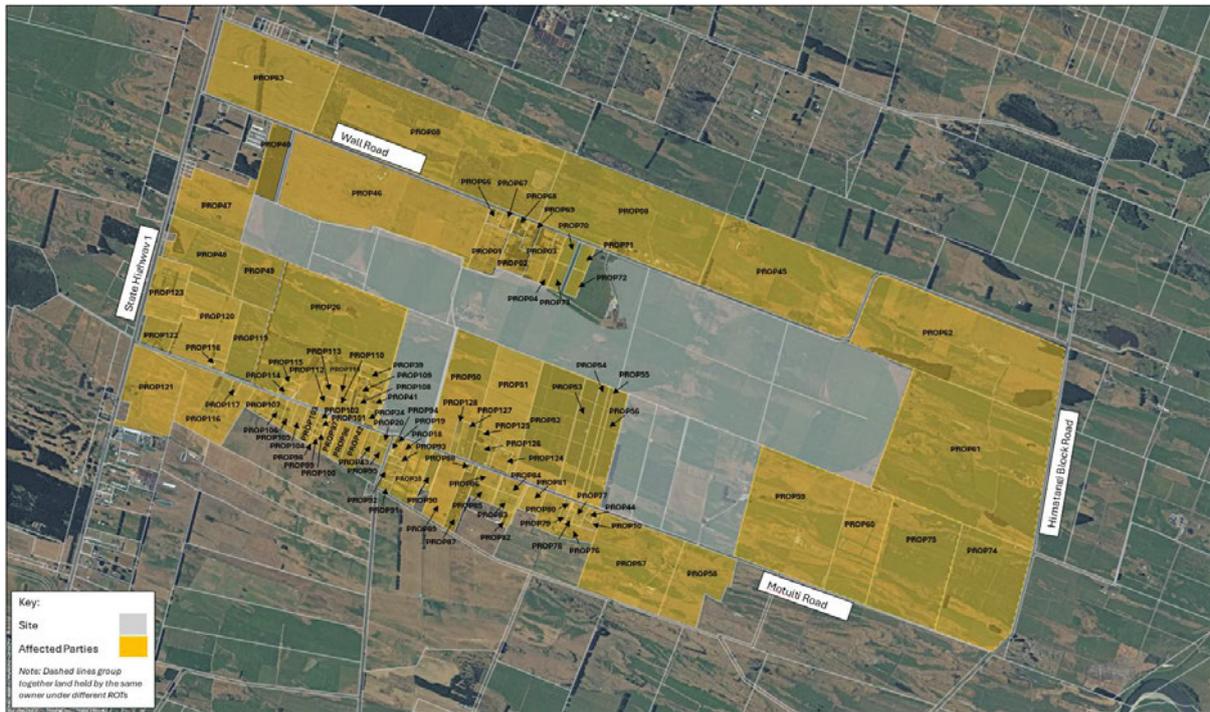
Sections 13(4)(j) and 43(2) of the FTA requires the applicant to provide a list of the persons and groups that it considers likely to be affected by the project, including (of relevance to this



project): relevant local authorities, iwi and relevant Treaty settlement entities. These parties are listed in Appendix F along with a key contact.

Figure 38 identifies properties considered likely to be affected by the proposal. The properties identified as likely to be affected were identified on a precautionary basis and included for reasons such as their proximity to the site, the potential for views across the solar farm and the likelihood that they would experience construction traffic and noise.

**Figure 38: Persons likely to be affected map (Source: Appendix F)**

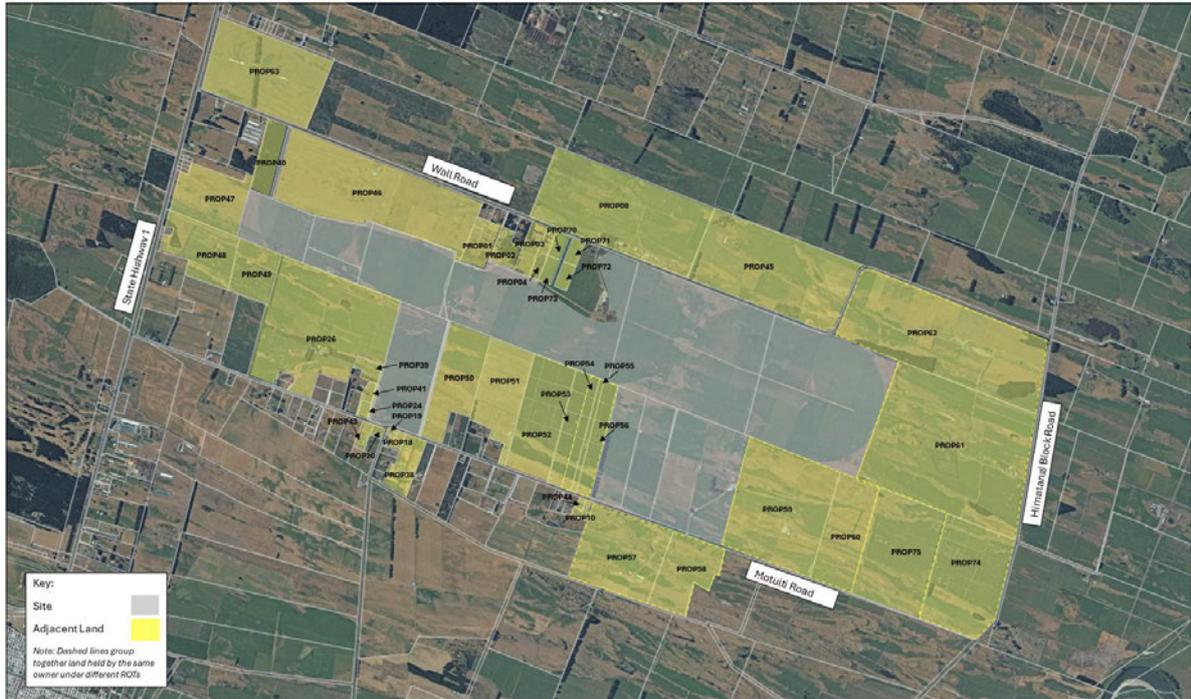


## 10.2 Owners of Site and Adjacent Land

Sections 43(1)(e) and (3)(a) and clause 5(1)(d) of Schedule 5 of the FTA require the applicant to provide the full name and address of the landowners and adjacent landowners and occupiers, these are set out in Appendix F and identified in Figure 39 below.



**Figure 39: Adjacent land map (Source: Appendix F)**



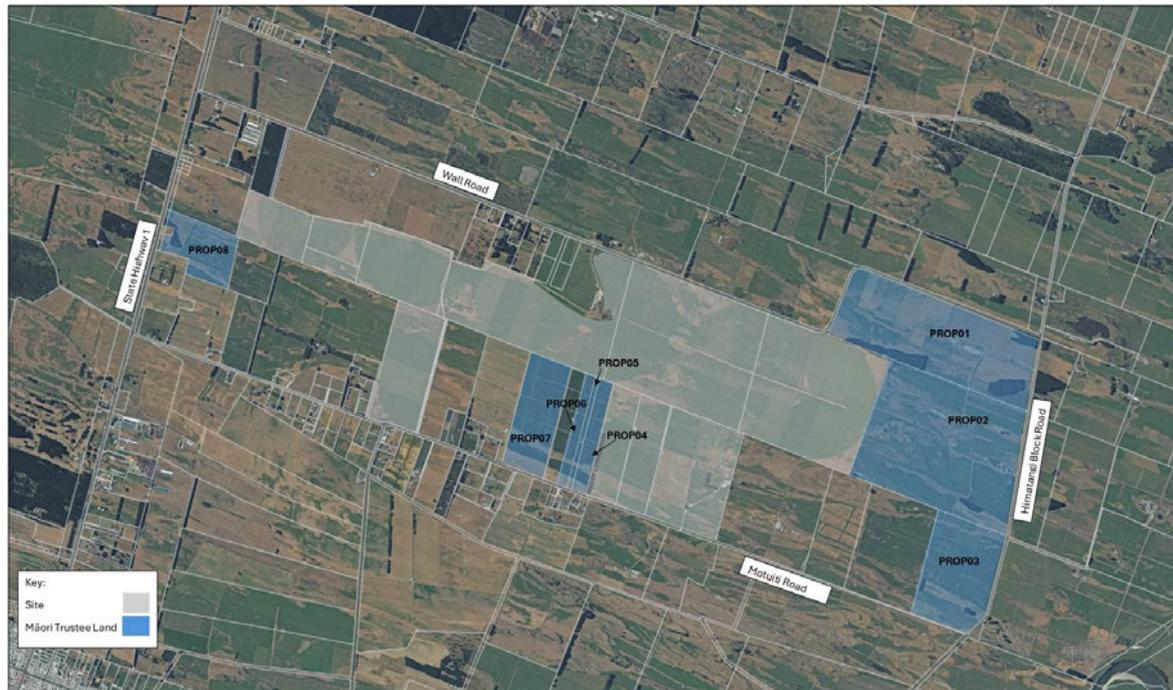
### 10.3 Māori land Owners

Clause 5(6) of Schedule 5 of the FTA also requires that if the applicant cannot supply the name and address of owners adjacent to the site because the land is Māori land then the application must include a statement to this effect. There are a number of Māori owned land parcels where it is not possible to supply the name and address of all owners. These are identified in Appendix F.

Land administered by Te Tumu Paeroa, the Māori Trustee is identified in Figure 40 below. A contact person for all other māori-owned land is included in Appendix F, as advised through engagement with Ngā Hapū o Himatangi representatives.



**Figure 40: Māori Trustee land map (Source: Appendix F)**



## 10.4 Consultation

Sections 13(4)(k) and 43(2) require a summary of the consultation that has been undertaken with the persons identified as likely to be affected under 43(4) (j) and how this has informed the project. The consultation process, responses, and outcomes are discussed in Section 5.0 of this report with key correspondence included in Appendix D.

## 11.0 Other Relevant Provisions of Resource Management Act

The provisions of the RMA of relevance to this application are the provisions of Parts 2, 3, 6 (excluding s 104D) and 8 to 10 of the RMA that direct decision making on an application for a resource consent. Of particular relevance are sections 5–7, 87A, 104, 104B, 108–108A and 123. These key sections are discussed below.

### 11.1 Section 5 (Purpose of the RMA)

Section 5 identifies the purpose of the Act as being the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

It is considered that the proposal accords with the purpose of the RMA and will not have an adverse effect on the sustainable management of natural and physical resources. The very nature of the proposal as a large-scale sustainable energy generation project is one that has the purpose of sustainable management on a national scale, at its core. This needs to be kept in mind when analysing the local effects created. The effects of the proposal in terms of adverse effects on the environment are discussed in detail in Section 7.0 of this report.



## 11.2 Section 6 (Matters of national importance)

Section 6 of the RMA sets out several matters of national importance. Those relevant to this application are reproduced below:

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

*(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

*(h) the management of significant risks from natural hazards*

It is notable that the only matters of national importance relevant to this application that must be provided for is the relationship of Māori and their culture with their ancestral lands and sites, and the preservation of the natural character of wetlands. It has been described earlier in this report how the proposal does not exacerbate and is not subject to any natural hazards.

The proposal is considered to not only preserve but will enhance the natural character of the wetlands within the application site. The ecology report describes the wetlands as having little value and these values are not further reduced by the proposal and in some areas of the site they are enhanced by the proposed native planting and protection of margins.

The Foxton Solar Farm sits within an area of interest to Ngāti Raukawa ki te Tonga, Rangitāne o Manawatū, and Muaūpoko. With the direct proximity of the proposed solar farm to Motuiti Marae, Rangitāne o Manawatū and Muaūpoko have provided their support, in writing, for three hapū of Ngāti Raukawa ki te Tonga (Ngāti Rakau, Ngāti Te Au, and Ngāti Turanga – together Ngā Hapū o Himatangi) to take the lead in respect of the project. Ngā Hapū o Himatangi, Rangitāne o Manawatū and Muaūpoko have provided written support (Appendix D).

All relevant matters of national importance have therefore been provided for in this application.

## 11.3 Section 7 (Other matters)

Section 7 identifies several "other matters" to be given particular regard to in the consideration of any assessment for resource consent. The relevant matters from section 7 are:

*(a) kaitiakitanga:*

*(aa) the ethic of stewardship:*

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

*(c) the maintenance and enhancement of amenity values:*

*(d) intrinsic values of ecosystems:*

*(f) maintenance and enhancement of the quality of the environment:*

*(g) any finite characteristics of natural and physical resources:*

*(i) the effects of climate change:*

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

As discussed above, Ngā Hapū o Himatangi have confirmed their support for the Project and consider that any adverse cultural effects of the Project will be appropriately addressed. In



terms of the efficient use and development of natural and physical resources the proposal uses a large area of farmland, some of which is Class 3 soils, to harness solar energy to create much demanded electricity. It is noteworthy that in using the land area and soil, the proposal temporarily reduces the impact on the land and does not prevent it from being utilised for productive use at some time again in the future.

The proposal does not have adverse effects on the intrinsic values of ecosystems which are affected by the proposal and the quality of the broader natural environment is enhanced through the creation of some habitat value on the site and a localised improvement in water quality.

Amenity of immediate properties are affected in the short to medium term, but the HDP describes that this large-scale change in land use is not necessarily perceived to be adverse in this District due to it being anticipated that land use in the Rural Zone will change overtime and the Foxton Dunefields landscape Precinct is not identified as an area of high existing amenity in the District.

Paragraph (j) requires decision makers to have particular regard to the benefits of renewable energy. These benefits have been described throughout this report and are considered to be a significant factor in the consideration of this application.

Overall, when particular regard is given to these matters, they do not create any barriers to the approval of this application.

## 11.4 Part 3 of the RMA

Part 3 of the RMA related to the duties and restrictions under the RMA. It is considered that the proposal meets Part 3 of the RMA because:

- The approvals sought are all approvals required under sections 9 and 11 and no other approvals are required.
- Section 16 can be complied with. The construction and operation noise and vibration effects have been assessed by a suitably qualified acoustics expert and they have concluded that the District Plan noise limits will be met at the boundary of all but one property. An acoustic barrier for operation noise and a construction management plan requiring monitoring and the detailing of methods that can be used to reduce construction noise at sensitive receivers has been proposed. These proposed measures demonstrate that the best practicable option to avoid adverse noise effects has been incorporated into the proposal.
- Section 17 is met as the discussion above demonstrates that the applicant has fulfilled their duty to avoid, remedy or mitigate any adverse effect on the environment arising from the proposed activity.

## 11.5 Part 6 of the RMA

Part 6 of the RMA sets out how decision on resource consent applications are considered under the RMA. The relevant provisions of section 6 are addressed below;

- **Section 104** in Part 6 is the primary section that sets out the decision-making requirements for resource consents under the RMA. The above assessments have concluded that the proposal is consistent with the provisions of all the planning instruments with the exception of tension with the HDP objectives and policies that relate to rural character and amenity. The implications for this are assessed in section 6 above.

In addition to this;



- The application does not include any approvals under **section 105 or 107** as no discharge consent is required.
- Under **section 106** of the RMA when considering an application for subdivision the consent authority may refuse to grant a subdivision consent if it considers there is a significant risk from natural hazards or sufficient provision has not been made for legal and physical access. The proposed lot boundaries are around existing dwellings. The subdivision plan, traffic report and hydrology reports submitted clearly demonstrate that sufficient legal and physical access is provided to all lots (and already exists) and that the sites are not subject to flooding or natural hazards. There is no reason under section 106 that approval cannot be granted for the subdivision consent as proposed.

## 11.6 Part 10 of the RMA

Part 10 of the RMA relates to subdivision. These provisions are relevant to the resource consent subdivision approvals sought and are addressed below:

- Specific conditions have been proposed in relation to the subdivision consent approval sought. These conditions are consistent with section 220 of the RMA.
- No esplanade reserves are required.
- There are no roads to vest, and all amalgamations and easements are shown on the drawings in accordance with standard RMA practice.
- All boundaries and allotments are shown on the scheme plans.

## 12.0 Conclusion

Genesis seeks approval under the Fast Track Approvals Act for all resource consents required by the proposal outlined in this application to establish a solar farm at 304-508 Wall Road and 447 Motuiti Road, Foxton. No other authorisations are required that may be sought under the FTA.

The proposed solar farm is of a scale that is clearly of national significance as it will generate 180MW<sub>AC</sub> of energy and the Regional Policy Statement identifies that any generation facility greater than 1MW is of regional significance.

The reduction and careful management of the localised effects generated result in the proposal only have effects that are not adequately mitigated in terms of landscape. These effects create tension with the objectives and policies in the HDP that relate to maintaining and enhancing rural character and amenity. The proposal is otherwise consistent with the relevant provisions of all other district, regional and national planning instruments that apply and a consenting pathway is provided for under the NES-F for works in natural inland wetlands. The recently amended NPS- REG requires decision makers to enable REG assets and activities in all locations and environments and where section 6 matters do not apply (as in this case with the exception of wetlands and the relationship of Maori with matters of value) the effects must only be avoided remedied or mitigated where practicable (Policy F (2) and (3)).

This single area of policy inconsistency and the overall low-moderate/moderate level of landscape effects which do not conflict with a matter in section 6, do not support a decision to decline the resource consent approvals sought, as based on the assessments provided it is considered that the level of effects created would not meet the threshold of “significant enough to outweigh the proposals regional or national benefits”, which enables an application to be declined.



As a result and for the reasons set out in this AEE, it is considered the resource consent approvals sought for this project are required to be granted by the Panel subject to appropriate conditions. A draft set of appropriate conditions of consent has been provided in Appendix S.

In terms of section 104(1)(a) of the RMA, the actual and potential effects of the proposed activity on the environment will be moderate and acceptable for this large significant renewable energy project as discussed in Sections 7.0 and 8.0 of this report.

In particular, the majority of potential effects have been avoided or mitigated as far as practicable by the careful site selection for this project, being a large flat site, already heavily modified, with very low existing ecological values in terms of indigenous habitats, flora and fauna. The potential effects on wetlands, and potential amenity related effects in terms of construction traffic, rural landscape values and operational noise are minimised to the extent practicable by careful site design and layout, although residual landscape and noise effects still occur. The proposed conditions of consent that will require management of construction and operation effects and the implementation of the proposed landscape planting and restoration and enhancement planting.

Increasingly, solar farms are becoming a common feature in rural landscapes, both in the New Zealand and global context and they are now commonly and successfully coexisting with agricultural and pastoral land uses. With appropriate design and mitigation measures, such as the setbacks and landscape plantings described, over time the project will start to integrate into the surrounding working environment, as concluded by the ALE.

The nature and scale of the project's landscape and restoration plantings will reduce the visual prominence whilst enhancing local biodiversity and ecological restoration. While the scale of landscape change that will occur will create adverse effects and introduce a large infrastructural element to this flat open landscape, the District Plan guides that large scale land use change is a key part of the history of the area and future use of the rural area will be determined by the integration of what communities require to be produced from the land with the management of effects on identified key values. The discussion of effects identifies that the site does not contain any remnant dunelands, wetlands, habitats or indigenous vegetation of value and the effects of the proposal have been able to be minimised by design and management conditions.

The higher order planning documents identify that providing for sustainable energy generation is a priority and there is therefore the need to maintain a balance between the changing energy needs for the country with the adverse effects of such a proposal. This proposal is of a significant scale and size and therefore generates significant renewable energy benefits. A proposal of this scale will of course change the visual character of the locality in which it exists, however these effects have been mitigated as far as practical by the design approach proposed, especially the boundary, enhancement and restoration planting.

The proposed activity will also generate positive effects on water quality and biodiversity values of the site as well as significant benefits in terms of the generation of sustainable electricity in New Zealand.

A consenting pathway for this proposal is provided through the NPS-FW by the functional need for this project to be located on this large, flat site containing low value wetlands, located adjacent to the National Grid.

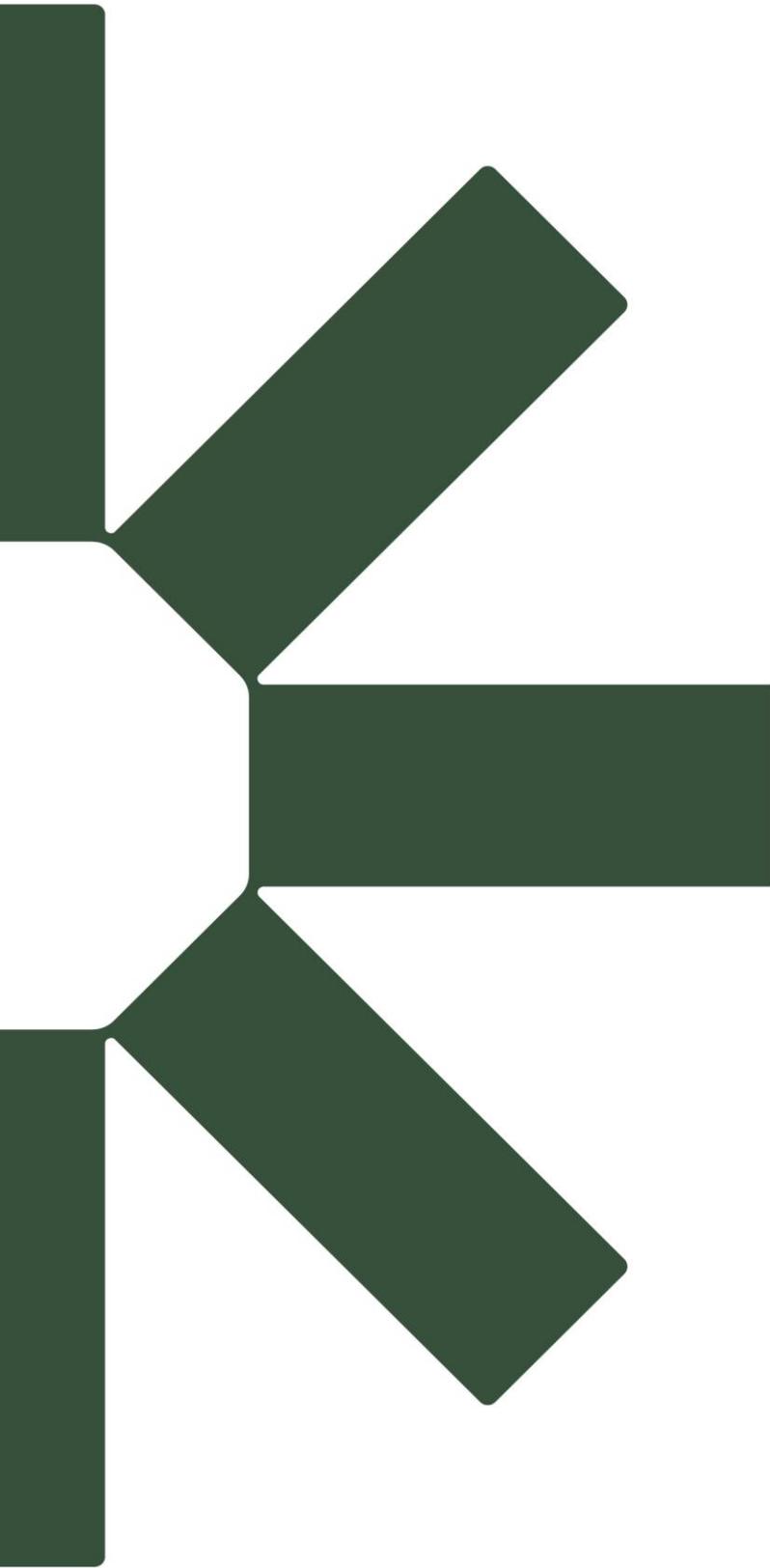
The proposal is consistent with Part 2 of the RMA because it is a project for the sustainable management of natural and physical resources and does not create tension with any of the matters raised in Part 2 other than in relation to amenity, a section 7 matter. The issue of landscape character and amenity has thoroughly been discussed in this report. The benefits



derived from the development of renewable energy is also a key matter under Section 7(j) and these matters therefore need to be balanced. It is noted that the development of renewable energy receives additional weight through the NPS-REG, in contrast to amenity values and landscape values, which has no such similar support through any higher order National Policy Statements.

It is therefore considered that approving this project assists to achieve the purpose of the FTA which is *“to facilitate the delivery of infrastructure and development projects with significant regional or national benefits”* and that there is no relevant matter in this Act that would result in this application not being approved.





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