

FAST-TRACK CONSENTING

Rangiriri Solar Farm¹

IN THE MATTER

of an application by Rangiriri Solar Farm Limited and Transpower New Zealand Limited to the Environmental Protection Authority ("EPA") under the COVID-19 Recovery (Fast-Track Consenting) Act 2020 to establish and operate the Rangiriri Solar Farm at Rangiriri West in the North Waikato.

Expert Consenting Panel:

Kate Storer (Chair)
Cherie Lane (Member)
James Whetu (Member)

Date of decision:

22 December 2023

RECORD OF DECISION OF THE EXPERT CONSENTING PANEL UNDER CLAUSE 37 OF SCHEDULE 6 OF THE ACT

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ACRONYMS

The following abbreviations and acronyms have been used throughout this decision.

ALE	Assessment of Landscape Effects
ALE Addendum	Addendum to the Assessment of Landscape Effects
AMP	Avifauna management Plan
Application	Land use consents sought by RSFL and Transpower to enable the Project.
BESS	Battery Energy Storage System
Block VII and Lot 12	Section 1 Block VII Rangiriri Survey District and Lot 12 Deposited Plan 12275 (684754) which form part of the Application site.
BSSMP	Battery Storage Safety Management Plan
CIA	Cultural Impact Assessment
CMP	Construction Management Plan
CTMP	Construction Traffic Management Plan
D-G Conservation	Director General of the Department of Conservation
DMP	Dust Management Plan
EcIA	Ecological Impact Assessment
EPA	Environmental protection Authority
ERMP	Ecological Restoration Management Plan
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
FENZ	Fire and Emergency New Zealand
Forest and Bird	Royal Forest and Bird Protection Society of New Zealand Inc
Freshwater NES	Resource Management (National Environmental Standards for Freshwater) Regulations 2020

FTCA	Covid 19 Recovery (Fast Track Consenting) Act 2020
PagerPower Addendum	Glint and Glare Addendum by PagerPower
HNZ	Heritage New Zealand Pouhere Taonga
Minister	Minister for the Environment
MOU	Memorandum of Understanding
NES-CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
NESETA	National Environmental Standard for Electricity Transmission Activities
NPS-ET	National Policy Statement on Electricity Transmission 2008
NPS-FM	National Policy Statement for Freshwater Management 2020
NPS-HPL	National Policy Statement for Highly Productive Land 2022
NPS-REG	National Policy Statement for Renewable Energy Generation 2011
NPS-REG 2023	Proposed National Policy Statement for Renewable Energy Generation 2023
Oakridge	The Oakridge subdivision which is located near to the Site
ODP	Operative Waikato District Plan
PagerPower Study	Solarvoltaic Glint and Glare Study" by PagerPower
Panel	The Expert Consenting Panel appointed to determine the Project
PSI	Preliminary Site Investigation
PDP	Proposed Waikato District Plan (Appeals Version)
Project	The proposal to establish and operate a solar electricity generation farm on 275 hectares of land at Rangiriri West in the north Waikato
Referral Order	Covid-19 Recovery (Fast-track Consenting) Referred Projects Order

RFI	Request for Further Information
RMA	Resource Management Act 1991
RSFL	Rangiriri Solar Farm Limited
Soil and Resource Report	Soil and Resource Report prepared by Hanmore Land Management
Transpower	Transpower New Zealand Limited
WDC	Waikato District Council
WRC	Waikato Regional Council
Waikato-Tainui	Te Whakakitenga o Waikato Incorporated
WRPS	Waikato Regional Policy Statement
WRP	Waikato Regional Plan

1. **INTRODUCTION AND THE PANEL'S DECISION AND REASONS**

- 1.1 Rangiriri Solar Farm Limited ("RSFL") and Transpower New Zealand Limited ("Transpower") propose to establish and operate a solar electricity generation farm ("the Project") on 275 hectares of land at Rangiriri West in the north Waikato ("the Site"). The relevant local authorities that would normally consider the application are the Waikato Regional Council ("WRC") and the Waikato District Council ("WDC").
- 1.2 RSFL and Transpower applied to the Minister for the Environment ("Minister") pursuant to section 27 of the Covid 19 Recovery (Fast Track Consenting) Act 2020 ("FTCA") to have the Application referred to an expert consenting panel for determination. The project is included in Schedule 68 of the Covid-19 Recovery (Fast-track Consenting) Referred Projects Order ("Referral Order"). As such, it is a "referred project" for the purposes of the Fast-track Consenting Act.
- 1.3 On 7 July 2023 RSFL and Transpower filed an application in accordance with Schedule 6 of the FTCA to enable the Project. In terms of the consents sought:
- (a) RSFL is seeking land use consents to construct and operate the power generation, storage and ancillary aspects of the Project;
 - (b) Transpower is seeking land use consent to construct and operate the transmission aspects of the Project, including an on-site substation and National Grid connections.
- 1.4 Together, these are referred to as "the Application" in this decision. For ease of reference, RSFL and Transpower are together referred to as "the Applicants".
- 1.5 An expert consenting panel was appointed comprising specialist resource management lawyer, Kate Storer (Chair), planning consultant and accredited hearing commissioner, Cherie Lane and planning consultant and accredited hearing commissioner (and Waikato-Tainui nominee) James Whetu to consider and determine the Application in accordance with FTCA procedures. This is the decision report of that expert consenting panel ("Panel").
- 1.6 The procedural history of the processing and consideration by the Panel of the information supplied under FTCA procedures is set out in Section 2 of this report.

The Panel's decision and reasons

- 1.7 Unlike listed projects (which have limited grounds for decline), the Project is a referred project, and as such sections 104A to 104D and 105 to 107 of the RMA apply.
- 1.8 As recorded in the AEE, the Project is, overall, a discretionary activity. In accordance with section 104B of the RMA, the Panel may grant or refuse the Application. If it grants the Application, it may impose conditions under section 108 of the RMA.
- 1.9 Having considered all the actual and potential effects of the Project, the Panel considers that the key issues in contention are the use of high-class soils, potential ecological effects (in particular on avifauna and bats) landscape and amenity effects, fire risk and emergency response and cultural effects/engagement with mana whenua.
- 1.10 Ultimately, the Panel has made the following decisions:

- (a) That no hearing was required on any issues on the basis that information available to it was thorough and able to be adequately tested via FTCA procedures; and
- (b) To **grant** the resource consents applied for subject to the conditions contained in Appendix 1.

1.11 The rationale for our decision is set out in detail in this decision report. However, the reasons can be summarised as follows:

- (a) The Project is consistent with and will promote the purpose of the FTCA. In particular:
 - (i) Benefits will be derived from the use and development of renewable energy generation, supporting security and diversity of energy supply and contributing to New Zealand's transition to low-emissions energy sources.
 - (ii) The Project represents a significant investment in the Waikato and will enable an economic output that is orders of magnitude higher than the use of the Site for dairy farming purposes.
- (b) Engagement with mana whenua has been genuine and effective, and the relevant mana whenua groups support the Project. There is also provision for ongoing engagement between the Applicants and the relevant mana whenua groups on matters relevant to the implementation of the Project.
- (c) The Project will enable improvement of the ecological values of the Site, by way of the retirement of two dairy farms and proposed riparian planting and fencing and screen planting.
- (d) The Project enables the ongoing use of the Site for primary production activities, and the design of the proposed infrastructure and the lifespan of the Project mean that there will be no permanent impact on the productive capacity of soils on the Site.
- (e) The Project aligns with all relevant national, regional, and local planning instruments. In particular:
 - (i) It aligns with the National Policy Statement for Renewable Energy Generation 2011 ("NPS-REG") which records the national significance of renewable energy generation and the need to locate renewable energy generation activities in locations where the renewable energy resource is available.
 - (ii) It is consistent with Te Ture Whaimana o Te Awa o Waikato / Vision and Strategy for the Waikato River ("Te Ture Whaimana") to restore and protect the Waikato River in terms of delivering benefits that are proportional to the impacts arising from the Project.
 - (iii) It is not an "inappropriate" use of land in terms of the National Policy Statement for Highly Productive Land 2022 ("NPS-HPL").
 - (iv) It is consistent with the relevant zoning in the operative Waikato District Plan ("ODP") and Proposed Waikato District Plan (Appeals Version) ("PDP") which contemplate the continued use of the Site for primary production activities.

- (f) Potential adverse effects during construction (noise, construction traffic, dust, erosion and sediment control) will be minor and can be addressed by the implementation of management plans and conditions of consent.
- (g) Potential adverse effects associated with the operation of the solar farm will be minor or moderate and can all be managed appropriately by conditions of consent. In particular:
 - (i) Potential adverse effects on landscape, rural character and amenity and glint and glare effects will be addressed by planting which will mature within five years of construction.
 - (ii) Potential adverse effects on the ecological features of the Site, and in particular on avifauna and bats, will generally be avoided by way of the retention of vegetation on the Site. Remaining effects can be addressed by way of consent conditions.
 - (iii) Fire risk associated with the storage of batteries on the Site can be managed by way of the preparation and implementation of emergency management plans in consultation with Fire and Emergency New Zealand ("FENZ").

1.12 Given that potential adverse effects can be adequately addressed, and having regard to the significant positive effects associated with Project, the Panel is satisfied that the purpose of both the RMA and the FTCA is best served by a grant of consent subject to the conditions that the Panel has elected to impose.

2. **PROCEDURAL MATTERS**

2.1 This section briefly canvasses the process followed by the EPA and the Panel, and the procedural background in terms of requests for comments, requesting further information, the site visit and independent technical advice received.

Panel functions

2.2 The Panel commenced its functions on 13 September 2023. The Panel was required by Clause 37 of Schedule 6 to the FTCA to deliver a decision within 25 working days from the date that invited comments closed (31 October 2023), i.e. 5 December 2023, unless an extension was sought.

2.3 On 13 November 2023 the Panel issued a Minute extending the timeframe for the decision by 25 working days, to 31 January 2024. The reason for the extension was to allow sufficient time for the Panel to receive and consider the expert advice obtained from its special advisors (discussed in paragraphs 2.24-2.25 below).

Site visit

2.4 On 16 October 2023 the Panel undertook a site visit, accompanied by Gen Hewett (EPA Project lead). The Panel drove through the application site. Representatives of the landowners were in separate vehicles and provided the Panel access to various parts of the application site.

2.5 The Panel observed the site and surrounds from the various viewpoints used in the Landscape Assessment. The site visit enabled us to gain a good understanding of the application site, the character of the surrounding environment and the visibility of the site from the surrounding area.

Panel meetings

- 2.6 The Panel convened weekly meetings by way of videoconference from 21 September onwards until 20 December 2023.¹ An in-person meeting was held after the site visit on 16 October 2023.

Invitations for comments and comments received

- 2.7 On 9 October 2023 the Panel issued an invitation to a number of parties and organisations to comment on the Application pursuant to clause 17 of Schedule 6 of the FTCA.
- 2.8 Statutory bodies, iwi authorities, iwi groups, Treaty Settlement Entities, persons listed in the Referral Order and the owners and occupiers of 16 adjacent sites were invited to comment on the Application.
- 2.9 Regarding adjacent landowners, the Panel noted that Section 1 Block VII Rangiriri Survey District and Lot 12 Deposited Plan 12275 (684754) ("Block VII and Lot 12") are identified in the Referral Order as forming part of the Project Site. The Application identified Block VII and Lot 12 as adjacent land.
- 2.10 The Panel therefore sought clarification² from the Applicants as to whether Block VII and Lot 12 were part of the Site or adjacent to it. In its response, the Applicant advised that it considered that Block VII and Lot 12 are both "*part of the Project site ... and adjacent land.*"
- 2.11 The Panel notes that the term "site" is not defined in the FTCA (nor in the RMA). However, the term is defined in both the ODP and the PDP, and both definitions provide for a "site" to be defined by its legal boundaries.³
- 2.12 The Panel therefore considered it appropriate to treat Block VII and Lot 12 as part of the Site and to invite comments from all owners and occupiers of land adjacent to Block VII and Lot 12.
- 2.13 The Panel also considered it appropriate to invite comments from:
- (a) FENZ, because the Panel was particularly interested in comments on fire risk and firefighting management requirements for the proposed solar farm.
 - (b) Federated Farmers of New Zealand, because the Panel was particularly interested in comments on the use of highly productive land for the proposed solar farm.
- 2.14 The Panel also invited comments from the owners and occupiers of the eight properties in the surrounding area that were identified in the AEE as potentially affected by the Project.
- 2.15 The full list of people and organisations invited to comment are listed in on the EPA website.⁴
- 2.16 Ten responses were received from the following organisations and persons:

1 On 21 and 27 September 2023, 5, 18, 25 and 31 October 2023, 9, 16, 23 and 30 November 2023, 14 December 2023, 20 December 2023.

2 By way of Further Information Request 1.

3 See Operative Waikato District Plan: Waikato Section Part 3 Appendices, P3 Defined Terms; Proposed Waikato District Plan Part 1-05 Interpretation.

4 <https://www.epa.govt.nz/assets/Uploads/Documents/Fast-track-consenting/Rangiriri/panel-correspondence/FTC84-Invited-parties-list-for-website.pdf>

- (a) Te Whakakitenga o Waikato Incorporated ("Waikato-Tainui");
- (b) Heritage New Zealand Pouhere Taonga ("HNZ");
- (c) WDC;
- (d) FENZ;
- (e) Royal Forest and Bird Protection Society of New Zealand Inc ("Forest and Bird");
- (f) Property Council New Zealand;
- (g) WRC;
- (h) Simpson Farms Limited;
- (i) Kerr Farms Limited;
- (j) The Director General of the Department of Conservation ("the D-G Conservation").

2.17 All comments received are available on the EPA website.⁵ The key issues raised in the ten responses comprised in particular: concern for potential impacts on bats, lizards and birds; appropriate firefighting design and emergency response and associated access measures; provision for wetland and riparian planting and protection; iwi engagement processes; and recommended conditions to support the proposal. The key issues raised by the persons / entities that supplied comments are set out in the table attached as Appendix 2 and are addressed in the relevant sections of this decision report.

Applicants' response to comments

2.18 The Applicants response to comments is available on the EPA website.⁶ The response has been closely considered and is addressed in the appropriate sections of this decision report.

Requests for further information

2.19 The Panel made four requests for further information ("RFI") to the Applicants, seeking further information and clarification of various matters in the application documents.

2.20 In particular, the Panel sought clarification of:

- (a) Various operational matters, including how safety issues would be managed on the Site, including the risk of fire associated with battery storage.
- (b) The consistency of the Application with the NPS-HPL, having regard to the fact that 94.9 per cent of the site is classified as "Highly Productive Land" in terms of the NPS-HPL.

5 See <https://www.epa.govt.nz/fast-track-consenting/referred-projects/rangiriri-solar-farm/comments-from-invited-parties/>

6 See <https://www.epa.govt.nz/fast-track-consenting/referred-projects/rangiriri-solar-farm/comments-from-invited-parties/>

- (c) The economic implications of replacing dairy farming on the site with the solar farm and associated sheep grazing.
 - (d) Details of the proposed sheep grazing regime and in particular, whether it is feasible to grow grazing grass under the panels.
 - (e) Proposed ecological enhancement including whether it was proposed to fence the wetlands on the site and the details of the stormwater treatment system and “off-site biodiversity initiatives” referred to in the Application.
 - (f) Details regarding the landscape assessment methodology, assumptions made and conclusions.
 - (g) The consistency of the Application with the Referral Order having regard to the differences in the size of the site and number of panels in the Order and in the Application.
- 2.21 In each case, the Applicants responded to those requests within the specified five working day timeframe. Those requests and responses are available on the EPA website.⁷
- 2.22 On 26 October 2023 the Panel also issued requests for further information from WRC and WDC in relation to the mana whenua groups consulted on resource consent applications in the vicinity of the Site. As part of the latter request, the Panel also sought information from WDC concerning details of any other resource consents granted for other solar farms in the North Waikato. The purpose of the requests was to understand the approach taken to mana whenua consultation in local consent processing, especially regarding any obligations on the local authorities under Treaty settlements.
- 2.23 WRC and WDC both provided helpful responses to these requests within the specified timeframe. The Panel is grateful for their assistance.

Independent technical assistance

- 2.24 The Panel requested and received independent expert assistance from the following special advisors:
- (a) Mr Jeremy Brabant, barrister, was appointed to provide legal advice regarding the extent to which the Application is consistent with the NPS-HPL;
 - (b) Mr Greg Akehurst, economist, was appointed to provide a peer review of the economic analysis included in the Application, with a particular focus on the use of highly productive land for the Project.
 - (c) Mr Simon Button, landscape architect, was appointed to provide a peer review of the Assessment of Landscape and Visual Effects included in the Application.
- 2.25 The advice received from these special advisors is discussed in the relevant sections of this decision.

Draft conditions / comments on draft conditions

- 2.26 A comprehensive set of proposed consent conditions was included with the Application. The Panel reviewed and made tracked changes to these

⁷ See <https://www.epa.govt.nz/fast-track-consenting/referred-projects/rangiriri-solar-farm/application/>

conditions and on 27 November 2023 the Panel circulated draft conditions for comment pursuant to clause 36(1) of Schedule 6 of the Act.⁸ The Applicants and any person or group who provided comments in response to the invitation issued by the Panel under clause 17(2) of Schedule 6 was requested to provide comments on the draft conditions by Monday 4 December 2023.

- 2.27 At the Applicants' request, the deadline was extended to Friday 8 December 2023 for all parties in accordance with the Panel's function under clause 10 of Schedule 5 to regulate its own procedure in a manner that best promotes the just and timely determination of an application. The reason for the request was to allow the Applicants further time to:
- (a) engage with mana whenua representatives on the Panel's proposed additional conditions relating to a mana whenua committee; and
 - (b) confirm the technical practicability of the additional screen planting proposed by the Panel.
- 2.28 Comments on the draft conditions were received from the Applicants, HNZ, WDC and one other person (addressed in paragraphs 2.30-2.35 below), all within the specified period. These comments and the Panel's responses are addressed in the relevant sections of this decision report.
- 2.29 The Panel made one further inquiry of the Applicants to confirm some final details around conditions.⁹

Request to withhold information

- 2.30 In response to its invitation to comment on draft conditions, the Panel received a letter from a mana whenua group concerning particular conditions. The letter included a request that it not be published in order to avoid causing serious offence to tikanga Māori.
- 2.31 The Applicants' response to draft conditions also included a memorandum of counsel which stated that RSFL considers that "the grounds for withholding information under section 7(2)(ba) of LGOIMA is met, in light of correspondence provided to the Panel by these mana whenua representatives."
- 2.32 Clause 16 of Schedule 5 of the COVID-19 Recovery (Fast-track Consenting) Act 2020 specifies that Part 1 of the Local Government Official Information and Meetings Act 1987 (LGOIMA) applies, with any necessary modifications, as if a panel were a board of inquiry given authority to conduct a hearing under section 149J of the Resource Management Act 1991. With reference to Part 1 of the LGOIMA, this means that in general, information held by a Panel is to be made available unless there is good reason for withholding it.
- 2.33 The reasons for withholding information are set out in sections 6 and 7 of the LGOIMA. Part 1 of the LGOIMA includes section 7(2)(ba) which enables the withholding of information to avoid serious offence to tikanga Māori, or to avoid the disclosure of the location of waahi tapu.
- 2.34 Having considered the request, the Panel determined that good reasons exist for withholding the information. The Panel was satisfied that the withholding of the information in question would not affect parties' ability to understand

8 Minute 5, 27 November 2023.

9 Specifically in relation to the text of Condition 2 (consent duration), the maximum tilt of the solar panels and provision for a condition concerning the construction of the engineered wetland.

the reasons for the conditions that the Panel has imposed. The Panel accordingly directed that the information contained within the letter be withheld.

- 2.35 The Panel records that the mana whenua group did not provide comments on the Application (although it was invited to do so) and therefore strictly speaking in terms of clause 36(1)(b) of Schedule 6 it did not have standing to provide comment on the draft conditions. Nevertheless, the material provided was helpful and entirely consistent with that provided by other mana whenua groups and therefore the Panel considered it appropriate to take it into account in its deliberations on conditions.

3. THE SITE, THE PROJECT AND CONSENTS REQUIRED

The site

- 3.1 The location and configuration of the Site are shown in Section 2 of the AEE. The site comprises two adjoining dairy farms held in four land parcels totalling 275 ha in area. Three of the land parcels are owned by Laing Holdings Limited, and one by Kerr Farms Limited.
- 3.2 RSFL has an agreement with the landowners which provides RSFL with the right to develop and operate the Project. These interests are protected by registered caveats over the relevant titles.
- 3.3 The site is currently operated as dairy and dry stock (beef) farms, with existing farm infrastructure (sheds, fencing, irrigation infrastructure and areas for silage storage, races) and the fields used for a mix of grazing and cropping. At the time of the site visit, much of the part of the site owned by Laing Holdings Limited was being utilised for growing maize while the parcel owned by Kerr Farms Limited was being used for dairy farming. There are three existing farm dwellings on the site, all accessed from Glen Murray Road.
- 3.4 Two transmission lines traverse the site: the Hamilton-Meremere B (HAM-MER-B) 110 kV transmission line and the Huntly – Otahuhu A (HLY-OTA-A) 220 kV transmission line.
- 3.5 The topography of the Site is predominantly flat, crossed by some open artificial drainage channels. The majority of the Site is planted with exotic pasture grass and maize, with some mature shelterbelts and amenity planting around the farmhouses.
- 3.6 The AEE identified three different types of wetland habitats within the Site.¹⁰ Grazing and stock disturbance is evident in the wetlands and, in general, their quality is poor, and diversity of species is low. The vegetation composition overall is dominated by exotic species.
- 3.7 The environment surrounding the Site is sparsely populated, and is predominantly used for dairy, grazing and other rural activities with some residential dwellings dotted around the landscape. Other land uses in the surrounding area include the Te Kauwhata Transport Depot located to the northeast at the intersection of Glen Murray Road and Te Ohaki Road and the Maurea Marae located 1.4km to the east of the Site on Te Ohaki Road. There is a seven-lot rural lifestyle subdivision ("Oakridge") currently under development near the intersection of Glen Murray Road and Rotongaro Road, to the west of the Site.

10 Comprising water pepper wetland, soft rush wetland and creeping bent wetland.

Key elements of the Project

- 3.8 RSFL is a subsidiary of Island Green Power UK Limited, which specialises in the development of utility-scale solar projects and battery storage systems with operations across the UK and Europe, Australia and New Zealand.
- 3.9 The Project will consist of the construction, operation, and maintenance of an estimated 146MWp photovoltaic solar farm connected to the National Grid. The key elements of the Project include approximately 233,000 solar panels, associated infrastructure, a battery energy storage system ("BESS"), and a National Grid substation, and two new 25m high monopoles to connect the substation and the national grid transmission lines.
- 3.10 The solar panels will cover approximately 69 hectares of the Site. The panels will be mounted on a metal mounting system which is pile driven into the ground to a depth of 1.5 to 3m. The panels will be aligned north-south and will rotate to follow the sun, starting and ending each day at their maximum inclination of 60 degrees from horizontal.
- 3.11 The rows of panels are to be spaced so that there is 6.25m between centrelines. When the panels are horizontal, there will be a space of 3.75m between rows. Medium voltage cabling will be trenched across the site at a depth of approximately 950mm.
- 3.12 The BESS and the substation will be located in the middle of the Site, towards the eastern boundary. It is proposed that the exact design of both the BESS and the substation will be confirmed at a later stage. However, the preliminary substation design occupies a footprint of approximately 70 m by 85 m (an area of approximately 6,000 m²). The substation switchyard will be covered with a crushed-rock surface and contain foundations and conduits for the substation equipment. It will be surrounded by a chain-link mesh security fence, approximately 2.5m in height.
- 3.13 A building located on one of the sides of the switchyard will contain control and protection panels, auxiliary power supplies, batteries and amenities for visiting maintenance staff, including self-contained bathroom facilities serviced by a septic tank and associated disposal field of approximately 30m².
- 3.14 It is proposed that the BESS will sit on a 6,500m² concrete platform (59m wide, 115m long). The batteries are proposed to be housed in up to 90 containers that will be 2.5m wide by 6.1m long, and up to 3.0m in height (or 3.5m if cooling equipment is located on top of the unit).
- 3.15 One new vehicle access point is proposed on Glen Murray Road to serve the solar farm site. This will be approximately 230m east of the existing 253 Glen Murray Road access point (which will remain to serve existing dwellings which are to remain). No other access points will be used to access the solar farm.
- 3.16 Construction will occur over approximately 12-18 months. Approximately 25,000m³ of earthworks will be required to enable cable installation and excavations/topsoil scraping for establishment of the internal access routes and the platforms for the substation and BESS.
- 3.17 It is proposed that the solar farm will operate for a period of 40 years, with the site decommissioned over the following two years. At decommissioning, all equipment is to be removed from the site and the site reinstated for agricultural activities.

- 3.18 As part of the Project, it is proposed that land-based primary production activity in the form of sheep grazing will be performed on the Site alongside the operation of the solar farm.
- 3.19 Some landscaping is proposed, in the form of screen planting along the road boundaries and riparian planting adjacent to the waterways within the site.

Consents required, reasons and activity status

- 3.20 The reasons for the application and consents required are considered in Section 4 of the AEE.
- 3.21 The Site is located in the Rural Zone in the ODP and in the General Rural Zone in the PDP. Consent is required under both the ODP and the PWDP because decisions have issued on the PWDP, but it is not yet operative.

RSFL's consent triggers

- 3.22 Discretionary activity consent is required under Rule 5.1.4.13 of the Waikato Regional Plan ("WRP") for the proposed earthworks (which generally relate to trenching for the cable installation and excavations for establishment of the internal access routes and the platforms for the substation and BESS.)
- 3.23 The consent triggers under the ODP are set out in Table 2 in the AEE. In summary, resource consent is required as a discretionary activity for a number of reasons comprising: industrial activity in a rural zone; earthworks; construction of the solar panels and BESS as building coverage; setbacks from existing transmission lines; setbacks from non-road boundaries; storage of hazardous substances (transformer oil); and parking, loading and access requirements on site. Consent triggers under the PDP are set out in Table 4 in the AEE and relate to "large scale infrastructure and associated infrastructure earthworks". Resource consent is also required as a discretionary activity.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

- 3.24 A Preliminary Site Investigation ("PSI") has been undertaken which concluded that HAIL activities, specifically waste disposal to land (farm dumps) have been undertaken on the Site and therefore parts of the Site are a "piece of land" for the purpose of clause 5(7) of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 ("NES-CS").
- 3.25 The Applicants assert that the NES-CS does not apply because none of the activities identified in clause (5)(8) are proposed, and in particular, that the Application does not propose to "change the use of the piece of land in a way that causes the piece of land to stop being production land" as contemplated by clause 5(8)(d)). In this regard, the Applicants say that the land will continue to be "production land" because agricultural activities (sheep grazing) will continue on the Site among the solar panels. The PSI also states that farm dump contamination discovered is likely to be within permitted volumes (though the AEE does not repeat this).
- 3.26 Nevertheless, "on a without prejudice basis"¹¹ the AEE seeks consent pursuant to Clause 11 (1) of the NES-CS for the disturbance of soil exceeding the permitted volume.

11 AEE, section 4.2.3.

- 3.27 The Panel accepts that agricultural activities will continue on the majority of the Site in the form of sheep farming. However, the construction of the panels, the BESS and other facilities means that parts of the Site will no longer be available for agricultural production. The Application records that undiscovered farm dumps may be present on the Site and their number and location is unknown. Therefore, it is possible that farm dumps may be uncovered on parts of the Site that are to be utilised for non-primary production activities. We note that "piece of land" is not spatially defined in the NES-CS such that it is unclear whether it is equivalent to the term "Site."
- 3.28 Having regard to the above, we have therefore adopted a conservative approach consistent with the approach taken in the Application. We have approached this decision on the basis that consent is required under the NES-CS.

Resource Management (National Environmental Standards for Freshwater) Regulations 2020 ("Freshwater NES")

- 3.29 No resource consents are required under the Freshwater NES.

Transpower's consent triggers

- 3.30 The consent triggers under the ODP are set out in Table 8 in the AEE. In summary, resource consent is required as a discretionary activity for the substation and associated electricity transmission structures and earthworks. Consent triggers under the PDP are set out in Table 9 in the AEE. Resource consent is also required as a discretionary activity for earthworks associated with infrastructure; substation associated with the national grid; and new above ground connections to the national grid.
- 3.31 Consistent with paragraphs 3.24-3.28 above, we have approached this decision on the basis that consent is also required under the NES-CS.

National Environmental Standard for Electricity Transmission Activities ("NESETA")

- 3.32 The NESETA applies to activities that relate to the operation, maintenance, upgrading, relocation, or removal of an existing transmission line. The Application states that the works are "expected to be" a permitted activity and therefore no consent is sought under the NESETA.

4. LEGAL CONTEXT

Referral of the Project under the FTCA

- 4.1 The purpose of the FTCA is set out in Section 4 which states:

'The purpose of this Act is to urgently promote employment to support New Zealand's recovery from the economic and social impacts of COVID-19 and to support the certainty of ongoing investment across New Zealand, while continuing to promote the sustainable management of natural and physical resources.'

- 4.2 Section 19 of the FTCA sets out the matters that the Minister is required to consider when determining whether a project meets the purpose of section 4. Schedule 68 states that:

"The Minister has accepted this application for the following reasons:

- a) *the project will help to achieve the purpose of the Act because—*
- *it has the potential to generate approximately 100 to 120 direct full-time equivalent jobs (**FTE jobs**), over a 15- to 18-month construction period and approximately 7 to 9 ongoing FTE jobs; and*
 - *it has the potential to provide infrastructure that will contribute to improving economic and employment outcomes; and*
 - *it has the potential to contribute to New Zealand's efforts to mitigate climate change and transition more quickly to a low-emissions economy by generating renewable energy; and*
 - *it is likely to progress faster than would otherwise be the case under the Resource Management Act 1991 standard processes:*
- b) *any actual and potential effects on the environment, and proposed measures to avoid, remedy, mitigate, offset, or compensate for any adverse effects, can be appropriately tested by an expert consenting panel against Part 2 of the Resource Management Act 1991 and the purpose of the Act."*

4.3 As the Project was referred, it follows that the Minister was satisfied that the Project would be consistent with the purpose of the FTCA. This Panel is not bound by the referral decision, however, and must independently determine whether the Project meets the purposes of the FTCA and whether the consent should be granted or not.

Decision making under the FTCA

4.4 The Panel agrees with and adopts the comprehensive description of the legal context for referred projects under the Fast-track Consenting Act provided in the recent decision of an Expert Consenting Panel concerning the application by Matvin Group Limited for the Browns Bay Road Apartments.¹²

4.5 Under clause 31 of Schedule 6, the Panel must have regard to the following matters when considering an application for a referred project:

1. *When considering a consent application in relation to a referred project and any comments received in response to an invitation given under section 17(3), a panel must, subject to Part 2 of the Resource Management Act 1991 and the purpose of this Act, have regard to—*
 - (a) *any actual and potential effects on the environment of allowing the activity; and*
 - (b) *any measure proposed or agreed to by the consent applicant to ensure positive effects on the environment to offset or compensate for any adverse*

¹² 22 May 2023, at [108]–[128].

effects that will or may result from allowing the activity; and

(c) any relevant provisions of any of the documents listed in clause 29(2); and

(d) any other matter the panel considers relevant and reasonably necessary to determine the consent application.

2. In respect of the matters listed under subclause (1), a panel must apply section 6 of this Act (Treaty of Waitangi) instead of section 8 of the Resource Management Act 1991 (Treaty of Waitangi)..."

4.6 Clause 31(1) has significant similarities to section 104 RMA, though the consideration of effects is subject to the purpose of the FTCA as well as to the purpose and principles of the RMA and there is the addition of specific scope to consider offset benefits and compensation. The statutory instruments listed in clause 29(2) are the same as those in section 104(1)(b) of the RMA, being:

(a) a national environmental standard:

(b) other regulations made under the Resource Management Act 1991:

(c) a national policy statement:

(d) a New Zealand coastal policy statement:

(e) a regional policy statement or proposed regional policy statement:

(f) a plan or proposed plan:

(g) a planning document recognised by a relevant iwi authority and lodged with a local authority.

4.7 The Panel has considered relevant effects and planning instruments in later parts of this decision.

4.8 Clause 31(4) of Schedule 6 states:

4. When forming an opinion for the purposes of subsection (1)(a), a panel may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.

4.9 The Panel has decided not to exercise its discretion to disregard any adverse effects under clause 31(4).

4.10 Clause 31(5) lists the matters that a Panel must not have regard to. None of these are relevant to the Project.

4.11 Under clause 31(7), a Panel may grant a resource consent on the basis that the activity concerned is a controlled, restricted discretionary, discretionary, or non-complying activity, regardless of what type of activity the application was expressed to be for. In this case, we agree with the Applicants that the Application is appropriately to be considered as a discretionary activity.

- 4.12 Clause 31(1) states that consideration of the matters to which a Panel must have regard is subject to Part 2 of the Resource Management Act 1991¹³ and the purpose of the FTCA.
- 4.13 Section 12 of the FTCA sets out the relationship between the FTCA and the RMA. Decisions made under the FTCA are subject to Part 2 of the RMA as well as the purpose of the FTCA as set out above. The purpose of the FTCA does not 'trump' Part 2 of the RMA – the two purposes are to be considered together "on an equal footing".¹⁴
- 4.14 In terms of whether the Panel is required to separately consider Part 2 of the RMA, the issue was helpfully summarised by the Expert Consenting Panel in for the Comprehensive Care Retirement Village at Kohimarama, 12 May 2021 which states:
- "We have considered the Court of Appeal's decision in RJ Davidson Family Trust v Marlborough District Council²⁵ in terms of whether the Panel should consider Part 2 of the RMA.*
- Whilst an overall Part 2 assessment may not be necessary in a Davidson sense, a Panel must bear in mind the need to achieve the overarching purpose of the FTA. That the Minister has found the purpose to be satisfied for an application to be referred¹⁵ does not absolve a Panel from its obligation in this regard."*
- 4.15 We set out our conclusions as regards whether the Application achieves the purpose of the FTCA and RMA in Section 9 of this decision report.
- 4.16 Finally, section 6 of the FTCA provides that in achieving the purpose of this Act, all persons performing functions and powers under it must act in a manner consistent with the principles of the Treaty of Waitangi, and Treaty settlements.
- 4.17 Under clause 31(12) of Schedule 6, the Panel must decline a consent application for a referred process if that is necessary to comply with section 6 (Treaty of Waitangi).

Sufficiency of information

- 4.18 The Panel has a discretion to decline an application if it considers that the information provided by the Applicant is inadequate to determine the application.¹⁶ The Panel has concluded that the Application, together with the Applicants' responses to RFIs and to comments from invited persons provide sufficient information for us to determine the Application.
5. **MANA WHENUA AND RELEVANT IWI MATTERS**
- 5.1 This section considers matters relevant to mana whenua and relevant iwi, including the information provided in the Application and Panel discussions on sensitive information, consultation, Cultural Impact Assessment ("CIA") environmental management plans and further comments received.

13 Excluding section 8 (Treaty of Waitangi) which is replaced by Section 6 of the FTCA.

14 Kohimarama decision dated 12 May 2021 at [41].

15 Section 19 FTCA.

16 Clause 31(8), Schedule 6 FTCA.

The Application

- 5.2 The AEE includes an analysis of cultural matters, as required by clauses 9(1)(i), 9(4), 9(5) and 9(6)(b) of Schedule 6 of the FTCA.
- 5.3 The AEE provides an assessment against Te Ture Whaimana and the principles of Te Tiriti o Waitangi, as well as noting the relevance of the following Treaty Settlements:
- (a) Waikato Raupatu Claims Settlement Act 1995
 - (b) Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, and
 - (c) Ngāti Tamaoho Claims Settlement Act 2018
- 5.4 In its description of the existing environment, the AEE recognises the cultural values and association of the following mana whenua:¹⁷
- (a) Horahora Marae;
 - (b) Maurea Marae;
 - (c) Nga Muka Development Trust;
 - (d) Te Riu o Waikato Trust; and
 - (e) Waikato-Tainui.
- 5.5 Ngāti Tamaoho were also identified elsewhere in the application as mana whenua, being both a hapū of Waikato-Tainui, and also being represented by the iwi authority Ngāti Tamaoho Settlement Trust under the Ngāti Tamaoho Claims Settlement Act 2018.
- 5.6 The AEE confirms that there are no customary marine title groups, nor any protected customary activities, in, or in proximity to, the project area.

Consultation with Relevant Iwi

- 5.7 The AEE records that the Applicants have engaged with the relevant iwi identified in the section 17 report prepared by the Ministry for the Environment and outlines the series of consultation and engagement methods and responses. The Application records consultation with the following iwi:
- (a) Waikato Tainui;
 - (b) Ngāti Tamaoho Trust;
 - (c) Te Kupenga o Ngāti Hako (Ngāti Hako);
 - (d) Ngāti Koheriki Claims Committee.
 - (e) Ngāti Maru Rūnanga Trust;
 - (f) Marutūāhu Iwi Collective/ Marutuuahu Roopu Limited Partnership/ Taonga o Marutuuahu Trustee Limited; and

¹⁷ AEE, section 2.5.9.

(g) Nga Muka Development Trust.

- 5.8 The Record of consultation with iwi and hapū includes either the views of those iwi, or commentary on the inability of the Applicants to consult and obtain comments. The Record indicates that the majority of the consultation has been with Waikato-Tainui and Ngāti Tamaoho Trust. Other mana whenua groups either deferred to Waikato-Tainui, indicated that consultation was not required or did not respond.

Cultural Impact Assessment Report

- 5.9 Waikato-Tainui and Ngāti Tamaoho Settlement Trust, as relevant iwi authorities, provided their mandate for preparation of a collective CIA on their behalf. A letter from Waikato-Tainui and an email from Ngāti Tamaoho Settlement Trust confirms this mandate.
- 5.10 Te Hira Consultants prepared the CIA, which sets out the matters of interest to mana whenua, reaffirms the cultural values of the area and addresses the potential effects of the Project and proposed mitigation measures.¹⁸
- 5.11 The CIA records that the position of mana whenua is guided by Te Ture Whaimana and the *Waikato-Tainui Environmental Management Plan Tai Tumu Tai Pari Tai Ao*. The latter addresses alternative electricity generation sources as follows:¹⁹

"Section 27.2.3 states that Waikato-Tainui is supportive of and would like an increased focus on renewable electricity generation providing the social, cultural, spiritual, environmental, and economic effects of the activity are managed in partnership with Waikato-Tainui."

- 5.12 *Tai Tumu Tai Pari Tai Ao* notes that the benefits of such electricity generation projects are mainly distributed internationally or nationally, whereas the costs are born locally. Therefore, Waikato-Tainui is keen to ensure local benefit from electricity generation and transmission.
- 5.13 Regarding effects, the CIA goes on to say that:

"The impact of the Project is generally unknown because there are no comparable solar infrastructure developments of any such scale have been constructed in the region, and therefore Mana Whenua have no real effect-based understanding of such infrastructure."

- 5.14 Nevertheless, the CIA records the following key matters of interest to mana whenua:
- (a) Mana whenua anticipate that overall net ecological benefits should be achieved as a result of:
- (i) The cessation of dairy farming from the site;
- (ii) Runoff from the substation platform area being directed into a stormwater treatment wetland to manage water quality before it is discharged into the receiving environment.

18 CIA, page 4.

19 CIA, page 22.

- (iii) Opportunities for significant enhancements (primarily off-site given the limited habitat on-site) will result in overall net ecological benefits.
 - (b) Wetlands should be protected, discharges of contaminants (including agricultural/chemical spraying) should be avoided and “appropriate consideration should be given to wider biodiversity gains for native bats, birds, lizards and other tāonga species.”
 - (c) Support for visual screening using predominantly native indigenous species where appropriate.
 - (d) Construction and operation of the Project should produce direct and indirect economic benefits for the greater region. Partnership conversations for procurement and employment for iwi/mana whenua beneficiaries would be progressed through the development of a MOU between mana whenua and IGP.
 - (e) The need for traffic management plans to respond to ceremonial and cultural events, to manage a risk of disruption during tangi and cultural events held at Maurea Marae and Horahora Marae,
- 5.15 Recommendations are proposed in the CIA to manage these matters and accommodate the aspirations of mana whenua. Key among these is ongoing consultation. The position of mana whenua is concisely encapsulated in the following position statement:²⁰

"Mana Whenua support the fast track and statutory requirements for this project, noting that on-going engagement will continue between all relevant parties.

Through mutual partnership discussions, greater clarity of concerns raised in this report can be better understood, including the opportunity to develop a partnership MOU towards positive and supportive outcomes for mana whenua.

RSFL and mana whenua need to enter into a consolidated partnership that is formed towards maximising on, and enhancing sustainable energy generation, with an overall view of reducing energy hardship for the mana whenua beneficiaries and the wider community within the [Rangiriri] rohe and further afield across the rohe.]

With implementation of the mitigation measures outlined above, mana whenua considers that the effects of the Rangiriri Solar Farm on cultural values will be appropriately managed.

Mana whenua therefore collectively supports the proposed Rangiriri Solar Farm conditional on achieving the mitigation recommendations as reflected in the proposed set of consent conditions outlined in Section 8 of the AEE prepared by Boffa Miskell and the MOU between WSFL and mana whenua."

The Applicants' proposed conditions – Mana Whenua

- 5.16 The Applicants did not propose any specific conditions regarding consultation with mana whenua. However cultural matters have been addressed in various conditions including the use of indigenous local plants and

²⁰ CIA, pages 26-27.

consideration of cultural perspectives in the landscape design and the implementation of an accidental discovery protocol for cultural heritage.

The Panel's findings – mana whenua and relevant iwi

- 5.17 The Panel noted that the cultural effects identified in the CIA are primarily associated with Waikato-Tainui and Ngāti Tamaoho Settlement Trust, although the Section 17 report and record of consultation identify other relevant iwi in the area. To avoid any breaches to tikanga and treaty settlement legislation, it was important to the Panel that it should clearly understand the relationship of the identified relevant iwi with the Project area.
- 5.18 In accordance with clauses 17(6)(b) and (c) of Schedule 6 of the FTCA, the Panel invited comments from the following iwi authorities and treaty settlement entities:
- (a) Marutūāhu Iwi Collective;
 - (b) Ngāti Maru Rūnanga Trust;
 - (c) Ngāti Koheriki Claims Committee;
 - (d) Ngāti Tamaoho Settlement Trust;
 - (e) Ngāti Tamaoho Trust;
 - (f) Te Kupenga o Ngāti Hako; and
 - (g) Waikato-Tainui.
- 5.19 The Panel indicated that it was particularly interested in receiving comments from the above iwi authorities in relation to whether they have an interest in the Project site and the extent of the relationship, in accordance with tikanga Māori and mātauranga Māori.
- 5.20 Only Waikato-Tainui responded to the Panel's invitation, outlining their interest in the Project site, their support for the CIA report lodged with the application, and the involvement of Te Riu o Waikato and Nga Muka Development in the Project.
- 5.21 It is understood that Te Riu o Waikato and Nga Muka Development represent 15 Waikato-Tainui marae, including the two marae in close proximity to the Project Site (Horahora Marae and Maurea Marae)²¹.
- 5.22 To provide further guidance, the Panel requested information from WRC and WDC regarding the following:²²

"In the last two or three resource consent applications in the Rangiriri area that were lodged with, and assessed by, the Council:

Who did the Council identify as appropriate mana whenua and/or iwi authorities to seek comments from, or for the applicant to consult with?

Please outline why that mana whenua group and/or iwi authority were identified by the Council?"

21 CIA, page 12.

22 Further Information Requests 1 and 2 to WDC and WRC 26 October 2023.

5.23 By way of a response dated 9 November 2023 WRC advised that:

"In the context of seeking comments and consultation from mana whenua and/or an iwi authority, the practice followed by the Waikato Regional Council (WRC) is to direct applicants to refer to the Te Puni Kōkiri website for guidance, and to engage with Waikato-Tainui.

Waikato Tainui is the tribal entity with the ability to advise on specific group representatives and provide connection with the wide network of local marae and related entities..."

5.24 In response to part two of the question, WRC advised:

"A poultry farm near the subject site, that obtained necessary consents in 2017, distinguishes itself in being a discharge and landuse activity that necessitated consultation with mana whenua during application preparation. At that time, the applicant undertook such engagement with the Nga Muka Development Trust (NMDT), which represents marae including Okarea, Taniwha, Waikare, Maurea, and Horahora."

5.25 WDC advised that consultation on relevant consent applications had been undertaken with:

- (a) Nga Muka Development Trust;
- (b) Te Riu o Waikato;
- (c) Waikato-Tainui;
- (d) Maurea Marae;
- (e) Horahora Marae;
- (f) Ngāti Naho Trust.

5.26 WDC confirmed that the reason that these parties were consulted was because of the cultural significance of Lake Whangape and Waikato River, and Rangiriri Pā to the parties and consultation undertaken by the applicant prior to lodgement of consent application.

5.27 With reference to the information outlined above, and in the absence of comments from the other iwi and no conflicting evidence presented to the Panel, the Panel is satisfied that the cultural effects assessment outlined in the CIA report and in the AEE is a fair capture of the actual and potential cultural effects on the environment associated with the Project.

The Panel's findings – cultural effects

5.28 The Panel acknowledges that mana whenua are largely supportive of the Project in principle, noting the benefits of retiring the dairy farming operation and the generation of clean energy.

5.29 It is apparent that mana whenua's support for the Project is premised on an expectation of ongoing engagement to provide for a broad range of matters, including:

- (a) social and economic benefit to mana whenua via employment for iwi/mana whenua beneficiaries;

- (b) ecological benefits including development of a culturally appropriate landscaping plan and offsite biodiversity enhancement initiatives,
 - (c) implementation of appropriate cultural protocols on site; and
 - (d) liaison in relation to construction traffic issues.
- 5.30 The Panel was initially unclear whether mana whenua's expectations regarding consultation had been properly actioned. The AEE and CIA included references to a Memorandum of Understanding ("MOU"), but it was unclear whether that document had been finalised and what ongoing consultation with mana whenua was in fact planned.
- 5.31 For these reasons, the Panel proposed draft conditions requiring the formation of a "Mana Whenua Committee" to provide for ongoing engagement between the Applicants and mana whenua. In response, the Applicants, Waikato-Tainui and one other mana whenua group (addressed in paragraphs 2.30-2.35 above) indicated their opposition to such conditions. The letter from Te Riu o Waikato on behalf of Waikato-Tainui stated:²³
- "Te Riu o Waikato has reviewed those proposed conditions and wishes to confirm that, in this instance, it does not support the inclusion of conditions relating to a Mana Whenua Committee.*
- Given the well-developed and constructive nature of Te Riu o Waikato's relationship with RSFL, imposition of the Mana Whenua Committee conditions undermine our Mana Motuhake and ability to determine and manage our own relationship with RSFL."*
- 5.32 Having regard to this very clear directive from the relevant parties, the Panel is satisfied that there is no need to include conditions of consent requiring ongoing engagement, which is to occur regardless pursuant to the existing relationship between mana whenua and RSFL.
- 5.33 Overall, the Panel is satisfied that:
- (a) The Applicants have engaged in good faith consultation with mana whenua and are committed to continuing this relationship throughout the life of the Project;
 - (b) The Applicants have acted in a manner that is consistent with:
 - (i) The principles of the Treaty of Waitangi; and
 - (ii) The relevant treaty settlements;
 - (c) The Applicants have appropriately considered the relevant Iwi Environmental Management Plans, being the *Waikato-Tainui Environmental Management Plan Tai Tumu Tai Pari Tai Ao*;
 - (d) A grant of consent is consistent with the FTCA and Part 2 of the RMA as it relates to mana whenua/cultural matters.

6. ASSESSMENT OF POSITIVE EFFECTS

- 6.1 Section 19 of the FTCA sets out the factors that are required to be considered when determining whether a project meets the purpose of the FTCA. This

²³ Letter from Te Riu o Waikato dated 30 November 2023.

includes potential positive effects (benefits) of the Project. This section addresses such effects.

AEE / specialist reports

6.2 The Application identified the following positive effects of the Project:

- (a) The Project will generate up to 250 GWh of electricity per annum, which could power in excess of 32,000 homes.
- (b) The Project's electricity generation could potentially displace about 100 million kilograms or more of New Zealand's CO₂ emissions from fossil fuel electricity generation, or power additional transport from electric vehicles by over 1.2 billion vehicle-kilometres travelled.
- (c) The Project will help to diversify renewable energy sources, filling in existing gaps in generation experienced by other types of renewable energy.
- (d) The Project enables a source of energy which does not rely on imported fossil fuels and therefore will contribute to New Zealand's energy self-sufficiency, reducing susceptibility to supply chain and international commodity price impacts.
- (e) In terms of economic/employment benefits:
 - (i) The Project will result in \$31-38 million (14-21 per cent of the total cost of the Project) being spent within the Waikato District and an estimated \$43-57 million (21-30 per cent of total cost) within the Waikato region (including the Waikato district).
 - (ii) During the construction period a total of 51-62 full-time equivalent (FTE) jobs are anticipated to be created within the Waikato district and an estimated 107-129 FTE jobs within the Waikato Region (including the Waikato district).
 - (iii) Annual expenditure on operation for the solar farm is expected to be approximately \$2.4m within Waikato District and \$2.7m in the region. The Project will also provide ongoing employment for approximately 6-8 FTE jobs within the Waikato district and 7-9 FTE jobs within the Waikato region (including the Waikato district) relating to maintenance of the Site and solar farm (including stock management, vegetation management, annual panel cleaning, etc)
- (f) The Project will have ecological benefits insofar as:
 - (i) The replacement of the existing dairy farm operation with sheep grazing will have reduced impacts in terms of greenhouse gas emissions and impacts on downstream aquatic ecosystems and water quality through the reduced runoff of nutrients; and
 - (ii) New planting is proposed along Glen Murray Road and within the Site.

Comments received

6.3 Comments in support of the Project were received from:

- (a) Waikato-Tainui, which commented that it *"remains steadfast in supporting renewable energy projects within our rohe and affirming the right of our Marae Haapori to achieve their own Tino Rangatiratanga and their own economic independence."*
- (b) WDC, which stated that it *"is supportive of the site's dual use as a solar farm and sheep farm. It is considered that this approach would ensure that the productive capacity of the underlying soil resource is largely retained and maintained, and, to a degree, the land is used in a manner anticipated by the Plans whilst maintaining the rural character and amenity of the area (subject to implementation of proposed landscaping)"*.
- (c) WRC, which stated that it accepts the Applicants' assessment of effects.
- (d) The owners of 710 Rotongaro Road.

Special advisor's report

- 6.4 Regarding the economic benefits, the Panel was assisted by the advice provided by independent economist, Mr Akehurst. Mr Akehurst's review of the economic assessment provided with the application considered in particular the economic implications of the Project when compared to continuation of dairy farming on the Site. Although he identified various flaws in the Applicants' economic assessment, Mr Akehurst generally concurred with its ultimate conclusions, noting that:²⁴

"Comparing the proposed use of the site against a counterfactual where it continues as a dairy farm suggests that employment over the forty-year period will be in broadly similar ranges. The value of output, however, is much greater from the solar farming and sheep farming activities. Even if the profits from this venture accrue to businesses outside New Zealand, the electricity produced will be used by New Zealand households and businesses. The location of the solar farm has the added benefit of providing capacity in the North Island with a shorter less problematic connection to population centres than the Cook Strait Cable. In this way the solar farm contributes to decentralisation of electricity production, enhancing resilience and sustainability of the national grid."

The Panel's findings

- 6.5 Overall, the Panel accepts the Applicants' contentions regarding the benefits (positive effects) of the Project in terms of the generation of renewable energy and that the Project will make a contribution to New Zealand's efforts to transition more quickly to a low-emissions economy as contemplated by section 19(d)(vii) of the FTCA.
- 6.6 Having regard to the Application and Mr Akehurst's independent review, we are satisfied that the Project will have substantial economic benefits in the Waikato district and in New Zealand more broadly.
- 6.7 Regarding employment, we find that the construction of the Project is likely to generate employment in the Waikato district and the region, but the

24 Market Economics, Peer Review of Rangiriri Solar Farm Assessment, 20 November 2023.

employment benefits of the Project during the operational period are less clear. We therefore do not rely on any such benefits in our decision.

- 6.8 In terms of the benefits of the Project in improving environmental outcomes for freshwater and indigenous biodiversity, we accept that the replacement of the dairy farming activity with the Project will likely result in improved environmental outcomes for freshwater quality on the Site and downstream and that the proposed screening and riparian planting will contribute to indigenous biodiversity on the Site. We do consider, however that the references in the AEE to “*environmental enhancement areas for the planting of native species*” somewhat overstate the actual ecological enhancement proposed. We address this further at paragraphs 7.64–7.70 below.

7. ASSESSMENT OF POTENTIAL ADVERSE EFFECTS

- 7.1 We address each of the potential adverse effects (generally but not always) in the order in which they are addressed in the AEE.

Landscape and visual effects / natural character and amenity effects

AEE/specialist reports

- 7.2 The Application includes an Assessment of Landscape Effects (“ALE”) prepared by Boffa Miskell, which addresses the effects of the Project in terms of natural character, landscape character, visual amenity and potential cumulative effects.
- 7.3 The visual catchment of the Site largely comprises farmland, where public access is generally limited. The exception is the Department of Conservation land at Lake Rotongaro to the south, though we understand that this is difficult to access and seldom visited. Visual effects are therefore largely limited to roads and the small number of private properties in the vicinity.
- 7.4 In terms of natural character, the ALE concludes that the Project would have a very low to neutral effect during construction, with a low beneficial effect once mitigation planting is established (overall a “very low adverse to neutral effect”) taking into account that:
- (a) no non-pasture vegetation on the site will be removed;
 - (b) the quality of wetland areas on the site may improve as a result of the removal of dairy grazing;
 - (c) proposed planting around stream margins will improve natural character values;
 - (d) experiential attributes of the rural environment will reduce due to the presence of the solar farm structures on the Site.
- 7.5 The ALE anticipates “moderate” effects on landscape character during the 12–18 month construction period, and “low-moderate” adverse effects during the operational phase as a result of the change in land use from agriculture and horticulture to an area containing energy infrastructure. The effect is most notable within the immediate site context and reduces to very low/neutral beyond 1km from the Site.
- 7.6 In terms of visual effects from public viewpoints, the ALE concludes that the most notable (moderate adverse) effect is on “a limited section of Te Ohaki Road during construction,” with very low adverse effects on more distant views from Glen Murray Road and Rotongaro Road.

7.7 The ALE anticipates low-moderate adverse effects on the occupiers of 909 Rotongaro Road, who have “open but mid distance views” and residents at 338 and 272 Glen Murray Road who have “filtered but closer” views of the Site. Effects on other neighbouring properties are considered to be low or very low.

7.8 To mitigate the visual effects of the Project, the ALE recommended the use of recessive colours for buildings and structures and the use of materials that have a light reflectivity value (LRV) of less than 30 per cent. The AEE records that:²⁵

“The panels are designed to maximise the absorbency of the sun’s rays and minimise solar glare and have an anti-reflective coating. As a consequence, they are dark in hue and recessive in the landscape.”

7.9 The Applicants generally propose to rely on existing shelterbelt planting to screen the site, plus additional screen planting.

Applicants’ proposed conditions

7.10 In accordance with the recommendations of the ALE, a Landscape Management Plan is to be prepared for the site which details additional planting areas required to screen the Project as follows:

- (a) A 3.5m wide planted buffer along the Glen Murray Road boundary;
- (b) Shelterbelt planting along the eastern fence line boundary of the northern side of the site for approximately 90m from Glen Murray Road;
- (c) Shelterbelt planting along the western fence line boundary of the northern side of the site from Glen Murray Road for approximately 350m back to where the existing shelterbelt starts.

7.11 The planting plan will also detail matters including species, grades, numbers, spacing, eco-sourcing, and a programme and specification for implementation and maintenance. Planting is to be implemented within the first full planting season following the commencement of the works, to allow sufficient time for the planting to establish and begin to assist with visual screening and the plantings maintained thereafter.

7.12 In response to a query from the Panel regarding whether it was intended that the landscape management and maintenance plan would include existing planting, the Applicants proposed the addition of a new requirement as part of the landscape plan, to include details of existing vegetation to be retained.

7.13 The Panel agrees that the proposed landscape plan condition is appropriate and has imposed it as condition 18 of the RSFL consent.

Comments from invited parties

7.14 The Panel took a conservative approach to identification of “adjacent” properties in order to ensure that all potentially affected neighbouring owners and occupiers would have the opportunity to comment.

25 AEE, page 14.

- 7.15 Only two neighbours of the Site took up the opportunity to do so, and neither of the comments raised any concerns about landscape, character or amenity effects.

Special advisor's report

- 7.16 Following our site visit, the Panel was concerned that effects on some properties on Rotongaro Road may not have been taken into account in the ALE. In addition, the Panel was surprised (particularly having regard to the relative novelty of solar technology in New Zealand) that only a very limited number of visual simulations were provided with the Application, all from Glen Murray Road. This initially made it difficult for the Panel to fully comprehend the likely scale of anticipated visual effects.
- 7.17 The Panel wanted to be sure that that ALE was complete and if not, what further information might be required. For these reasons, the Panel appointed an independent special advisor, Mr Simon Button, to provide a peer review of the ALE to report on the robustness of the assessment methodology and conclusions and to consider whether sufficient landscape mitigation was proposed.
- 7.18 Mr Button identified various inconsistencies and points of clarification to which the Applicants were requested to respond by way of RFI 3. The Applicants' response was provided within the required five working day timeframe and adequately addressed the matters raised, enabling Mr Button to conclude that he agreed with the majority of the conclusions in the ALE.
- 7.19 Mr Button did also conclude, however, that:
- (a) Visual amenity effects on 197 Glen Murray Road, to the north of the Site, will be moderate, rather than low as per the ALE, because of the sparseness of existing planting. Additional landscape planting on the north eastern boundary would reduce such effects to "low."
 - (b) The Project includes significant reliance on existing vegetation on the Site to mitigate visual effects, particularly when viewed from the west. However, the proposed conditions of consent did not adequately ensure that such vegetation would be maintained for the life of the consent.
- 7.20 Mr Button's conclusion was that provided that these two matters were addressed by way of conditions, the operational effects of the Project would be no more than "low-moderate."

The Panel's findings and proposed conditions

- 7.21 Assisted by Mr Button's assessment and the absence of any comments from neighbours to the contrary, the Panel accepts:
- (a) The appropriateness of the assessment methodology set out in the ALE and its conclusion that the Project is located in a rural landscape and an area of rural character, and
 - (b) The conclusions in the AEE and ALE regarding the nature and extent of anticipated landscape and visual effects.
- 7.22 The Panel, does, however accept Mr Button's conclusion that without additional mitigation planting to fill in the spaces between existing trees on the eastern boundary, the Site will be insufficiently screened from the dwelling and outdoor living space at 197 Glen Murray Road.

- 7.23 The Panel therefore proposed an amendment to the landscape plan condition requiring this additional planting in addition to that set out in the ALE. The Applicants have accepted this condition.
- 7.24 The Panel also agreed with Mr Button that greater certainty is required that this vegetation will be maintained, and if necessary, replaced, during the life of the Project.
- 7.25 By way of RFI 3, the Panel sought clarification from the Applicants that it was intended that existing vegetation would be included in a management plan. In response, the Applicants restated their intention to retain existing vegetation and suggested an addition to condition 18 requiring "details of existing vegetation to be retained" in the Landscape Plan.
- 7.26 To provide greater clarity that both existing and proposed vegetation will be maintained and, if necessary, replaced during the life of the Project, Mr Button recommended amendments to the condition as follows:

"All landscaping required under the landscape plan, shall be maintained for the duration of the consent. Should proposed mitigation planting or existing tree cover along the site boundaries be removed, lose condition, and / or die or fail during the operational lifespan of the solar farm, such that they no longer provide effective screening, it shall be replaced with a similar species within the next planting season to ensure that visual amenity effects are appropriately managed."

- 7.27 The Applicants confirmed their agreement to this amendment but requested the deletion of the term "lose condition" on the basis that it is insufficiently certain. The Panel agrees that this term is subjective and unclear and has therefore not adopted it.
- 7.28 Having regard to all information received and considered, including comments, further information and special advice, the Panel:
- (a) Accepts the Applicants' conclusions in regard to landscape and visual effects in the AEE and supporting technical reports; and
 - (b) Is satisfied that with the implementation of the conditions and methods recommended by the Applicants in the ALE and with the conditions that the Panel has imposed, any potential adverse landscape and visual effects and/or rural character and amenity effects can be adequately addressed and do not preclude a grant of consent.

Glint and glare

- 7.29 "Glint" and "glare" effects are a particular risk associated with solar farm development. The term "glint" in this context means "a momentary flash of bright light typically received by moving receptor or from moving reflectors." The term "glare" means "a continuous source of bright light typically received by static reflectors or from large reflective surfaces."²⁶ Together, these effects are referred to as "solar reflections."
- 7.30 Solar reflections have the potential to adversely affect road safety and the amenity of neighbouring households if not appropriately managed.

26 Glint and Glare Report, PagerPower, Appendix C to ALE, page 11.

- 7.31 The Applicants have provided a "Solarvoltaic Glint and Glare Study" from PagerPower ("PagerPower Study") which considers this issue in detail.
- 7.32 The Panel is unaware of any national policy or guidance in New Zealand concerning the management of solar reflection effects from solar farms. The Panel has therefore paid particular attention to PagerPower's credentials and the methodology that it has adopted in assessing potential solar reflection effects of the Project.

PagerPower credentials and methodology

- 7.33 PagerPower is a UK based company which has undertaken over 900 glint and glare assessments in the UK, Europe and internationally. The PagerPower Study reports that there is an absence of formal policies or guidance concerning acceptable levels of solar reflections overseas as well as in New Zealand. For this reason, PagerPower has, since 2017, published its own guidance document for solar photovoltaic developments which defines a comprehensive process for determining the impact of solar reflections on road safety and residential amenity.
- 7.34 In summary, the methodology adopted is to:²⁷

"undertake geometric reflection calculations and, where a solar reflection is predicted, consider the screening (existing and/or proposed) between the receptor and the reflecting solar panels. The scenario in which a solar reflection can occur for all receptors is then identified and discussed, and a comparison is made against the available solar panel reflection studies to determine the overall impact."

Application of PagerPower methodology to the Application

- 7.35 Forty-four "road receptors" were identified from points on Glen Murray Road and Te Ohaki Road. The PagerPower Study concluded that solar reflections are geometrically possible towards:
- (a) 250m and 1.9km sections of Glen Murray Road.
 - (b) 1.37km section of Te Ohaki Road.
- 7.36 Specifically, on Te Ohaki Road there is a theoretical risk of a maximum of 20 minutes of glare per day (and typically less than this) from 6-7pm between the months of February – April and between September – October. For Glen Murray Road there is the theoretical risk of a maximum of 100 minutes of glare per day between 6am and 8.30am for all months.
- 7.37 The study concludes, however, that screening in the form of existing and proposed vegetation, dwellings, and/or buildings will significantly obstruct views of the reflecting panels such that observers along these sections of road will not experience solar reflections in practice. The report concludes that:²⁸

"No impact is predicted, and mitigation is not required."

- 7.38 Thirty-eight "dwelling receptors" were identified comprising properties in the surrounding area. The PagerPower report concluded that:

²⁷ PagerPower Study, page 3.

²⁸ PagerPower Study, page 4.

- (a) The results of the modelling indicate that solar reflections are geometrically possible towards 30 of the 38 assessed dwelling receptors.
- (b) For 19 dwellings, screening in the form of existing vegetation, proposed vegetation, dwellings, buildings, and/or terrain will significantly obstruct views of the reflecting panels, so that observers located at these dwellings will not experience solar reflections in practice. No impact is predicted, and mitigation is not required.
- (c) For 11 dwellings, views of the reflecting panels are considered possible. A low impact is predicted, and no further mitigation is recommended because:
 - (i) The duration of predicted effects is not significant;
 - (ii) The separation distance between the dwelling and the closest reflecting panel is sufficiently large; and/or
 - (iii) Solar reflections would occur within approximately two hours of sunrise. Effects would mostly coincide with direct sunlight.

Proposed conditions

- 7.39 The Applicants did not propose any conditions of consent to specifically address potential glint and glare effects. However, the proposed landscaping on the site serves a dual purpose insofar as it is intended to address both potential landscape/visual effects and glint and glare.
- 7.40 The Applicants propose conditions requiring the implementation of landscape planting along the northern and western boundaries of the Site in the first planting season following the grant of consent (as discussed in paragraph 7.10 above) to screen the Site from potential receptors. This is intended to ensure that the extent of the temporary adverse glint and glare effects is limited, with planting being fully established within five years.

Further information requested and Applicants' response

- 7.41 Notwithstanding PagerPower's obvious credentials and industry experience, the Panel was initially concerned that the PagerPower Study is a desktop exercise undertaken from the UK and therefore may not have been based on direct understanding of site characteristics and New Zealand conditions, particularly as regards screening vegetation.
- 7.42 The Panel was also concerned that the Applicants were seeking to rely on vegetation on neighbouring sites that are outside the Applicants' control to screen the project over its 40-year lifespan.
- 7.43 As part of RFI 3, the Panel issued a series of questions concerning the PagerPower study, including requesting the Applicants to clarify:
 - (a) Whether glint and glare effects will be present whilst screen planting matures to a sufficient height;
 - (b) Which areas of existing vegetation relied upon for screening are on neighbouring sites;
 - (c) Whether the scale, species, canopy density or health of existing vegetation had been considered in the production of the PagerPower Study.

- 7.44 In response, the Applicants produced an Addendum to the Assessment of Landscape Effects ("ALE Addendum") and "Glint and Glare Addendum" ("PagerPower Addendum") based on a complete 'bare-earth' basis in which there is no reliance at all on existing vegetation between the site and receptors. PagerPower Addendum concludes in respect of the road receptors that:²⁹

"Solar reflections are geometrically possible towards 37 of the 44 assessed receptors and a low impact is predicted for all of these affected receptors with no safety concerns identified. Given this impact classification, no mitigation is recommended for the assessed road receptors."

- 7.45 In terms of dwelling receptors, the PagerPower Addendum added three missing properties into the assessment, taking the total number of assessed properties to 41, and records the results as follows:³⁰

"Solar reflections are geometrically possible towards 33 of the 41 assessed receptors. A low impact is predicted for 31 of these receptors, and a moderate impact is predicted for the other two receptors (Dwellings 12 and 13) without the consideration of the existing and proposed screening. A moderate impact is predicted due to the duration of predicted effects, and the lack of sufficient mitigating factors. Consequently, mitigation is recommended for the two dwelling receptors where a moderate impact is predicted."

- 7.46 Regarding the properties at 250 and 272 Glen Murray Road, the ALE Addendum concludes that proposed screen planting on the northern boundary will provide long term mitigation of glint and glare effects such that there will be "no impact". During the period before the screen planting is established, there is the theoretical potential for some glint and glare effects (comprising solar reflections for more than three months of the year, but less than 60 minutes per day). These effects would only occur if the existing vegetation within these properties and the road reserve of Glen Murray Road was removed.

- 7.47 The ALE Addendum also notes that:

- (a) The bare earth scenario also does not take into account the existing trees and buildings within the site that are to be retained and will diffuse the effects of any potential glare from the solar panels during this establishment period;
- (b) The property at 272 Glen Murray Road is orientated to the north-east, with no windows facing to the south-east towards the project site. This orientation and the fact that the nearest solar panels are approximately 120 metres from this dwelling, reduces the nature of the effects experienced at this property.
- (c) The property at 250 Glen Murray Road is oriented to the north-west but has a number of windows facing to the south-east towards the project site. These windows face towards vegetation and dwellings and sheds within the Site itself and the nearest solar panels are approximately 280 metres from the property.

- 7.48 The Panel accepts the Applicants' conclusion that in real terms, the effects on these properties in the five-year period before the on-site landscaping is

²⁹ PagerPower Addendum, page 4.

³⁰ PagerPower Addendum, page 18.

established will not be significant, having regard to the existence of other vegetation and buildings within the Site, the orientation of the dwellings and their proximity to the Site. As discussed in paragraphs 7.23-7.27 above, the Panel has imposed a condition of consent requiring the maintenance and replacement of existing vegetation on the Site.

- 7.49 The Panel also accepts the Applicants' assertion that the offsite vegetation relied upon in the landscaping establishment period is well established and forms part of the existing environment, and that taking a "real world" approach, the removal of all of this vegetation is unlikely given its long existence and the fact that in some cases it has a functional purpose (e.g. shelterbelt screening). The Panel is of the view that the Applicants have taken all reasonable steps to internalise effects within the Site. The Panel also notes that despite being invited to comment on the Application, neither the owners or occupiers of 272 and 250 Glen Murray Road took up the opportunity to do so.

The Panel's findings – glint and glare

- 7.50 In light of all information received and considered, the Panel finds that:
- (a) PagerPower is well qualified to assess glint and glare effects, and the methodology they have applied is robust and well tested.
 - (b) Glint and glare effects have the potential to affect parts of Glen Murray and Te Ohaki Roads and 33 dwellings.
 - (c) Of these dwellings:
 - (i) Effects on 31 dwellings will be low;
 - (ii) Effects on two dwellings could theoretically be "moderate" but in reality, these potential adverse effects are less than minor, taking into account the duration of the effect, the orientation of the dwellings and the features of the surrounding environment.
 - (d) The implementation of the proposed landscape planting, which is required by the conditions imposed by the Panel, would in any event mitigate this moderate effect within a five-year period such that any adverse glint and glare effects will eventually be avoided.

Cumulative visual effects

AEE/specialist reports

- 7.51 The ALE records that there is already a consented (but not constructed) 39.3 hectare solar farm development on the intersection of Glen Murray Road and Te Ohaki Road. This solar farm is approximately 665 metres east of the Site.
- 7.52 To better understand this development, the Panel requested and obtained a copy of the resource consent from WDC which records that consent was granted on 27 October 2023.³¹
- 7.53 The Panel also requested information from WDC concerning whether any other solar farms have been consented in the north Waikato. WDC confirmed that two other solar farms have already been consented, one of which is also

31 The Panel notes that the ALE states that consent had been granted at the time of writing. Presumably this was incorrect.

in the immediate vicinity of the site.³² This consent authorises the establishment and operation of a solar farm consisting of 8,904 photovoltaic panels at 459 Glen Murray Road,³³ to the west of the Site.

- 7.54 The Panel has no specific knowledge of whether these consents are “likely to be implemented” and therefore should be treated as part of part of the existing environment in terms of the dictum in *Queenstown Lakes District Council v Hawthorn*, in which the Court of Appeal stated that:³⁴

“...the word “environment” embraces the future state of the environment as it ... might be modified by the implementation of resource consents which have been granted at the time a particular application is considered, where it appears likely that those resource consents will be implemented.”

- 7.55 The Panel notes, however, that the resource consent applications were granted recently, suggesting that there is at least, at present, an intention to implement them. The Panel therefore proceeds on the conservative basis that these consents form part of the environment.
- 7.56 The ALE records that the Te Ohaki Road development includes a proposal to establish a 5m deep screen planting buffer along the road boundaries at Glen Murray Road and Te Ohaki Road. After a period of 5 years, the planting is intended to reduce visibility of the panels and associated development as seen from adjacent roads. Development of this site will be similarly visible along the Glen Murray Road site boundary until the screening vegetation is established.
- 7.57 In the intervening period, both solar farms may be visible from Glen Murray Road. They will not be visible in the same view but may be seen sequentially as a vehicle travels down the road.
- 7.58 The ALE records that the cumulative effect will be:
- (a) Low (adverse) once boundary planting has established, having regard to the fact that shelter planting along road edges and fence lines is a common element in the landscape and therefore in keeping with the surroundings; and
 - (b) Depending on timing of the two developments, potentially low-moderate (adverse) in the interim period before planting establishes.
- 7.59 The Application does not specifically address the cumulative effect associated with the other consented solar farm on Glen Murray Road to the west of the Site. The Panel notes, however, that the location of that development is sufficiently distant from the Site that it will not be seen in the same view from Glen Murray Road but rather sequentially when travelling down the road. Having regard to the screening vegetation proposed as part of the Project, it follows that a cumulative effect may only arise during the construction of the Project and establishment of vegetation.

The Panel's findings – cumulative visual effects

- 7.60 In light of all the information received, the Panel:

32 The other is at 387 Coalfields Road, Kopuku.

33 LUC0133/23.

34 (2006) 12 ELRNZ 299; [2006] NZRMA 424 (CA), at [84].

- (a) Accepts the conclusions in the ALE regarding the cumulative effect of the Project together with the consented solar farm at Te Ohaki Road;
 - (b) Finds that the cumulative effect of the Project and both of the two consented solar farms on Glen Murray Road will be minor, having regard to the distance between the sites and the proposed screening vegetation which means that even if constructed simultaneously, the solar farms will only be visible when travelling along Glen Murray Road for a maximum of five years.
- 7.61 The Panel also observes that the consented solar farm at 459 Glen Murray Road and the Project may both be visible in the landscape from some parts of the Oakridge subdivision. However, the owners of that development did not provide comments on the Application (despite being invited to do so), therefore it is difficult to assess the magnitude of any effect on that development.

Ecological effects

- 7.62 The application included an Ecological Impact Assessment ("EcIA") prepared by Boffa Miskell. The EcIA identifies the ecological effects associated with the proposed solar farm as follows:
- (a) Effects on terrestrial vegetation;
 - (b) Effects on freshwater and wetlands;
 - (c) Effects on bats;
 - (d) Effects on avifauna (birds); and
 - (e) Effects on herpetofauna (reptiles).
- 7.63 We address these in turn below.

Terrestrial vegetation

- 7.64 The site is highly modified and typical of a dairy farming environment, being dominated by exotic grasses and shelterbelts. There are no significant natural areas on the site, and the ecological value of the vegetation on the site is assessed as "negligible."
- 7.65 The proposal does not involve the removal of non-pasture vegetated areas and it is not anticipated that construction will have any impacts on the vegetated areas on the site. Therefore, the EcIA concludes that effects on terrestrial vegetation will be avoided.
- 7.66 The Panel did not receive any comments which contradict that conclusion. Having reviewed all of the material, the Panel is satisfied that:
- (a) The ecological value of vegetation on the site is negligible;
 - (b) There will be no adverse effects on terrestrial vegetation associated with the Project.
- 7.67 Although the AEE made a number of references to "ecological enhancement areas" it is apparent that this is limited to narrow plantings for screening purposes (a mix of native and fast-growing exotic species) and on riparian margins. As such, the Panel observes that the Project offers some opportunity to improve the ecological value of vegetation on the Site, though the beneficial effect is unlikely to be significant.

7.68 In addition, the Panel notes that the AEE included the brief statement that:³⁵

"Given the lack of opportunities on-site for extensive ecological enhancement through planting of riparian or wetland areas or zones of existing ecological value, RSFL proposes to explore opportunities with mana whenua to contribute to off-site biodiversity initiatives within the wider area."

7.69 The Panel requested further information regarding what discussions had taken place with mana whenua and what biodiversity initiatives were proposed. RSFL advised that it has had general discussions with mana whenua regarding off site biodiversity initiatives but has not yet identified specific biodiversity initiatives to support *"given that enhancement works would only likely commence once the project has reached financial close."*

7.70 In the absence of any firm proposal, in reaching its conclusions regarding ecological matters, the Panel has placed no weight on the mooted off-site enhancement projects in terms of ecological mitigation/compensation. The Panel does consider, however, that provision for ongoing discussions with mana whenua on such matters is relevant to mitigation of cultural effects, as discussed in Section 5.

Freshwater ecology

7.71 Watercourses on the Site comprise a number of artificial drainage channels which do not contain any natural portions, with the exception of the Rotongaro canal, which is a highly modified natural watercourse. The two main watercourses on the site, the Rotongaro Canal and the Bodley Drain flow north to eventually join the Waikato River through Patterson's and Blair's pump stations.³⁶ The riparian margins of the waterways are primarily vegetated in non-native pasture species, with occasional stands of exotic trees and pest plants.

7.72 The EcIA records that potential effects on these waterways comprise:

- (a) Sediment generation during earthworks;
- (b) Water quality impacts due to stormwater discharges and changes to impervious surfaces; and
- (c) Aquatic invertebrate attraction to solar panels (and consequent loss of such invertebrates from the waterway).

7.73 The EcIA concludes that all of these potential effects can be appropriately managed by way of conditions such that they will be either "negligible" (earthworks/construction impacts), or "low" (all others).

Sediment generation during earthworks

7.74 In terms of earthworks, the Applicants proposed conditions of consent requiring erosion and sediment control measures to be implemented during construction in accordance with WRC requirements.

7.75 Comments from WRC requested the imposition of an alternative set of conditions pertaining to erosion and sediment control. WRC advised that these were conditions commonly imposed by WRC for land disturbance activities, including requirements for the implementation of flocculation

35 AEE, page 22.

36 EcIA, page 2.

treatment systems to accompany any decanting earth bund. The Applicants confirmed their acceptance of these conditions, which replace those originally proposed. As discussed in paragraphs 7.198-7.206 below, the Panel is satisfied that these conditions are appropriate.

Stormwater discharges

- 7.76 In terms of stormwater discharges, the primary risk arises from the impervious surfaces associated with the BESS and the substation. It is proposed that stormwater from these areas be treated in a constructed wetland. The proposed constructed stormwater wetland has been sized (approximate 600m² area and 594m³ storage volume) and designed to comply with WRC Stormwater Management Guideline (TR2020/07) and will treat stormwater runoff from the contributing hardstand areas in order to:
- (a) Reduce water velocity promoting settlement of any remaining sediments;
 - (b) Provide natural organic materials which absorb organic and inorganic contaminants;
 - (c) Promote nitrification and denitrification resulting in removal of nitrogen; and
 - (d) Increase organic bottom sediments that have high cation exchange rates for removal of metals.
- 7.77 Having regard to the design of the wetland and the small size of the area treated, the EcIA concluded that the magnitude of effects will be low. The Panel accepts this conclusion.

Effects on freshwater invertebrate species

- 7.78 The final risk to freshwater ecology relates to the potential for aquatic invertebrates to be attracted to and aggregate around solar panels. This could cause an increase in predation from birds, mortality associated with egg laying on solar panels or changes in the freshwater ecosystem as a result of the panels becoming a "sink" for the aquatic invertebrate population.
- 7.79 The EcIA records that there is limited research on interactions between invertebrates and solar panels, and therefore the magnitude of the risk is unclear. The EcIA concludes, however, that the effect is likely to be low, having regard to the dominance of disturbance and pollution tolerant species.
- 7.80 Nevertheless, having regard to the "unresolved potential risk" posed due to lack of data on this effect,³⁷ the EcIA recommended the implementation of a 5m planted buffer along all perennial watercourses on the site, which would block the line of sight between the solar panels and the aquatic environment and strengthen the resilience of the invertebrate populations by providing additional nutrients, shading and habitat.
- 7.81 This recommendation was captured in a proposed condition which required the preparation of a landscape plan to be prepared *"In general accordance with the recommendations of the Rangiriri Solar Farm Landscape and Visual Assessment Graphic Supplement and Ecological Impact Assessment submitted as part of the application."*
- 7.82 Comments were received from Forest and Bird which requested that the proposed 5 metre buffer planting be increased to 10 metres and additional

37 EcIA, page 70.

requirements be imposed regarding the fencing of riparian planting, earthworks and further baseline surveys of invertebrates on the site.

- 7.83 While rejecting the assertion that any further measures were required to mitigate the effects of the Project on freshwater, the Applicants proposed (in addition to the landscape plan condition) a new condition requiring the preparation of an Ecological Restoration Management Plan ("ERMP") to be submitted for certification to WDC at least four weeks before the commencement of operation of the solar farm. The ERMP would include, among other things, details of proposed riparian planting, fencing requirements for planted areas and measures to control pest species.
- 7.84 The Panel agrees that the ERMP condition is appropriate having regard to the potential risk to the freshwater ecosystem. As proposed, however, the Applicants had provided for the ERMP to be submitted and certified four weeks prior to operation of the solar farm. The Panel considers that plans for planting, fencing and other related matters should be confirmed prior to commencement of construction and therefore the condition imposed requires the submission and certification of the ERMP at least four weeks prior to the start of construction, consistent with the requirements for the landscape plan required under condition 18.

The Panel's findings – freshwater

- 7.85 The Panel accepts the Applicants' conclusions regarding the likely effects of the Project on freshwater. In particular, the Panel:
- (a) Accepts the advice of the Applicants and WRC with regard to appropriate erosion and sediment control conditions to manage the effects of earthworks on freshwater. These conditions have been imposed as conditions 7-28 of the earthworks consent (8.1.3);
 - (b) Accepts the Applicants' conclusions regarding the design and effectiveness of the proposed engineered wetland;
 - (c) Considers that the proposed riparian planting is an appropriate means of mitigating the potential, but uncertain, adverse effects on aquatic invertebrates, insofar as the planting will both create a physical barrier between the waterway and the panels and will enhance the health of the freshwater ecosystem; and
 - (d) Considers that the proposed ERMP is an appropriate means by which to ensure that riparian planting and other ecological enhancement is implemented, protected and maintained. The Panel has therefore imposed a condition to that effect, as condition 22.

Wetlands

AEE/ specialist reports

- 7.86 There are a number of natural wetlands on the Site which have been assessed as having low ecological value, due to the lack of species diversity and significant modification as a result of agricultural land use.
- 7.87 It is not proposed to remove any wetland areas and the installation of solar panels within 10 metres of the identified wetland areas is not proposed. The primary risk to wetlands is therefore considered to be the increase in impermeable surfaces. The Applicants state that it is expected that runoff from impermeable surfaces will not have an impact on existing wetlands because:

- (a) The design of the solar panel allows for water to flow and percolate below the panels.
- (b) Minimal ground/topographic contouring is required to establish the solar panels so that water will flow downhill in the same direction as it did prior to development.
- (c) There will be a minimal increase to impervious surfaces due to the small footprint of the pole mounts supporting the panels.
- (d) An artificial wetland or stormwater treatment wetland will be constructed near the substation and BESS to minimise excess runoff potentially entering wetlands.

7.88 Beyond proposed condition 1, requiring the consent holder to undertake the Project generally in accordance with the Application, no specific conditions of consent were proposed to address effects on wetlands.

Comments from invited parties and Applicants' response

7.89 Forest and Bird raised a concern that it was not clear from the application whether it was proposed to fence or enhance the wetlands on the Site. The Panel similarly asked a question of the Applicants in that regard.³⁸

7.90 The Applicants have confirmed that it is not proposed to fence the wetlands on the basis that this is not necessary or "appropriately related to an effect of the Project"³⁹ because:

- (a) The ecological values of the wetlands on the site are low; and
- (b) The effects on wetlands associated with the Project will be negligible.

The Panel's findings - wetlands

7.91 The Panel accepts that planting and fencing of the wetlands on the site is not necessary to mitigate an adverse effect of the Project. Nevertheless, the Panel considers that it would have been desirable for the Project to include provision for the protection and enhancement of wetlands on the Site, having regard to:

- (a) the direction in Policy 6 of the National Policy Statement for Freshwater Management 2020 to the effect that:

"There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted."

- (b) The requirement of the Vision and Strategy to achieve "betterment" in order to restore and protect the Waikato River.

7.92 With these requirements in mind, the Panel considered imposing conditions of consent to require the planting and fencing of wetlands on the Site. However, after careful consideration, the Panel determined not to do so, having regard to:

- (a) the fact that such a requirement was not strictly required to mitigate the effects of the Application; and

38 By way of RFI 2.

39 Response to comments Attachment 3 page 4.

- (b) the fact that the removal of dairy cattle from the Site and replacement with sheep is likely to have an overall positive effect on the health of the wetlands, albeit from a low baseline.

Bats

AEE/specialist reports

- 7.93 The Applicants have considered the effect of the project on New Zealand's two species of native bat, being the long-tailed bat (pekapeka), which is classified as Threatened – Nationally Critical in the New Zealand Threat Classification System, and the lesser short-tailed bat, which is classified as At Risk-Declining.
- 7.94 A bat survey conducted on the Site indicated low levels of long-tailed bat / pekapeka activity on the Site. In terms of the risk to bats, the Project does not involve the loss of non-pasture vegetated areas of the Site (which may be bat habitat) but there is the potential for light and noise disturbance associated with construction. The EcIA also concluded that there is a risk of potential collision fatalities or injuries if bats mistake horizontal solar panel surfaces for water, or vertical surfaces as flight paths. However, due to the low level of bat activity identified in the area, and the fact that the panels will not be installed horizontally, but rather will move with the sun to a maximum 60-degree tilt from horizontal (where they will remain at night time), the EcIA concludes that the overall risk is negligible-low.
- 7.95 By way of RFI 4, the Panel clarified with the Applicants whether the proposed "maximum 60-degree tilt" was a hard maximum because the various references in the AEE were inconsistent, with some using the term "approximate".⁴⁰ The Applicants confirmed that 60 degrees is a hard maximum, and proposed that this be codified in the conditions of consent. The Panel agrees that this is appropriate and has included this requirement as part of condition 24.

Comments from invited parties and Applicants' response

- 7.96 Both the D-G Conservation and Forest and Bird noted that only one bat survey was undertaken, and that bat usage of an area can vary considerably. Therefore, they contended that effects on bats should be given careful consideration.
- 7.97 Forest and Bird considered that because of the presence of long-tailed bats on the Site, the habitats present should be considered of very high ecological value. It suggested that an assessment of adverse effects ranging from very low to moderate would be appropriate. It also suggested that further surveys of bat activity should be undertaken to better quantify the risk.
- 7.98 In response, the Applicants say that such further surveys are not justified because of the very low levels of activity identified. It was the Applicants' position that any additional surveys would have to demonstrate a considerable and unexpected increase in activity levels before the quantification of effects and proposed mitigation would change. As the Project already avoids removal of roosting habitat and activities within roosting habitat, the only additional controls that the Applicants would propose would relate to management of disturbance associated with construction.
- 7.99 In terms of mitigation of construction effects, Forest and Bird requested the imposition of conditions requiring a precautionary approach be adopted

40 See e.g. section 3.3.1 of the AEE.

during construction. For example, Forest and Bird suggested conditions that require:

- (a) Measures to reduce noise and lighting near roosting and foraging habitat;
- (b) That such activities are not undertaken within 50 metres (or other appropriate distance) of existing vegetation and water bodies, during the hours of dawn and dusk; and
- (c) That prior to undertaking works in close proximity to potential roost trees, bat monitoring is undertaken to determine whether trees are being used for roosting and if roosting is occurring, works are delayed or other measures are implemented in order to avoid impacts on bats from noise and lighting.

7.100 The Applicants indicated that they considered that Forest and Bird's proposed conditions were impractical, but it has proposed amendments to the CMP condition which address similar measures.

7.101 The Applicants' proposed condition requires the CMP to be prepared in consultation with a bat ecologist and to include specific measures related to the effect of construction on bats including:

- (a) Restrictions on works at dusk and dawn;
- (b) Restrictions on artificial lighting; and
- (c) Restrictions on works in proximity to potential roost trees during the breeding season, unless bioacoustic survey has confirmed that bats are not present.

7.102 The Panel agrees that these requirements are appropriate.

7.103 The comments from the D-G Conservation observed that the EcIA relies on an Incidental Discovery Protocol (and that this is also referenced in the AEE) to monitor and respond to unexpected bat mortality. However, the Incidental Discovery Protocol was not carried through into the Applicants' proposed conditions, meaning that there was no certainty about whether it would be implemented, or in what form, or what responses would be triggered if unexpected impacts on bats did occur. The D-G Conservation requested an additional condition to provide certainty that higher use of the site by bats, and/or unexpected death or injury, can be appropriately recognised and responded to.

7.104 In response, the Applicants noted that the Incidental Discovery Protocol condition was inadvertently left out of the proposed conditions of consent and added such a condition. The condition required that sightings of bats should be reported to the D-G Conservation within 48 hours and all injured bats transported to a veterinarian. Bat discoveries were to be reported to WDC on an annual basis.

7.105 The Panel agrees that this condition is appropriate but also considers, as suggested by the D-G Conservation, that provision should be made to address what responses would be triggered if unexpected impacts on bats did occur and has therefore inserted specific reference to "ecological effects" as one of the potential triggers for review of the consent under 8.1.4.

The Panel's findings – Bats

- 7.106 The Panel accepts that bat surveys undertaken on the Site to date have been relatively limited and that bat usage of an area can vary considerably.
- 7.107 However, the Panel also accepts the Applicants' conclusion that the results of additional surveys, even if bat numbers were found to be higher, would likely not result in changes to the proposed effects management strategy.
- 7.108 In terms of construction effects, we find that the imposition of a requirement that the CMP be prepared in consultation with a bat ecologist and that measures be included in it to manage potential effects on bats is an appropriate and proportionate response to the risk posed. We have imposed this requirement as condition 9 of both the RSFL and Transpower consents.
- 7.109 In terms of operation, we are satisfied that the operation of the Project avoids effects on bat habitat and that the risk that bats mistake the solar panels for water (when horizontal) or flight paths (when vertical) is mitigated by the fact that the panels will not be installed horizontally but will move throughout the day and will start and end the day at a maximum 60 degree tilt as reflected in the amendment to condition 24 of the RSFL consent to this effect.
- 7.110 We also consider that the incidental discovery protocol is an appropriate measure to ensure that the effects of the Project on bats are appropriately monitored. This has been included as condition 25 of the RSFL consent. We have also included reference to "ecological impacts" in review condition 1 (8.1.4) to acknowledge that a response may be required if effects are not as anticipated.
- 7.111 Overall, we are satisfied that the potential adverse effects of the Project on bats can be adequately managed and do not preclude the grant of consent.

Avifauna

AEE/specialist reports

- 7.112 The AEE records that bird species likely to be present at the site are generally common, mobile and tolerant of disturbance (for example, house sparrows). Desktop assessment has identified no At Risk or Threatened bird species on the Site, although the location of the Site between several large water bodies⁴¹ mean that it is possible that native water associated species may traverse the Site from time to time.
- 7.113 It is expected that construction of the Project will have negligible effects on such species.
- 7.114 The operation of the Project may result in improved avifauna habitat on site, as a result of increased foraging activities, because the solar panels may attract insects. There is, however, international recognition that there is a risk of bird deaths due to trauma from collision with solar panels. Water birds are thought to be particularly vulnerable, and it follows that solar farms which are located on flight paths between water bodies may be at increased risk. Collisions may also occur if birds are attracted to the panels by increased insect populations around them.
- 7.115 The likelihood and magnitude of potential effects of bird strike on solar panels is not fully understood and therefore it is difficult to quantify the magnitude of the risk posed by the Project, though based on the available research, the

41 Lakes Rotongaroiti, Whangape, Rotongaro, Kopuera and Waikare and the Waikato River.

EcIA concludes that it is likely to be low. The EcIA observes that while the location of the Site near to a number of water bodies may magnify the risk that avifauna may pass by, on the other hand the actual habitat on the Site is unlikely to attract birds to it.

- 7.116 As noted at paragraph 7.8 above, it is proposed that the solar panels on the Site will be coated with anti-reflective coating and will include spaces between panel rows, which is expected to make it less likely that the panels will appear to passing birds as a lake.

Proposed conditions

- 7.117 In order to mitigate potential, but uncertain, impacts on avifauna, the Applicants proposed:
- (a) The preparation of an avifauna collision risk monitoring plan to assess the impact on avifauna due to panel collision which would:
 - (i) Require monitoring and reporting of collision mortality and steps to be taken (for example, physical deterrents) if more than a low level of risk is identified;
 - (ii) Contribute to national/international understanding of collision risk and enable management methods to be implemented if the risk is identified to be higher than anticipated;
 - (b) A consent review condition following the avifauna monitoring plan report to enable the consent conditions to be updated for any additional measures that may be required.

Comments from invited parties and Applicants' response

- 7.118 As discussed in relation to bats at paragraph 7.103 above, the D-G Conservation observed that while the EcIA recommended the implementation of an Incidental Discovery Protocol for birds and lizards, it was not included in the proposed conditions of consent. In response, the Applicants advised that the Incidental Discovery Protocol had been inadvertently omitted from the proposed conditions of consent and reintroduced a condition to that effect.

Panel's conclusions - avifauna

- 7.119 The Panel agrees that the Incidental Discovery Protocol, Avifauna Monitoring Plan, and provision for review of consent conditions in the event that avifauna mortality is more significant than expected is an appropriate response to the uncertain, but likely low, risk to avifauna proposed by the Project. The Panel has imposed these conditions as conditions 35, 36 and 37 of the RSFL consent.

Herpetofauna

AEE/specialist reports

- 7.120 The EcIA records that desktop analysis has indicated a "scattered presence" of native lizards in the surrounding area, and that there is potential for copper skinks and (to a lesser extent) ornate skinks to be found on the Site, both of which are classified as At Risk – Declining.
- 7.121 The EcIA concludes that the risk to herpetofauna associated with the construction of the Project is low, reducing to negligible at the operational stage, given that no vegetation on the Site will be removed. The additional

planting proposed may result in a positive effect overall. As a result, the EcIA concluded that management measures to compensate against potential herpetofauna impact is not required, but that an Incidental Discovery Protocol should be implemented to govern the response if lizards are in fact discovered.

- 7.122 As recorded at paragraph 7.103 above, an Incidental Discovery Protocol is now included as condition 25. The Panel also observes that, as noted by the D-G Conservation, separate approval would be required to catch, hold, kill or release lizards in the event that they are discovered.
- 7.123 The Panel is satisfied that these measures are sufficient to address any potential adverse effects on herpetofauna.

Panel's overall conclusions – ecological effects

- 7.124 In light of all the information received, including comments received and Applicants' response, the Panel:
- (a) Accepts the Applicants' conclusions regarding the magnitude of ecological effects; and
 - (b) Finds that, with the imposition of conditions and methods recommended by the Applicants in the Application and required by the conditions that the Panel has imposed, any potential adverse effects on ecological values can be adequately addressed, will be acceptable and do not preclude against grant of consent.

Effects on soil resource

AEE/specialist reports

- 7.125 The AEE contains a Soil and Resource Report prepared by Hanmore Land Management ("Soil and Resource Report") which investigates the quality and classification of soils on the Site, as defined by the Waikato Regional Policy Statement ("Waikato RPS") and the PDP as well as the NPS-HPL.
- 7.126 The investigation determined that 94.9 per cent of the property is classified as Highly Productive Land under the NPS-HPL (being land in LUC Class 3), but none is classified as high-class soil under the Waikato RPS/PDP definition.
- 7.127 Key features of the Project relevant to the effects of the proposal on highly productive land and its future productive use are that:
- (a) Solar panels will be mounted on a metal tracking system which is pole driven into the ground, so they will not impact the soil structure;
 - (b) Hardstand areas will cover only approximately 1.5 hectares of the Site, which is the minimum feasible for the infrastructure required and represents less than 0.0002 per cent of the Waikato Region's highly productive land resource;
 - (c) Sheep will graze the area under the solar panels; and
 - (d) All infrastructure will be decommissioned and removed from the Site at the end of the operational life of the panels after 40+ years and the Site will be returned to pasture.

7.128 Having regard to the above, the Soil and Resource Report concluded that:⁴²

"Under this proposal the productive potential of the soil will be utilised for pasture production and to support the primary electricity generation activity for the life of the project.

The productivity potential of the soil will not be diminished by the project as it will remain largely undisturbed with only hard stand areas being impacted. The rest of the property will be available for primary production once the project is decommissioned."

Invited comments and Applicants' response

7.129 This issue was of particular interest to the Panel because of the percentage of the Site that is Highly Productive Land, noting the directives in the NPS-HPL to ensure the availability of New Zealand's most favourable soils for food and fibre production, now and for future generations. The consistency of the proposal with the NPS-HPL is addressed in section 8 below.

7.130 The Panel was also aware that there is growing demand for land for solar farms in the North Waikato (including two consented farms on Glen Murray Road), and therefore was concerned about potential cumulative effects on soil resources.

7.131 For these reasons, the Panel decided to invite Federated Farmers of New Zealand to provide comments on the Application. No comments were received. The Panel also did not receive any comments from any other persons raising concerns about effects on the soil resource.

7.132 The comments from WDC recorded that it is supportive of the site's dual use as a solar farm and sheep farm and that:⁴³

"This approach would ensure that the productive capacity of the underlying soil resource is largely retained and maintained, and, to a degree, the land is used in a manner anticipated by the Plans whilst maintaining the rural character and amenity of the area (subject to implementation of proposed landscaping)."

7.133 WDC also observed that sheep farming is a permitted activity under the operative and proposed district plans and therefore the sheep farming aspects of the proposal may not necessarily form part of the "activity" proposed, although WDC considered that it should do so. In response, the Applicants stated that as reflected in the specific references to sheep farming in various sections of the AEE, sheep farming does form part of the application. We agree.

Further information requested and Applicants' response

7.134 A key element of the Application was the assertion that agricultural production on the Site would continue during the life of the Project, in the form of sheep grazing. However, limited information was provided with the Application regarding the nature of the sheep grazing regime and whether it was indeed viable – in this regard some images included with the Application appeared to show bare earth underneath the panels and therefore it was uncertain whether pasture growth under the panels would be viable.

42 Soil and Resource Report, page 8.

43 WDC comments, 31 October 2023.

7.135 The Panel therefore sought further information from the Applicants regarding:

- (a) The proposed sheep grazing regime (including numbers of sheep, facilities to be utilised, fencing, and other forms of management); and
- (b) The feasibility of growing grass under panels which move with the sun, thereby potentially limiting grass growth.

7.136 In response, the Applicants provided a "Grazing Regime Statement" prepared by an agribusiness consultant, Rob MacNab, which sets out options available for the sheep grazing regime. This report suggests that there are several options available, although it appears from the report that in fact only one (lamb fattening) is likely to be selected. Other options involve breeding, and it was conceded that it would be difficult to find ewes in lambing distress between the panels. A lamb fattening regime would involve a stocking rate ranging between 7-12.5 sheep per hectare. In terms of infrastructure, the report concludes that:

- (a) Existing farm infrastructure at the northern side of the Site will remain in place and will be utilised if practicable.
- (b) Existing farm fences will largely need to be removed as part of the construction phase of the Project but will be retained wherever possible. The final layout of the reinstated internal fencing will be confirmed at a later stage.

7.137 RSFL also provided a letter from Island Green Power which provides information to demonstrate that pasture can be sustainably grown to support stock in solar farms that move to follow the sun (as opposed to those that are fixed in place). The letter states that:⁴⁴

"There are two different types of solar panels used – stationary panels (called fixed-tilt solar (FTS) arrays) and panels that follow the sun (called single-axis tracking (SAT) arrays). Both these types of solar panels enable pasture growth to support sheep grazing, with SAT arrays enabling similar pasture growth and better grazing conditions. Rangriri Solar Farm will use SAT arrays.

...

While an FTS panel casts a smaller shadow at certain times of day than an SAT panel, this effect is offset by the fact that a higher density of panels is installed to capture light that would otherwise be lost at the specific and fixed angle. This means that, although FTS arrays involve smaller shadows for each individual panel, there are more shadows overall given the greater ground coverage.

SAT arrays are also well above the ground allowing the use of almost all available land for grazing. In comparison, FTS arrays are typically closer to the ground and involve areas which are fully shaded all year. As a result, pasture growth under SAT arrays tends to be much more consistent and provide for better grazing conditions."

44 Letter from Island Green Power, 9 November 2023.

- 7.138 This letter therefore dispels the Panel's concern that much of the research on pasture growth had been undertaken in relation to fixed panels and that panels which move with the sun may block sunlight and inhibit pasture growth.

The Panel's findings – effects on soil resource

- 7.139 Having regard to all of the information provided, the Panel is satisfied that:
- (a) The Project has been designed so that it will not permanently affect the productive potential of the soil resource.
 - (b) There are options available for sheep grazing among the panels which are potentially economically and practically viable, such that agricultural production on the Site can continue for the life of the Project.
 - (c) Pasture production underneath the solar panels is viable and the use of SAT arrays rather than FTS arrays is not likely to adversely affect pasture growth.
 - (d) The hardstand areas of the Site which will be unavailable for agricultural production are relatively small and have been limited to the minimum feasible.
 - (e) Conditions 2 and 39, which require that the Site is decommissioned within a period of two years after the operational period, are appropriate to ensure that the Site will be returned to its former state to enable production activities to continue.
- 7.140 Overall, the Panel is satisfied that the proposed land use will not diminish the productivity potential of the soil resources of the Site.

Operational traffic effects

AAE/specialist reports

- 7.141 The Site will not be permanently manned. Access to the Site will therefore generally be limited to:
- (a) Occasional access for maintenance, typically by light vehicle, for visual inspections and ad hoc corrective work (e.g. panel replacement).
 - (b) Panel cleaning which will occur yearly and is to be done by a mini tractor over a period of days / weeks.
 - (c) Replacement of inverters once or twice through the lifetime of the solar farm.
- 7.142 Each field of panels will need to be accessible by vehicle but will typically be accessed by a quad-bike type vehicle. Small hiab trucks will need to be able to access the central inverters. The substation needs to be always accessible by Transpower for routine maintenance and for larger vehicles in case of transformer replacement.
- 7.143 Access to the Site is proposed via one new access point on Glen Murray Road, 230m east of the existing access to 253 Glen Murray Road. The proposed access point meets the requirements for separation distance from intersections under the ODP and PDP but does not meet the ODP requirement for separation between vehicle accesses (being less than 100m from the

closest existing access point). The ITA included in the Application concludes that this is not a concern because of the low traffic volumes and because driver sightlines in excess of 300m will be available in each direction, meaning that drivers exiting the Site can choose safe gaps in the passing traffic and vehicles turning to and from the Site are clearly visible for approaching drivers.

- 7.144 Inside the Site, quad bike type vehicles will use internal access paths to serve the panels and substation. In terms of parking, given the nature of the activity and operational requirements the ITA concludes that informal parking areas will be sufficient and, as the wider site is designed to accommodate vehicles required for construction and ongoing maintenance, no special provision for a heavy goods vehicle bay is necessary.
- 7.145 In terms of traffic generation, the ITA anticipates that that traffic generation will generally be less than the existing farming activity but during panel cleaning, may be comparable to existing farming activities during a busy time of year.⁴⁵ Overall, the ITA concludes that once operational "the solar farm will generate very low traffic volumes and have a negligible effect on the surrounding road network."⁴⁶

Proposed conditions

- 7.146 The Applicants proposed a condition requiring that the vehicle access point on Glen Murray Road should be formed in accordance with the relevant regional standard and widened to seven metres at the gateway to allow two way traffic movement. The Panel agrees that this condition is appropriate and has imposed it as condition 23 of the RSFL consent.

Invited comments

- 7.147 No persons raised any concerns about the effects of the operation of the solar farm on the surrounding traffic network, although WDC raised a number of queries regarding construction traffic, which are addressed in paragraphs 7.217-7.220 below.

The Panel's findings -Operational traffic effects

- 7.148 Having regard to all of the information provided, the Panel is satisfied that the operation of the Project will have negligible effects on the surrounding traffic network, and as such there is no reason related to operational traffic which indicates that consent should be declined.

Archaeological effects

AEE/specialist reports

- 7.149 The Archaeological Assessment prepared by Sian Keith Archaeology Limited included in the Application⁴⁷ concludes, on the basis of a desktop analysis and two site visits, that:
- (a) There are no known archaeological sites within the Project footprint.
 - (b) The risk of discovery of archaeological sites, features or deposits is low and can be appropriately managed via an Accidental Discovery Protocol.

45 ITA, page 13.

46 ITA, page 20.

47 Appendix 12.

- 7.150 The proposed conditions of consent include a requirement for an Accidental Discovery Protocol to be followed in the event that any archaeological feature, artefact or human remains is discovered on the Site during Project works.

Invited comments and Applicants' response

- 7.151 HNZ has confirmed that it is supportive of the application and the proposed conditions of consent, subject to minor typographical amendments to correct referencing to "Heritage New Zealand Pouhere Taonga".
- 7.152 HNZ also requested a change to the title of the accidental discovery protocol (to "Accidental discovery – heritage and cultural") to be clear that the condition is intended to apply to the discovery of both Māori and non-Māori features, artefacts or remains. The Panel agrees that this change is appropriate.

The Panel's findings – Archaeology

- 7.153 In light of all of the information received, the Panel accepts the Applicants' conclusions regarding the likely archaeological effects of the Project and agrees that the Accidental Discovery Protocol condition is appropriate, with the typographical corrections and amended title requested by Heritage New Zealand Pouhere Taonga. The Panel has imposed this condition as condition 12 of both the RSFL and Transpower consents.
- 7.154 The Panel is satisfied that with the implementation of condition 12, any potential adverse effects on archaeological features can be adequately addressed.

Operational noise effects

AEE/specialist reports

- 7.155 The Styles Group Noise Assessment⁴⁸ included with the Application indicates that the operation of the Project will involve the following noise sources:
- (a) The solar plant (primarily the cooling fans within the plant), comprising:
 - (i) Transformers, which are located inside the substation;
 - (ii) Inverters, which are distributed across the panel array and in the BESS; and
 - (iii) Batteries inside the BESS.
 - (b) Occasional maintenance activities involving quad bike or small farm utility vehicles.
- 7.156 The Noise Assessment concludes that the permitted noise levels for the General Rural zone are appropriate for the activity, having regard to the fact that the associated provisions provide for noise sources associated with rural activities such as farming and processing of agricultural products which rely on mechanical plant, such that mechanical plant noise can reasonably be expected in the zone. We agree with this assessment.
- 7.157 In terms of effects, the Noise Assessment concludes that:

48 Appendix 7.

- (a) The closest receivers are some distance away: the closest is 197 Glen Murray Road, at approximately 1380m from the noise source.
- (b) The worst-case cumulative noise emissions from the fixed plant will readily comply with the General Rural Zone noise standards when measured and assessed at any notional boundary on another site.
- (c) The predicted noise level at all existing notional boundaries on separate sites will be less than 35 dB LAeq. This level of noise is very low and will be generated during the daytime period, when background noise levels are generally elevated.
- (d) For the majority of the time, the plant will not be audible. There may be occasions when the plant is audible when power generation is at or near peak and when meteorological conditions are calm. The noise will be low and will not be intrusive or dominant.

7.158 There is also the potential for “corona discharge” from the substation. Corona discharge is an electrical discharge caused by the ionisation of a fluid (such as air) surrounding a high voltage conductor. This can generate a hissing or crackling noise from transmission lines, particularly when humidity is high. The Noise Assessment Report concludes that any corona discharge from this and the proposed new section of transmission line will be no greater than existing discharge from the National Grid Transmission Line.

Proposed conditions

7.159 The condition proposed by the Applicants in relation to operational noise requires that noise from the operation of the solar farm complies with the requirements of the ODP and PDP. The Panel agrees that the condition is appropriate and has imposed it as condition 34 of the RSFL consent and condition 21 of the Transpower consent.

Operational noise – the Panel’s findings

7.160 The Panel accepts the Applicants’ conclusions in relation to operational noise. In this regard, we note that the substation and the BESS (which are the primary source of noise) have helpfully been sited so that they are in the middle of the Site, distant from nearby properties.

7.161 We find that, with the implementation of the conditions recommended by the Applicants and required by the conditions that the Panel has imposed any potential adverse effects arising from the operation of the solar farm can be adequately managed and do not preclude or count against a grant of consent.

Contaminated land

AEE/specialist reports

7.162 The AEE contains a PSI which indicates evidence of farm dumps on the Site, with potential contaminants being persistent pesticides, hydrocarbons and metals. The PSI records that known farm dumps on the Site are outside of the footprint of the proposed solar farm but identifies the potential for historical farm dumps to be present on the site, the location of which is unknown.

7.163 The PSI concludes that the risk to both development workers and the aquatic environment is low and can be appropriately managed by way of conditions requiring steps to be taken in the event that waste from a historical farm dump is unearthed or a liquid discharge is observed.

7.164 The Applicants propose that the risk be managed by way of a Site Management Plan (SMP") to manage the proposed soil disturbances and set out the steps that are to be taken if a historical farm dump or any other HAIL is discovered during the proposed works. The SMP will address:

- (a) Erosion and sediment controls;
- (b) Environmental controls for stockpiling;
- (c) Procedures to minimise on-site contaminant dispersal;
- (d) Unexpected contamination discovery protocols; and
- (e) Transport and disposal of any on-site contaminated materials to off-site (if required).

7.165 No comments were received from any persons regarding issues relating to contaminated land.

The Panel's findings – contaminated land

7.166 Having regard to all of the information provided, the Panel is satisfied that:

- (a) The requirement for preparation of an SMP (imposed as condition 2 of the consent for soil disturbance) is appropriate to manage the low risk associated with the discovery of contaminated materials on the Site.
- (b) It is unlikely that there will be a risk to human health as a result of the Project;
- (c) There is no reason related to contamination on the Site why consent should not be granted.

Hazardous substances and fire risk

AEE/specialist reports

7.167 A report prepared by Dr Paul Heveldt for Boffa Miskell (on behalf of the Applicants) assesses the potential risks and associated compliance requirements of hazardous substances associated with the Project.

7.168 The Project will involve the storage of some hazardous substances, although the quantities do not exceed the thresholds for either upper tier or lower tier major hazard facilities as prescribed in Schedule 2 of the Health and Safety at Work (Major Hazard Facilities) Regulations 2016.

7.169 Up to 140,000 litres of insulating/heat transfer mineral oil will be stored inside transformers in the substation (of which there will be "up to two") and in cabinet structures across the Site. Transformer oil may be classified as "harmful to aquatic life with long lasting effects."

7.170 The AEE records that it is proposed to incorporate bunding to provide secure containment for the expected total volume of transformer oil in the two transformers, plus a contingency of 10 per cent. The bund drains will be connected to oil/water separators so that rainfall within the bunds can be drained off and discarded without also drawing off any minor quantities of transformer oil that may be in the bund water.

7.171 The inert gas sulphur-hexafluoride will be used for electrical insulation and arc suppressant within the electrical equipment in the substation, the solar

inverters (distributed among the solar panels) and the storage battery inverters. Sulphur hexafluoride is classified as non-hazardous under the Hazardous Substances and New Organisms Act 1996 except that it is an asphyxiant if released into a confined area; i.e. it may displace oxygen.

- 7.172 The BESS will contain 6,500m² of connected modular units containing lithium-ion storage batteries. Lithium-ion batteries pose a risk of fire and explosion if not managed adequately.

Proposed conditions of consent

- 7.173 The AEE recorded that "*preparation of an emergency response plan and monitoring and maintenance schedules is [sic] also proposed.*"⁴⁹ However, no conditions of consent were included which were addressed to the management of operational risks on the Site.

Comments received and Applicants' response

- 7.174 The Panel sought comment on the Application from FENZ because of the particular fire risk posed by the storage of lithium-ion batteries.

- 7.175 FENZ provided helpful comments which recorded that it has several operational concerns regarding alternative energy storage systems including access (safe entry and egress in an emergency and access for fire appliances), heightened fire risk (i.e., operational failure resulting in fire) and general safety matters (i.e., firefighter safety working around electrical installations during a fire or other emergency such as medical response).

- 7.176 FENZ recommended that these matters should be addressed by way of:

- (a) Confirmation that access arrangements are consistent with minimum design requirements for firefighting access.
- (b) Confirmation that low flammability plant species will be used for buffer planting, to reduce fire risk and mitigate fire spread.
- (c) An Emergency Response Plan ("ERP") to be prepared at the earliest opportunity, in consultation with FENZ, to ensure that appropriate measures are in place to manage fire risk. FENZ recommended a condition requiring the preparation of an ERP and its sign off by FENZ.

- 7.177 In response, the Applicants confirmed that access arrangements can meet the minimum standards for firefighting access and proposed an amendment to the landscaping plan condition requiring the use of low flammability plant species as identified on the FENZ website.

- 7.178 RSFL also confirmed its willingness to prepare an ERP and also a Battery Storage Safety Management Plan ("BSSMP") in consultation with FENZ. It confirmed agreement to the condition proposed by FENZ subject to minor amendment to ensure that it did not rely on third party approval (which would be *ultra vires*). In response to an RFI, draft versions of the ERP and BSSMP were subsequently provided.

- 7.179 Transpower noted that it has existing Service Specifications that require it to prepare an emergency plan for its sites which also require consultation with FENZ. Accordingly, it proposed that no condition is included in the Transpower consent to replicate this existing arrangement.

49 AEE, page 65.

Panel findings – hazardous substances

- 7.180 The Panel has imposed conditions 26, 27 and 28 on the solar farm (RSFL) consent requiring the preparation of a final ERP and BSSMP based on the draft documents provided and prepared in consultation with FENZ. We have not imposed an equivalent condition on the Transpower consent on the basis that it is unnecessary for the reasons set out above.
- 7.181 We have also included a requirement in condition 18(ii) (landscaping) for planting used on site to be selected from low flammability species identified on the FENZ website. This list identifies numerous native species with low flammability.
- 7.182 Having regard to all of the information provided, including the Application, comments from FENZ and other materials, the Panel is satisfied that:
- (a) The risks associated with hazardous substances on the Site can be adequately mitigated by way of the methods and conditions proposed;
 - (b) Fire risk can be appropriately mitigated by way of the proposed condition, including the preparation of a final ERP and BSSMP in consultation with FENZ.
 - (c) There is no reason related to hazardous substances why consent should not be granted.

Natural hazards

Geotechnical

AEE/specialist reports

- 7.183 The AEE includes a Geotechnical Investigation by CMW Geosciences which assessed the relevant geohazards on the Site, including via field investigations. The report concludes that:
- (a) The Site is located 40km from the Kerepehi Fault, which has a recurrence interval of 1:1000 years. The risk of fault rupture is therefore considered to be low.
 - (b) Testing of liquefaction risk identified that due to the limited thickness of the surface material (~1m thick), there is potential for punching failure of the substation structure foundations to occur under liquefied conditions. The risk of liquefaction and the associated risk of potentially unacceptable liquefaction induced settlements is therefore moderate to high under the design cases considered.
 - (c) The Site is generally flat and therefore there is minimal risk of slope instability. The low hill at the south-eastern end of the site has gentle side slopes typically less than 1V:4H and is considered at low risk for slope instability.
 - (d) An expansive soils assessment concludes that the Site includes “non” expansive soils and “slightly” expansive soils.
- 7.184 Based on the ground conditions encountered in the field investigations and the geohazards, the Geotechnical Investigation has provided foundation design recommendations for the substation and solar panels (though notes

that foundations for the latter would likely need to be at least 10m deep to resist liquefaction effects and therefore allowance should be made to potentially repair or realign the panels following an earthquake event).

The Panel's findings – geotechnical matters

7.185 In light of all the information received and considered, the Panel:

- (a) Accepts the Applicants' findings as set out in the AEE and supporting documents;
- (b) Finds that, with the implementation of the methods recommended by the Applicants in the AEE, any potential adverse effects arising from natural hazards can be adequately addressed, will be acceptable and do not preclude or count against a grant of consent to the Project.

Stormwater and flooding

AEE/specialist reports

7.186 The Application includes a Civil Servicing Report prepared by Lysaght and a Flood Modelling Assessment prepared by Stantec. Those reports indicate that:

- (a) There are several existing constructed watercourses that run through the Site to collect runoff, which ultimately drain to the Horohoro pump station on the bank of the Waikato River.
- (b) The Waikato Regional Council Flood Model indicates that flooding on the Site would not occur in the 100-year storm as a result of flooding from the Waikato River.
- (c) As the Project does not involve habitable buildings and facilities associated with the substation will only be occupied for limited periods of time, flood risk mitigation has focussed on designing to minimise potential for damage to the structures.
- (d) Solar panels can structurally and functionally sustain a flood because the only part of the structure beneath the water is the steel support structure, not the panel itself. In addition, for the same reason, the volume of floodwater displaced by the structures will be negligible.
- (e) Transpower's standards for National Grid substations requires the detailed design to account for 1 in 450-year flood events.

7.187 In terms of stormwater runoff, no increase is expected from the area covered by the solar panels because the Project will not alter the sheet flow of runoff across the ground beneath the panels. All pre-development runoff directions and overland flow paths will therefore be maintained, and no watercourse will receive any more or less runoff from its contributing catchment than it did prior to development. No specific stormwater disposal infrastructure is therefore proposed for the solar panels.

7.188 Collectively, the impervious surfaces associated with the proposed substation, office platform and the battery storage area will be approximately 12,500m². The additional runoff from these areas will be attenuated back to pre-development flows before discharge. Runoff will be channelled into a realigned farm drain on the southern side of the hardstand, and channelled into a 600m² constructed wetland which will attenuate flows to pre-development rates for storms up to the 1 per cent AEP storm event and treat

stormwater runoff during a 50 per cent AEP storm event to capture first flush contaminants.

- 7.189 Although it is proposed that a comprehensive wetland design will be undertaken as part of detailed design, a preliminary design and location for the treatment wetland is outlined in the Civil Servicing Report prepared by Lysaght designed in accordance with WRC's Stormwater Management Guideline (TR2020/07). It will treat stormwater runoff from the proposed catchment area during a 50 per cent AEP storm event in order to capture first flush contaminants. The wetland will also be sized to attenuate flows back to predevelopment flow rates for storms up to the 1 per cent AEP storm event.

The Panel's findings - stormwater and flooding

- 7.190 No person has raised any concerns regarding the stormwater and flood modelling or proposed solutions. Having regard to all of the information provided and considered, the Panel:
- (a) Accepts the Applicants' findings as set out in the AEE and supporting reports; and
 - (b) Finds that with the implementation of the conditions and methods recommended by the Applicants in the AEE, and to be required by the conditions that the Panel has imposed, any potential adverse effects arising from flooding and stormwater management can be adequately addressed, will be acceptable and do not preclude or count against a grant of consent to the Project.

Construction effects

- 7.191 The potentially adverse effects associated with the construction of the Project are those associated with dust, erosion and sediment, noise, and construction traffic. The Panel addresses each in turn.

Dust

- 7.192 There is the potential for dust to be generated during the construction of the Project due to the exposure and stockpiling of soil and the movement of construction vehicles, particularly during windy and/or dry conditions.
- 7.193 The AEE noted that there is an existing consent (RC11432) for a water take from a bore on site permitting a maximum total take of 46.34 cubic metres per day which will be available for dust suppression,⁵⁰ but did not provide further detail regarding how dust would be managed.

Proposed conditions

- 7.194 The AEE proposed that these effects could be managed via measures to be set out in the Construction Management Plan ("CMP") to be prepared in accordance with consent conditions at a later date.

Further information requested and received

- 7.195 In response to a request from the Panel, the Applicants have provided a "Preliminary Dust Management Plan" which provides that a Dust Management Plan ("DMP") is to be prepared that will provide details of the on-site dust management methods that will be employed throughout the

50 Appendix 15, Civil Servicing Report.

duration of the project's construction/earthworks activities, which may include:

- (a) Water suppression (including details of water supply sources and equipment);
- (b) Work scheduling (e.g. staging of earthworks to minimise the amount of exposed earth, monitoring and responding to weather conditions);
- (c) Construction vehicle/access considerations (e.g. utilising covers when transporting material, implementing speed limits); and
- (d) Other construction methods including stockpile locations and management and stabilisation techniques.

7.196 The Panel considers that the preliminary DMP is suitably comprehensive and provides an appropriate basis for the preparation of the DMP as part of the CMP.

The Panel's findings – Dust

7.197 In light of the information received and considered, the Panel finds that:

- (a) The potential generation of nuisance dust during construction can be avoided or mitigated to an acceptable degree by the conventional measures proposed by the Applicants.
- (b) With the implementation of the conditions and methods recommended in the AEE, and the requirements of the conditions that the Panel has imposed, any potential off-site adverse effects associated with dust generation can be adequately addressed, will be acceptable, and do not preclude or count against a grant of consent to the Project.

Erosion and sediment

AEE/specialist reports

7.198 Earthworks required for the construction of the Project generally relate to trenching for the cable installation and excavations/topsoil scraping for the establishment of internal roads and platforms for the substation and BESS.

7.199 The AEE records that it is proposed that during construction, erosion and sediment control structures will be installed in accordance with WRC's Erosion and Sediment Control Guidelines for Soil Disturbing Activities (TR2009/02) to ensure that sediment is not transported off the Site into waterbodies.

7.200 The sediment control measures to be employed are to be set out in the CMP and therefore are proposed to be confirmed at the time of detailed design. However, the Civil Servicing Report attached to the AEE identifies measures which are "expected to be employed" comprising:

- (a) Stabilised entranceways;
- (b) Clean water diversion channels;
- (c) Dirty water diversion channels to intercept overland flow through construction areas and divert water to decanting earth bunds or sediment ponds;

- (d) Silt fences (or super silt fences) around receiving waterbodies downstream of open works areas.

7.201 The AEE concludes that with implementation of the above measures and regular inspection and maintenance of control measures, any adverse effects associated with erosion and sedimentation are expected to be less than minor.

Proposed conditions

7.202 The Applicants proposed that erosion and sediment control would be addressed by way of:

- (a) A requirement for the CMP required under the land use consent conditions to include:

"Erosion and sediment control measures in accordance with Waikato Regional Council's Erosion and Sediment Control Guidelines to ensure sediment is not transferred off site or into watercourses."

- (b) A requirement for the provision of an Erosion and Sediment Control Plan ("ESCP") to WRC for certification prior to commencement of works under the earthworks consent.

Comments received and Applicants' response

7.203 WRC proposed a set of alternative erosion and sediment control conditions for the earthworks consent that are commonly used in WRC issued consents for land disturbance. WRC suggests that these alternative conditions *"are regarded as a more effective safeguard against the environmental risks that could accompany the proposal."*⁵¹

7.204 The conditions proposed by WRC include significantly more detail than proposed by the Applicants, including provision for matters such as winter works, the content of the ESCP and provision for a flocculation treatment system to accompany any decanting earth bund. The Applicants have confirmed that it accepts these alternative conditions.

7.205 The Panel agrees that the conditions proposed by WRC represent a more robust framework for the management of erosion and sediment control during earthworks and has therefore imposed these as conditions 7-28 of the earthworks consent.

The Panel's findings – erosion and sediment

7.206 In light of all the information received and considered, the Panel:

- (a) Accepts the Applicants' findings per the AEE and supporting technical reports.
- (b) Finds that, with the implementation of the conditions and methods recommended by the Applicants in the AEE and WRC and required by the conditions that the Panel has imposed, any potential adverse effects associated with earthworks in terms of potential erosion can be adequately addressed, will be acceptable and do not preclude or count against a grant of consent to the Project.

51 WRC comments, 31 October 2023.

Construction noise

AEE/specialist reports

7.207 The AEE records that the construction phase will take approximately 12 -18 months. Potential noise effects associated with construction are addressed in the Assessment of Noise Effects by Styles Group⁵² which concludes that:

- (a) All existing dwellings are separated from the site boundaries by distances exceeding 100m. Compliance with NZS 6803's daytime noise limits will be readily achievable even where multiple machines are working together near a neighbouring dwelling.
- (b) The construction noise levels are likely to vary considerably over time depending on the phase and location of construction.
- (c) Construction noise levels will, even when it is at its maximum, readily comply with the permitted levels authorised by the ODP and PDP.

Proposed conditions

7.208 The proposed conditions require noise to be managed as part of the CMP. In particular, the CMP will require:

- (a) Provision for a pre-start meeting to ensure that staff and consent holders understand the requirements of the consent and CMP for the construction phase;
- (b) Details of construction noise management measures to ensure compliance with the necessary standards;
- (c) Procedures for communicating with neighbours to keep them informed of works and minimise disruption, and details of contact persons in the event of complaints.

7.209 In addition, the Applicants proposed a condition of consent requiring that all construction work shall be designed, managed and conducted to ensure noise levels at the façade of any occupied dwelling on any other site shall comply with the following limits (when measured and assessed in accordance with NZS6803:1999 Acoustics-Construction Noise):

Time period	Maximum noise levels	
	LAeq	LAFMax
7.30am to 6.00pm, Monday to Saturday	70dB	85dB
All other times and on Public Holidays	45dB	70dB

- 7.210 The Panel agrees that these conditions are appropriate and has imposed them as condition 14 of both the RSFL and Transpower consents.

Comments received and Applicants' response

- 7.211 Although all adjacent owners and occupiers were invited to comment on the application, comments were received from only two adjacent owners/occupiers and no person raised any issues relating to disruption from construction.
- 7.212 WDC's comments included a request for a condition providing for a nominated point in time (e.g., within 3 months of construction work) at which the noise standards shall be measured (to confirm compliance with the conditioned noise standards) and steps to be undertaken if compliance is not achieved. The Applicants' response and amended condition set did not address this request.
- 7.213 The Panel agrees that it is appropriate to include provision for noise monitoring to ensure compliance with the specified noise limits and has therefore imposed conditions (condition 15 and 16) to that effect. These conditions require noise monitoring and steps to be taken in the event of non-compliance.
- 7.214 As the proposed conditions contained no reference to construction vibration, the Panel has also imposed condition 17 which requires compliance with the relevant vibration standard. This condition is the same as that imposed on the Tauhei solar farm in a recent decision by another Expert Consenting Panel.

The Panel's findings – construction noise

- 7.215 In light of the information received and considered, the Panel finds that:
- (a) Due to factors including the distance of the Project area from neighbouring dwellings and the nature of the work proposed, construction noise associated with the Project can readily be managed so that district plan noise limits for construction activities are met.
 - (b) The preparation and certification of a CMP is an appropriate means by which to ensure that noise effects on neighbours are managed;
 - (c) With the implementation of the methods recommended by the Applicants in the AEE and the conditions imposed by the Panel, any potential adverse effects associated with noise can be adequately addressed, will be acceptable and do not preclude or count against grant of consent.

Construction traffic

AEE/specialist reports

- 7.216 In terms of construction traffic, the ITA records that:
- (a) Glen Murray Road is an arterial road with the Rangiriri Interchange connecting the site the SH1. Much of the Project equipment is expected to be delivered from either the Port of Auckland or the Port of Tauranga (via SH1 and SH29). The proximity of the Site to the two State Highways and the Site location on the arterial road network means that all travel to and from these major destinations will be

able to be made via the State Highway and arterial road network, limiting travel on local roads.

- (b) Construction traffic is expected to be largely related to the delivery of equipment and construction staff movements.
- (c) Equipment will generally be brought to the Site in 20ft containers on rigid or standard articulated trucks. Based on the construction of other solar farms, the equipment delivery phase is estimated to take 4-6 months.
- (d) While earthworks will largely be contained to the Site, some fill will also be delivered to Site for access roads and footings. This would likely occur early in the construction phase and would require a mix of single unit trucks and truck and trailer units.
- (e) It is expected that some construction activities will have peaks in intensity rather than be consistent across the construction period. During the equipment delivery phase, it is estimated that there will be 50-65 heavy vehicle movements per day, (or 25-30 heavy vehicle deliveries to the site per day) and "typically less than 120 light vehicle movements per day."
- (f) Staff numbers will vary with different stages of construction, but it is estimated that there will typically be approximately 130 construction workers on the site, and possibly up to 200 at peak times. Due to the remote location of the Site, it is anticipated that the main contractor will provide transport by way of shuttles from main centres and other construction staff would share vehicles.
- (g) It is estimated there will typically be less than 100 light vehicle movements per day associated with construction workers. Staff vehicle movements will predominantly be towards the site early in the morning (typically ahead of the morning peak on the road network), and away from the site in the evening.

Proposed conditions

7.217 To manage construction effects and to meet the requirements of the Code of Practice for Temporary Traffic Management, the Applicants proposed the preparation of a Construction Traffic Management Plan ("CTMP") as part of the CMP, the purpose of which will be to ensure that construction traffic:

- (a) Is safely accommodated along all routes to the Site;
- (b) Can safely turn at intersections without affecting the safety of the intersections; and
- (c) Can safely turn onto and off the site at access locations without impacting the safety of the frontage roads.

Comments received and the Applicants' response

7.218 WDC stated that it "would like to better understand the timing and extent of any proposed road upgrades associated with the application." The Panel understands that no road upgrades are required to facilitate construction of the Project, except the formation of the new vehicle access as addressed in paragraph 7.143 above. Pavement monitoring and maintenance is, however, a matter that will need to be addressed in the CTMP. In this regard, WDC also requested that the conditions of consent include additional detail regarding the matters that should be addressed in the CTMP, including pre

and post construction inspection of local road condition, provision for remediation of damage and traffic management planning.

7.219 In response, the Applicants proposed a revised CTMP condition separate from that relating to the CMP, which includes specific detail regarding the matters that should be included. The condition requires that the CTMP is submitted to WDC for certification at least four weeks before commencement of physical works. The CTMP will address matters including:

- (a) An outline construction programme for the works indicating, in particular, the likely duration of any temporary road closures and related traffic management measures;
- (b) Details of any temporary traffic management measures for the movement of construction vehicles to ensure the safe and efficient operation of the surrounding road network, and the measures to be undertaken to minimise disruption to the roading network and residents; and
- (c) Road management measures to ensure road inspection, maintenance, and remediation of any construction related damage to the condition of the local road network.

7.220 The Panel agrees that it is appropriate to include a condition specifically relating to the CTMP and the matters that it needs to address and has imposed this as condition 10 of both the RSFL and Transpower consents. We have expanded the list of matters to be addressed in response to further feedback from WDC.

7.221 The Panel also notes that traffic disruption to events at local marae was a particular concern raised by mana whenua. The Panel is satisfied that this matter can be addressed by way of both the CTMP condition and the separate arrangements between the Applicants and mana whenua providing for ongoing consultation and engagement.

The Panel's findings – construction traffic

7.222 In light of all the information received and considered, the Panel:

- (a) Accepts the Applicants' findings as set out in the AEE and supporting technical reports;
- (b) Finds that, with the implementation of the conditions and methods recommended by the Applicants in the AEE and to be required by the conditions that the Panel has imposed, any potential adverse effects associated with construction traffic can be adequately addressed, will be acceptable and do not preclude or count against a grant of consent to the Project.

Potential adverse effects – the Panel's overall findings

7.223 The section of our decision report has addressed all potential adverse effects associated with the construction and operation of the solar farm, and has made findings in relation to each.

7.224 Having regard to each of our findings, we conclude that there are no potential adverse effects, individually and collectively, that:

- (a) Cannot be adequately and appropriately addressed by the conditions imposed by the Panel; and

- (b) Preclude a grant of consent to the Project.

8. ASSESSMENT OF STATUTORY PLANNING INSTRUMENTS

- 8.1 A number of national, regional, and district-level policy and planning instruments need to be considered and assessed in the context of the Application. This section of our decision report addresses those policy and planning instruments.

Te Ture Whaimana o Te Awa o Waikato

- 8.2 The application identifies the relevant Treaty Settlements in the project area. Of these, Schedule 2 to the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 (hereon the "Waikato River Settlement Act") is Te Ture Whaimana, the Vision and Strategy for the Waikato River.
- 8.3 In accordance with the Waikato River Settlement Act, Te Ture Whaimana is an instrument at the top of the RMA hierarchy which prevails over any inconsistent provision in another national policy statement.⁵³
- 8.4 The Waikato River Settlement Act defines the Waikato River within Te Ture Whaimana as:
 - (a) The body of water known as the Waikato River flowing continuously or intermittently from the Huka Falls to the mouth of the Waikato;
 - (b) All tributaries, streams, and watercourses flowing into the part of the Waikato River described in (a);
 - (c) Lakes and wetlands; and
 - (d) The beds and banks of the water bodies described in (a) to (c).
- 8.5 Watercourses on the Site ultimately flow into the Waikato River. Accordingly, Te Ture Whaimana applies to the consideration of the Application.
- 8.6 Te Ture Whaimana provides, among other things, for the "restoration and protection of the health and wellbeing of the Waikato River."⁵⁴
- 8.7 In *Puke Coal Ltd v Waikato Regional Council*⁵⁵ the Environment Court found that:⁵⁶
 - (a) The requirement to "restore and protect" the Waikato River goes further than simply avoiding effects. It requires "preservation from future and restoration from past damage" (or "betterment").
 - (b) Any such protection or restoration must be proportionate to the impact of the application.
- 8.8 With the betterment of the Waikato River in mind, the Panel sought further information from the Applicants regarding how the Project has considered Te Ture Whaimana, particularly in relation to:
 - (a) Treatment of existing wetlands on the Site;

53 *Puke Coal Ltd v Waikato Regional Council* [2014] NZEnvC 223 at [90].

54 Te Ture Whaimana clause 3(a).

55 [2014] NZEnvC 223.

56 *Puke Coal v Waikato Regional Council* [2014] NZEnvC 223 at [92].

- (b) The proposed constructed wetland and disposal of stormwater runoff from the substation and BESS and its management; and
 - (c) Intended “ecological enhancement” referenced in the AEE, both on and off the Site.
- 8.9 As a result of information requests, it became apparent that the “betterment” achieved by the Application is rather more limited than the impression first obtained from the Application documents. In this regard, “ecological enhancement” on the Site is limited to boundary screen planting and planting of riparian margins. It is not proposed to fence the wetlands (with the effect that sheep may continue to graze in them). The engineered stormwater wetland will reduce effects of stormwater runoff from hardstand areas to “low” but will not result in a net positive effect. Although the AEE references an intention to undertake offsite ecological enhancement projects in collaboration with mana whenua, upon questioning it became apparent that no such initiatives have yet been identified.
- 8.10 The primary method relied upon by the Applicants to achieve “betterment” is therefore the retirement of the land from dairy farming and the replacement of cattle with solar panels and sheep, which have a lighter environmental footprint. The Applicants’ conclusion is that this (together with planting and fencing of riparian margins) is sufficient and proportionate to the effects of the Application on the Waikato River, which are not significant.

The Panel’s findings – Te Ture Whaimana

- 8.11 Having considered this matter in detail, the Panel accepts that:
- (a) the Applicants have engaged with, and recognised the role of, mana whenua in Te Ture Whaimana as demonstrated by the CIA report, letters of support from mana whenua and the MOU between RSFL and mana whenua;
 - (b) The Project’s methodology to manage stormwater runoff from the substation and BESS is appropriate, and
 - (c) the proposed “ecological enhancement” measures on the Site, and commitment regarding work on off-site ecological enhancement projects are adequate mitigation of the effects of the Project.

NPS for Renewable Energy Generation 2011

- 8.12 The NPS-REG was promulgated in 2011 to set out:
- “...objectives and policies to enable the sustainable management of renewable electricity generation under the Resource Management Act 1991.”*
- 8.13 The generation of energy from solar sources falls within the definition of “renewable electricity generation.” The proposal must therefore be considered as a “renewable electricity generation activity” under the NPS-REG.
- 8.14 The Panel has given the NPS-REG considerable attention and weight in considering the Application. Relevant matters were canvassed in section 6.5.1.1 of the AEE and need not be repeated here. However, the Panel wishes to highlight aspects of the NPS-REG that it has had particular regard to.
- 8.15 The Preamble to the NPS-REG highlights:

"The contribution of renewable electricity generation, regardless of scale, towards addressing the effects of climate change plays a vital role in the wellbeing of New Zealand, its people and the environment..."

Development which increases renewable energy generation capacity can have effects that span local, regional, and national scales, often with adverse effects manifesting locally and positive effects manifesting nationally".

8.16 The stated objective of the NPS-REG is:

"To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national target for renewable electricity generation."

8.17 The matters of national significance to which the NPS-REG applies are:

"(a) The need to develop, operate, maintain, and upgrade renewable electricity generation activities throughout New Zealand; and

(b) The benefits of renewable electricity generation."

8.18 The NPS-REG contains strong directions to decision-makers considering resource consent applications to recognise the benefits of renewable electricity generation activities, with a strong implication that such activities may need to be looked upon more favourably than other activities in a context in which renewable energy activities conflict with competing environmental considerations. For example, Policy C states:

"C. Acknowledging the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities.

Policy C1

Decision-makers shall have particular regard to the following matters:

a) the need to locate the renewable electricity generation activity where the renewable energy resource is available

..."

8.19 Other policies that the Panel has had particular regard to include the following:

"A. Recognising the benefits of renewable electricity generation activities.

Policy A

Decision makers shall recognise and provide for the national significance of renewable electricity generation activities, including the national, regional and local

benefits relevant to renewable generation activities. These benefits include:

...

(b) maintaining or increasing security of electricity supply at local, regional and national levels by diversifying the type and/or location of electricity generation.

B. Acknowledging the practical implications of achieving New Zealand's target for electricity generation from renewable resources

Policy B

Decision-makers shall have particular regard to the following matters:

...

(c) meeting or exceeding the New Zealand Government's national target for the generation of electricity from renewable resources will require the significant development of renewable electricity generation activities."

- 8.20 The positive effects (benefits of the proposal) are specifically considered in Section 6 of this decision report. The Panel records that the AEE notes that the proposed solar farm will be one of the largest in the country (with capacity to power over 32,000 homes), therefore making a significant contribution to meeting New Zealand's renewable electricity targets. It is considered that this will provide diversification of renewable generation sources, with New Zealand currently reliant on hydro generation, and offer security of electricity supply.
- 8.21 The AEE summarises the operational advantages of the proposal, including proximity to the National Grid, proximity to areas of high electricity demand, land area availability and climatic conditions, with the conclusion made that the proposal would help achieve the objective of the NPS-REG.

The Panel's findings – NPS-REG

- 8.22 The Panel finds that the Project is consistent with and will promote the objectives of the NPS-REG. The proposal meets relevant policies of the NPS-REG, and includes appropriate mitigation measures in response to identified localised and/or temporary adverse effects, in order to enable the benefits of providing for this new renewable electricity generation activity.

Proposed National Policy Statement for Renewable Energy Generation 2023

- 8.23 A proposed replacement NPS-REG was released for consultation ("NPS-REG 2023") in April 2023. Although the NPS-REG 2023 is only at the consultation stage and subject to change, the AEE has provided an assessment of the proposal against the draft provisions.
- 8.24 The proposed NPS places emphasis on the objective of achieving a significant increase in the provision of renewable energy sources in a timely manner in order to meet New Zealand's emission reduction targets. The management of and provision for the operational and functional needs of such facilities is also supported.

- 8.25 As the proposed NPS is in draft, it is not a document to which the Panel must have regard and therefore the Panel has given it little weight, beyond observing that the current general policy direction is towards greater promotion of and support for renewable energy generation.

National Policy Statement on Electricity Transmission 2008

- 8.26 The overarching objective of the National Policy Statement on Electricity Transmission 2008 ("NPS-ET") is to recognise the national significance of the country's electricity transmission network. This emphasises the requirement that activities be managed to ensure that the operation of the transmission network is not compromised and that (of particular relevance to this application), the existing transmission network is maintained and upgraded to meet the needs of present and future generations.
- 8.27 The AEE details the policy framework of the NPS-ET, which, in summary, is to identify the national benefits of transmission activities; to manage effects; and to recognise locational and operational constraints.
- 8.28 The proposed construction of a new substation and monopole connection, as integral components of the proposed solar farm operation which will assist in meeting future electricity supply needs. The AEE acknowledges that the location and design of these facilities relate both to the existing transmission line alignment and to distances to neighbouring residential buildings. Furthermore, the siting of the proposed facility is clear of areas of outstanding natural landscapes, areas of high natural character, amenity and recreational value (as expressed in the policy directives of the NPS-ET). Policy 8 of the NPS-ET directs that planning and development of the transmission system should "seek to avoid" such areas.
- 8.29 A proposed replacement NPS-ET, which is currently at consultation stage, introduces a policy to recognise Māori interests in relation to these transmission activities, with early engagement to protect sites of significance; and policy to acknowledge and mitigate adverse effects that may result on local amenity values.

The Panel's findings – NPS-ET

- 8.30 The Panel finds that the proposed solar farm is consistent with the objective and policies of the NPS-ET as it will facilitate the extension of the existing transmission network (thus assisting in the provision for the future security of supply of electricity) in a form and design that has operational and locational advantages. Adverse effects will be satisfactorily managed as part of the overall construction and operation measures proposed.

National Policy Statement for Highly Productive Land 2023

- 8.31 The NPS-HPL entered into force on 17 October 2022. It is addressed to the use of "highly productive land" which is defined in Clause 3.5(7) of the NPS-HPL as follows:

"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, at the commencement date:

(a) is

*(i) zoned general rural or rural production; and
(ii) LUC1,2, or 3 land ..."*

8.32 LUC 3 soils comprise 94.9 per cent of the site which is thus classified as 'highly productive land' in accordance with the NPS-HPL.

8.33 Of particular relevance to the Application, Policies 4 and 8 of the NPS-HPL state:

Policy 4: The use of highly productive land for land-based primary production is prioritised and supported.

Policy 8: Highly productive land is protected from inappropriate use and development.

8.34 Part 3 of the NPS-HPL is a series of implementation clauses which:⁵⁷

"sets out a non-exhaustive list of things that local authorities must do to give effect to the objective and policies of this National Policy Statement."

[our emphasis]

8.35 Although, as the Applicants have stated, the implementation clauses are not rules, we note the directive language of this section in terms of identifying what is required to give effect to the NPS-HPL.

8.36 Implementation clause 3.9(1) directs that:

"Territorial authorities must avoid the inappropriate use or development of highly productive land that is not land-based primary production."

[our emphasis]

8.37 We consider that the term "avoid" has the meaning expressed by the Supreme Court in *Environmental Defence Society Inc v The New Zealand King Salmon Co Limited* to the effect that:⁵⁸

"avoid" has its ordinary meaning of "not allow" or "prevent the occurrence of".

8.38 "Land based primary production" is defined in the NPS-HPL as follows:

"... means production, from agricultural, pastoral, horticultural, or forestry activities, that is reliant on the soil resource of the land."

8.39 The Applicants have asserted that the "starting point" for assessment of the Application under Policies 4 and 8 and clause 3.9(1) is that:

"The vast majority of the site will continue be used for land-based primary production throughout the duration of the consents."

8.40 For the purpose of applying clause 3.9(1), we do not agree with the Applicants that the proposed sheep grazing regime is relevant to assessment of whether or not the use is inappropriate. While sheep grazing is a component of the Project and relevant to mitigation, it is not the primary component. The Panel considers that the primary use of the Site for over forty years (including construction and decommissioning) will be the solar

57 NPS-HPL Part 3, Outline of Part.

58 *Environmental Defence Society Inc v The New Zealand King Salmon Co Limited* [2014] 1 NZLR 593

farm. Parts of the Site will not be available for primary production (e.g. the hard stand and solar panel footings) and dairy farming will need to be replaced by a less intensive form of primary production (i.e. sheep farming). To suggest that the combined or overall use of the Site is "land based primary production" because of the sheep grazing component would, in our view, be a contrivance that bears little relation to what is actually proposed.

8.41 Therefore, the solar farm activity is the use of land which must be assessed against clause 3.9(1). As a solar farm does not fall within the definition of "land based primary production" identified above, clearly the Proposal does not comply unless it falls within one of the qualifications to clause 3.9(1) identified in clause 3.9(2).

8.42 What is "inappropriate" use of land is defined by reference to a list of circumstances in which use or development is not inappropriate. Of particular relevance, clause 3.9(j)(i) provides that one of these circumstances is where:

"it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land:

the maintenance, operation, upgrade, or expansion of specified infrastructure.

... "

8.43 As such, the NPS-HPL provides an exception for the use or development of highly productive land for specified infrastructure where there is a functional or operational need associated with "maintenance, operation, upgrade or expansion."

8.44 We agree with the Applicants that the Project is "specified infrastructure". In this regard, the NPS-HPL defines "specified infrastructure" as including infrastructure that is recognised as regionally or nationally significant in a National Policy Statement, Regional Policy Statement or regional plan. Of relevance to the Project:

(a) The NPS REG recognises the national significance of renewable electricity generation;

(b) Section 1.6 of the RPS defines "regionally significant infrastructure" as including the national electricity grid, as defined by the Electricity Industry Act 2010, and infrastructure for the generation and/or conveyance of electricity that is fed into the national grid or a network (as defined in the Electricity Industry Act 2010).

8.45 In terms of whether there is a "functional or operational need" (as defined by the NZ Planning Standards) for the solar farm to locate on highly productive land, the Applicants say that there is an operational need for it to do so. The reasons for this conclusion are set out in detail at section 6.5.1.3.2.1.2 of the AEE but broadly comprise:

(a) Proximity to the major load centres of Auckland and Hamilton, key existing transmission infrastructure (including the HLY-OTA-A 220 kV transmission line, which traverses the Site) and transport infrastructure.

(b) The Site is a suitable size, shape and has suitable topography for a solar farm development of this scale.

- (c) Absence of significant cultural, environmental and ecological significance.
 - (d) Location in an area of relatively low population density.
 - (e) The climatic conditions in the area are well-suited to solar generation.
 - (f) Proximity of employment centres, necessary to supply workers for the construction phase.
 - (g) Possible to achieve site design which meets Transpower requirements for the substation in terms of connectivity to the transmission line, solar inverters and BESS and flood risk.
- 8.46 We accept the Applicants' conclusions, which no other party has challenged.
- 8.47 In terms of whether the Proposal falls within the scope of "maintenance, operation, upgrade, or expansion of specified infrastructure", the Panel noted that the word 'construction' is not included in the exception.
- 8.48 We understand that this lacuna has been identified by the Ministry for the Environment which is currently consulting on amendments to the NPS-HPL to address a concern that the NPS-HPL does not clearly provide a consenting pathway for construction of specified infrastructure.
- 8.49 The Panel requested clarification from the Applicants as to whether there was a consenting pathway available given the strong directive in the NPS-HPL that use and development should be avoided unless specific circumstances apply, and whether this proposal, being 'construction' of specified infrastructure, is "inappropriate" development in terms of the NPS-HPL.
- 8.50 The Applicants say that while the proposal 'may not fall within the strictly applied wording of the implementation clause' it does fall within its *intended* scope.
- 8.51 As the NPS-HPL only came into effect in October 2022, there was very little in the way of precedent to assist the Panel in resolving this issue with any certainty. As result, the Panel sought legal advice from Mr Jeremy Brabant, specialist Environmental Law barrister.
- 8.52 It was Mr Brabant's opinion that while clause 3.9(2)(j)(i) does not expressly provide for 'construction', a strict interpretation of the clause to exclude construction activities would not be consistent with the NPS-HPL when read as a whole. Mr Brabant observed that:⁵⁹

"Use or development of highly productive land is not inappropriate where it is "associated with" the maintenance, operation, upgrade, or expansion of specified infrastructure. I agree with the Applicant that the term "associated with" captures a range of activities including development and construction of infrastructure. It is almost certain that development in association with the upgrade or expansion of existing specified infrastructure will require construction. Construction is therefore implied as appropriate in those circumstances."

- 8.53 The Panel is persuaded by this interpretation. We also agree with Mr Brabant that application of a strict interpretation would create inconsistencies with the other relevant national policy statements such as the NPS-REG and the

⁵⁹ Letter from Jeremy Brabant dated 20 November 2023.

NPS-ET which require decision-makers to recognise and provide for the effective operation, maintenance, upgrading and development of the electricity transmission network, and recognise and provide for national significance of renewable electricity generation activities. On the basis of the interpretation set out above, we do not consider that there is in fact an inconsistency between the NPS-HPL and other national policy statements.

8.54 We also agree that the MfE consultation documents are not documents the Panel must have regard to under clause 31(1) of Schedule 6 of the FTCA, nor do these documents have any statutory weight. We have therefore given them little weight – though also note that they do not suggest that there is *no* consent pathway, only that clarification is desirable.

8.55 Accordingly, we consider that:

- (a) The Project is use and development associated with the expansion of specified infrastructure. The absence of the word 'construction' from clause 3.9(2)(j)(i) is of no consequence. Accordingly, use and development associated with the Project is not "inappropriate" as contemplated by the NPS-HPL.
- (b) Even if we are wrong, when read as whole, it is clear that the intention of the NPS-HPL is to enable both existing and new activities that are "associated with" specified infrastructure".

8.56 Finally, clause 3.9(3) requires that:

(3) Territorial authorities must take measures to ensure that any use or development on highly productive land:

(a) minimises or mitigates any actual loss or 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 land-based primary production activities from the use or development.

8.57 The Panel notes that MfE Guidance on the application of clause 3.9(3)⁶⁰ states that when considering whether a use or development "minimises or mitigates" a loss of productive capacity, territorial authorities should consider:

- (a) The location of the activity - whether it can be sited somewhere on the subject site that minimises the impact on the productive capacity of HPL;
- (b) The footprint of the activity – whether efforts have been made to keep the footprint of the activity as small as possible to minimise the actual loss of HPL;
- (c) Clustering of activities – whether there is an option to group a number of activities in a similar location to mitigate the cumulative loss of HPL that would occur through activities being spread out across a wider area of HPL;
- (d) Co-existing with land-based primary production – whether the activity can be designed in such a way that it does not preclude being

60 National Policy Statement for Highly Productive Land: Guide to implementation (Ministry for the Environment, March 2023), page 32

able to carry out land-based primary production around the activity (e.g. the potential for using the land around specified infrastructure to be used for vegetable production or animal grazing).

8.58 Section 6.5.1.3.2.2 of the AEE describes the measures that the Applicants have taken to minimise and mitigate the loss of availability and productive capacity of land. These are not repeated in full, but broadly comprise:

- (a) RSFL has elected to develop the Project as a single, larger-scale solar farm, entering into lease option agreements to enable aggregation of sufficient land for this purpose.
- (b) During the operation of the solar farm, the productive potential of the soil will be utilized for pasture production and sheep grazing.
- (c) The solar panels will be mounted on a metal tracking system which is pole driven into the ground. This method minimises the area affected by structures, reduces the need for excavations and therefore limits impacts on the soil.
- (d) A specific driver of the design of the substation and BESS activities has been to minimise their hardstand footprint, both to minimise the area of highly productive land affected by the hard stand areas and to reduce construction cost. The end result of that design measure is that the substation and BESS hardstand areas will cover only approximately 1.25ha (or 0.5 per cent) of the site.
- (e) The Project design also considered the potential of locating the substation and BESS hard stand platforms in the small areas of land on the Site that are not highly productive land. It was determined, however, that those areas are of insufficient size. There is also a lineal natural inland wetland on one of those areas which represents a further barrier to its use.
- (f) Consideration was also given to the potential for 'off-site' areas of non-highly productive land bordering the Site to be used for the Project. However, no practicable off-site locations were identified to minimise the loss of highly productive land on the Site.
- (g) At the end of the 40-year operational life of the Project, the solar farm, substation and BESS infrastructure will be removed and the Site will be available for land-based primary production.

8.59 The Panel is satisfied that these measures constitute an appropriate response in terms of minimising and mitigating the loss of highly productive land. In terms of the cumulative loss of highly productive land, while the Panel is aware that there are a number of other solar farms consented in the area, it also notes that the Site comprises only 0.04 per cent of the Waikato region's highly productive land resource. The Panel therefore agrees with the Applicants that the Site represents a negligible proportion of the region's highly productive land.

The Panel's findings -NPS-HPL

8.60 The Panel finds that:

- (a) Having regard to the above, the Application is consistent with:
 - (i) Policy 4 of the NPS-HPL insofar as the Project enables primary production on the Site to continue.

- (ii) Policy 8 of the NPS-HPL insofar as the proposed use and development of the Site is not inappropriate.

NPS for Freshwater Management 2020

- 8.61 The purpose of the National Policy Statement for Freshwater Management 2020 ("NPS-FM") is:

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

first, the health and well-being of water bodies and freshwater ecosystems

second, the health needs of people (such as drinking water)

third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future."

- 8.62 The AEE states that the proposal *"will not result in adverse effects on the health and wellbeing of freshwater ecosystems"* and that *"the change from dairy farming to sheep farming will help improve the health and wellbeing of watercourses within the site."* The proposal will not result in any loss of wetland or stream extent.
- 8.63 Further, under the NPS-FM, freshwater must be managed in a way that gives effect to Te Mana o te Wai.

The Panel's findings – NPS-FM

- 8.64 The Panel notes that the Applicants have undertaken consultation with iwi and a CIA has been prepared. Overall, the Panel accepts the conclusions in the AEE that the proposal is consistent with the NPS-FM.

NES for Assessing and Managing Contamination in Soil to Protect Human Health 2012

- 8.65 The NES-CS sets out planning controls and soil contaminant values for the purpose of identifying and assessing contaminated land before it is developed. The overarching intent is to ensure that land is safe for human use. We have addressed the question of whether the NES-CS applies at paragraphs 3.24-3.28 above.

The Panel's findings – NES-CS

- 8.66 The Panel relies on the assessment undertaken as part of the PSI which concluded that harm to workers in undertaking earthworks on the site and the surrounding environment (in particular, freshwater) would be low. Accordingly, the Panel accepts the recommendations to require a plan as a condition of consent to manage unexpected discoveries of contamination.

Waikato Regional Policy Statement

- 8.67 The Waikato RPS provides an overview of the significant resource management issues in the Waikato region and includes objectives, policies, and methods to achieve the integrated management of the natural and physical resources of the region.
- 8.68 Many RPS objectives and policies are interrelated and overlapping. The AEE helpfully grouped the objectives and, where relevant, policies under the topic

heading it considers most relevant to the aspect of the application relevant to WRC.

8.69 The objectives and policies that were identified as being relevant to the Project are as follows:

- (a) Energy:
 - (i) Objective EIT-O1 – Energy; and
 - (ii) Policy EIT-P1 – Significant infrastructure and energy resources.
- (b) Freshwater:
 - (i) Objective LF-O1 – Mauri and values of freshwater bodies;
 - (ii) Objective LF-O3 – Riparian areas and wetlands;
 - (iii) Policy LF-P3 – All freshwater bodies; and
 - (iv) IM-O4 – Health and wellbeing of the Waikato River.
- (c) Indigenous biodiversity:
 - (i) ECO-O1 – Ecological integrity and indigenous biodiversity; and
 - (ii) ECO-P1 – Maintain or enhance indigenous biodiversity.
- (d) High class soils:
 - (i) Objective LF-O4 – Values of Soil;
 - (ii) Objective LF-O5 – High class soils;
 - (iii) Policy LF-P8 – Maintain or enhance the life supporting capacity of the soil resource; and
 - (iv) Policy LF-P11 – High class soils.
- (e) Tangata whenua:
 - (i) HCV-P2 – Relationship of Māori to taonga;
 - (ii) IM-O7 – Relationship of tangata whenua with the environment; and
 - (iii) IM-P3 – Tangata whenua.
- (f) Built environment:
 - (i) UFD-O1 – Built environment.
- (g) Amenity:
 - (i) IM-O9 – Amenity.
- (h) Contaminated land:

- (i) LF-P9 Soil contaminants; and
 - (ii) HAZ-P4 – Contaminated land.
 - (i) Natural character:
 - (i) NATC-O1 – Natural character; and
 - (ii) NATC-P1 – Preserve natural character.
 - (j) Natural hazards:
 - (i) HAZ-O1 – Natural hazards; and
 - (ii) NAZ-P2 – Manage activities to reduce the risks from natural hazards.
- 8.70 The AEE concluded that the proposal is consistent with the key objectives and policies above. Specifically, the Project provides for the development of renewable energy generation in a manner that avoids, remedies or mitigates adverse effects on the landscape, freshwater, and ecosystem services. In addition, extensive iwi consultation has been undertaken.

The Panel's findings – Waikato RPS

- 8.71 The Panel finds that the proposal is consistent with and will promote the objectives of the Waikato RPS. In particular, the proposal will provide a large scale electricity generator within the Waikato region while giving proper regard to potential effects in terms of construction, erosion and sediment control, and ecological values. Some productive use of the land will be retained, albeit in a different form (sheep rather than cattle farming). Consultation and engagement with mana whenua is understood to be ongoing, with agreements and relationships established.

Waikato Regional Plan

- 8.72 The WRP gives effect to the direction set by the Waikato RPS, including the identification of issues and associated objectives, policies and implementation methods. Objectives and policies key to the application were identified in the AEE, being specifically limited to soil disturbance (5.1.2 Objective, and 5.1.3 Policies (2) and (3)). This relates to work required for the trenching of cables and the excavation of topsoil for internal access routes and the construction of the substation and the BESS.

The Panel's findings - WRP

- 8.73 The Panel finds that the proposal is consistent with the direction provided by the WRP. The measures that have been proposed by the Applicants for the appropriate management of erosion and sediment control are considered to meet WRP requirements. The proposal is not contrary to any key objectives or policies in the WRP.

Waikato District Plan and proposed Waikato District Plan

- 8.74 Both the ODP and the PDP apply given that rules within the PDP have legal effect. Key objectives of relevance to this application under both the ODP and the PDP include:
- (a) infrastructure (as a regionally significant infrastructure build);
 - (b) energy (specifically as a renewable energy generation activity);

- (c) economy (for the districts socio-economic advancement);
- (d) high quality soils (although not involving subdivision);
- (e) rural use and activity (with consideration to landscape, rural character, and amenity values);
- (f) tangata whenua (engagement and effects to be considered);
- (g) water and stormwater (treatment wetland proposed);
- (h) natural hazards (flooding, liquefaction and instability);
- (i) access and transport (local network and new access points);
- (j) contaminated land (identifying HAIL activities);
- (k) hazardous substances (operation of the proposed substation and BESS);
- (l) ecosystems and indigenous biodiversity (bat, herpetofauna and avifauna habitat); and
- (m) earthworks (trenching and substation construction).

8.75 The detailed effects assessment at Sections 6 and 7 address matters relevant to these policies and objectives. The Panel is satisfied that the application is consistent with them and that the proposal can be established and operate in a manner that is in keeping with the expectations of the WDP and PDP. In this regard, the Panel notes that WDC provided comments which stated:⁶¹

"Regarding the Operative Waikato District Plan ("ODP") and the Proposed Waikato District Plan ("PDP"), ("the Plans"), the Plans are generally supportive of renewable energy generation and recognises the national, regional and local significance of these activities. However, it also expects that the adverse effects of these types of activities are appropriately avoided, remedied, or mitigated.

...

... WDC is supportive of the site's dual use as a solar farm and sheep farm. It is considered that this approach would ensure that the productive capacity of the underlying soil resource is largely retained and maintained, and, to a degree, the land is used in a manner anticipated by the Plans whilst maintaining the rural character and amenity of the area (subject to implementation of proposed landscaping)."

8.76 The Panel agrees that while the landscape and character of the Site will be modified, the proposed solar farm will operate in conjunction with a rural activity (sheep grazing). Importantly, in the Panel's view, it will also include significant screen planting as mitigation to these landscape changes.

8.77 Construction and operation of the facility will require associated earthworks, an upgraded access point and use of the surrounding road network, control of hazardous substances, and management of terrestrial habitats. Most of the associated effects are expected to be temporary in nature while others,

61 WDC comments, 31 October 2023.

as part of the ongoing operation, will be mitigated by the various management techniques and mitigation measures, as proposed.

The Panel's findings – ODP and PDP

- 8.78 The Panel finds that the proposal (including associated management and mitigation measures) will be consistent with the objectives and policies of the WDP and PDP; providing a new renewable energy infrastructure facility while retaining the general rural function and character of the Site.

Statutory planning instruments – the Panel's findings

- 8.79 Overall, the Panel's findings are as follows:
- (a) That the various NPS instruments provide high level support for the Project, as one of national significance.
 - (b) That the NPS instruments emphasise the importance of renewable electricity generation and securing diversity of renewable generation sources.
 - (c) The Project will be able to provide security and resilience of power supply.
 - (d) The locational and operational attributes for the Site include its direct access to the National Grid, its reasonably flat land, its accessibility to the North Island main centres, and its availability of useable climate regime.
 - (e) The relevant NES and associated regulations can be complied with.
 - (f) The proposal is consistent with relevant regional and district planning policies, including insofar as it provides for the mitigation and management of construction and operational effects (including planting and vegetative screening of the Site), the on-going relationship with mana whenua, and proposed ecological improvements (with the conversion from cattle to sheep grazing).

9. STATUTORY ASSESSMENT UNDER THE FTCA AND RMA

Decision making under the FTCA

- 9.1 The Panel has considered the Project in light of all matters made relevant by clause 31 of Schedule 6 of the FTCA and made findings on them throughout the course of this decision report. By way of summary:

Clause 31(1)(a) – actual and potential effects on the environment

- 9.2 The Panel has considered potential effects on mana whenua (Section 5 of this report); positive effects (Section 6 of this report); and potential adverse effects (Section 7 of this report). Our findings on all such effects are contained in those sections, which are to the effect that:
- (a) Mana whenua are supportive of the Project and appropriate provision has been made between the Applicants and mana whenua for ongoing consultation such that no mana whenua issues in terms of potential adverse effects arise.
 - (b) There are significant positive effects associated with renewable energy generation.

- (c) That all potential adverse effects are minor to moderate and can be addressed via the conditions of consent that we have imposed.

Clause 31(1)(b) – offsetting and compensation

- 9.3 The Application recorded that because there were limited opportunities on site for ecological enhancement, it proposed to explore opportunities for off-site ecological enhancement. The nature of any such proposal nevertheless appears very uncertain. However, the Applicants did not conclude that any potential adverse ecological effects were of such a magnitude as to require offsetting or compensation and we agree with that conclusion. On that basis, it is not necessary for the Panel to make a finding on this issue.

Clause 31(1)(c) – relevant statutory and iwi planning instruments

- 9.4 The Panel's assessment of relevant statutory and iwi planning instruments are considered in sections 5 and 8 of this report. The Panel concluded that it is satisfied that the Project either promotes or is consistent with all statutory planning instruments that apply.

Clause 31(1)(d) – other relevant matters

- 9.5 The Application did not identify any other relevant matters.
- 9.6 Having regard to the above, the Panel finds that all considerations relevant to assessment under clause 31 of Schedule 6 have been assessed and that no issues arise under this assessment to preclude or count against a grant of consent subject to the conditions that we have imposed.

Decision making under the RMA

- 9.7 Referred projects require consideration of sections 104A to 104D and sections 105 to 107 of the RMA. Overall, the application is required to be assessed as a 'full' discretionary activity. Of these provisions, only three are brought into play – sections 104B, 105 and 107. (Section 104 does not apply as it is replaced by clause 31 of Schedule 6 in the context of referred projects under the FTCA.)
- 9.8 Section 104B states:

"After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—

(a) may grant or refuse the application; and

(b) if it grants the application, may impose conditions under section 108."

- 9.9 A full assessment has been made of the Project throughout this decision report and is summarised above. The Panel has, based on its findings, decided to grant the consent and impose the conditions contained in Appendix 1.
- 9.10 The Panel is satisfied that no aspect of the Project contravenes or brings into play sections 105 or 107 of the RMA.

Assessment against the purpose of the FTCA and Part 2

- 9.11 Clauses (9)(1)(g)(ii) and (i) of Schedule 6 of the FTCA requires applications to provide an assessment of the activity against the purpose of that Act and Part 2 of the RMA.
- 9.12 Clause 31(1) requires that the Panel's considerations must be subject to both Part 2 of the RMA and to the purpose of the FTCA. The FTCA does not specify weighting of the dual purposes such that one can be given primacy or emphasis over the other.

Part 2 of the RMA

- 9.13 The Supreme Court's decision in *Environmental Defence Society v King Salmon*⁶² (and the subsequent decision of the Court of Appeal in *R J Davidson Family Trust v Marlborough District Council*) make clear that when there is no ambiguity in lower order planning documents, there is generally no need to refer back to Part 2 of the RMA, except in certain circumstances.
- 9.14 Of particular relevance, in *RJ Davidson* the High Court stated that (in the context of the NZCPS) if a proposal were affected by different policies so that it was unclear whether consent should be granted or refused, the consent authority would need to exercise judgment and there was no reason why it should not consult Part 2 for assistance.⁶³
- 9.15 In undertaking its assessment of the relevant planning documents, the Panel has concluded that there is no tension between them that cannot be reconciled. In particular, it has found no inconsistency or tension between the NPS-HPL and those NPS's relating to energy generation that cannot be reconciled. The Panel therefore considers that there is no reason in this case why recourse back to Part 2 is required, but nevertheless, for completeness, we set out our conclusions here.
- 9.16 The Applicants addressed Part 2 of the RMA in the AEE. It concluded that the proposal is consistent with Part 2 and that granting (rather than declining) the Application subject to appropriate conditions will best promote the RMA's sustainable management purpose. The Panel has carefully considered the Applicants' assessment in light of and subject to the conditions as now confirmed by the Panel and accepts it. The Panel particularly notes that the "other matters" in section 7 include section 7(j), which is:

"The benefits to be derived from the use and development of renewable energy."

- 9.17 These conclusions confirm the findings we have made elsewhere in this decision.

Purpose of the FTCA

- 9.18 For all the reasons outlined in the AEE and throughout this report the Panel is satisfied that the Project will achieve the purpose of the FTCA as set out in sections 4 and 19 of the FTCA. In particular, the Project will:
- (a) Support the certainty of ongoing investment in the Waikato, and provide substantial economic benefits to the district and to New Zealand.

62 *Environmental Defence Soc Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593

63 *RJ Davidson Family Trust v Marlborough District Council* [2018] NZCA 316, [2018] 3 NZLR 283

- (b) Provide significant public benefits in terms of:
 - (i) Contributing to New Zealand's efforts to mitigate climate change and transition more quickly to a low-emissions economy (in terms of reducing New Zealand's net emissions of greenhouse gases).
 - (ii) Providing infrastructure that can contribute to improvements to economic and environmental outcomes and increases in productivity.
 - (iii) Enabling improved environmental outcomes by way of retirement of dairy farms on the Site and new riparian planting.

9.19 In addition, as recorded in the AEE, granting consent to the Project is likely to enable the Project to progress faster than would otherwise be possible under the conventional RMA consenting process.

9.20 The Project will also continue to promote the sustainable management of natural and physical resources, including because adverse effects will not be significant and can readily be managed by way of conditions.

10. **CONDITIONS**

10.1 A comprehensive suite of conditions was filed with the application documents.

10.2 The Panel's approach throughout this decision report has been to address conditions in the context of the potential adverse effect to which they relate, and the Panel's findings have been made in light of them. As a result, this section only addresses matters which have not already been addressed in other sections of this Report.

10.3 Where these amendments were grammatical or did not alter the effect of the proposed conditions but provided clarification or a better wording, we have imposed them without addressing them in our comments below.

Structure of consents

10.4 As originally proposed, the conditions provided for separate consents and associated conditions for the solar panels and BESS. Separate consents are also required for Transpower's parts of the Project, being the substation and line connections.

10.5 As the conditions of consent relating to each consent were largely the same, the Panel was concerned about unnecessary duplication. The Panel also did not see a good reason to separate the solar farm and BESS parts of the consent given that they both form part of the same Project.

10.6 The Panel therefore endeavoured to rationalise the consent conditions by:

- (a) Providing for one land use consent for the solar farm and BESS;
- (b) Deleting repeated conditions and utilising cross referencing instead.

10.7 The Applicants accepted this approach, except for in relation to the Transpower consent conditions. Transpower requested that all consent conditions relating to its land use consent for substation and line connections are set out in full, to meet the requirements of its internal consent monitoring systems. We agree that this is appropriate, particularly given that

Transpower's consent will operate as a separate consent with a separate consent holder. We have therefore reinstated the full set of consent conditions in the Transpower consent.

Condition 1

- 10.8 The Applicants proposed that condition 1 would require works to be undertaken "in general accordance" with the information submitted. In the draft conditions circulated for comment, the Panel deleted the term "general" such that the Project must be undertaken "in accordance with" the application material.
- 10.9 In response, the Applicants sought that the term "general" be reinstated *"to acknowledge the slight differences that can occur between the details set out in a resource consent application (for example in design and specific construction methodology or solar panel technology details) and the works that are eventually undertaken."*
- 10.10 The Panel has carefully considered this request but has elected to retain the requirement for the Project to be undertaken "in accordance with" the application materials. The reasons for this decision are set out below.
- 10.11 Upon receiving the Application, it was immediately apparent to the Panel that the Application had allowed significant latitude for Project details to be finalised during detailed design, by way of liberal use of the term "approximately" in the description of the Project and heavy reliance on detailed design and management plans to be finalised at a later date.
- 10.12 By way of example, the number of panels and their elevation, the site layout, predicted energy output and substation footprint are all described as "approximate" or indicative. In regard to the panels, the AEE states that:
- "Due to the rapid advancement of solar PV technologies and range of panels available, it is possible that the final design of the solar farm may differ slightly from those shown in these diagrams. Any changes through the detailed design process are however unlikely to alter the key parameters of the Project such as the overall footprint of the Project (total area of ~65-69ha), or exceed the following design parameters..."*
- 10.13 The Panel understands the need for flexibility having regard to the rapidly changing technology. We also consider that we have sufficient information to understand the nature of what is proposed and its potential effects.
- 10.14 However, having regard to the latitude that is already allowed in the application materials, the Panel considers that in this particular case, further flexibility in condition 1 both should be unnecessary and could enable the consent holder to depart too far from what is contemplated in the consent documents and considered, understood and approved by this Panel. The Panel has therefore elected to retain the requirement in condition 1 for the application to be undertaken "in accordance with" the application materials.

Condition 2 – consent duration

- 10.15 As originally proposed, the draft conditions did not include a condition of consent relating to consent duration. Although it was proposed that the solar farm be permitted to operate for 40 years, the actual life of the consent, including the construction period and decommissioning, was not specified.
- 10.16 The Panel added a new condition 2 which specifies that the consent will authorise power generation for a period of 40 years. In its response to the

draft conditions, the Applicants proposed an addition which would clarify that the consent will expire two years after the cessation of power generation, during which time decommissioning would need to be completed.

- 10.17 The Panel was supportive of that addition, but also agreed with WDC's observation (in its comments on draft conditions) that there was still uncertainty regarding when the 40-year period of "operation" commences. By way of RFI 4, the Panel therefore invited the Applicants to propose amended wording for condition 2 which more accurately identifies the point at which the 40-year operational period would commence. The Applicants proposed the following text:

"The consent will commence in accordance with section 116 of the Resource Management Act 1991 ("RMA") and will expire when provides for the operation of the solar farm for a period of 40 years from its commercial operating date (being the first date that the project is commercially exporting power to the National Grid, excluding operations under test conditions) after construction has concluded. The consent will expire and cease to authorise the activities 2 years after the cessation of generation, to enable the decommissioning of the solar farm."

- 10.18 The Panel agrees that the revised condition provides sufficient clarity regarding the term of the consent, including the operational and decommissioning periods, and has imposed it as condition 2.

Condition 26 - Emergency Response Plan

- 10.19 RSFL proposed that the ERP be submitted to WDC for certification four weeks prior to operation of the Project. The Panel was of the view that consideration should be given to emergency response measures at a much earlier stage, and therefore amended this condition to require submission of the ERP for certification at least four weeks before commencement of construction.
- 10.20 RSFL confirmed its agreement to this amendment, which the Panel has imposed as condition 26 but requested the addition of a further condition to allow the ERP to be prepared and certified without covering matters relating to the BESS, provided the ERP is updated and certified in relation to BESS-relevant aspects prior to construction of the BESS.
- 10.21 The reason for this request was that the development schedule is such that operational ERP details regarding the BESS design and systems may not be available prior to general construction (e.g. details of hazardous goods stored on site and the specific procedures associated with them). This approach is consistent with the approach to the final BSSMP which is required to be provided to WDC for certification prior to the construction of the BESS.
- 10.22 The Panel accepts RSFL's reasons for the request and agrees with RSFL that its proposed approach provides a workable solution. The Panel has therefore accepted RSFL's proposed condition which states:

"The ERP prepared and certified under Condition X may exclude matters relating to the BESS provided that the ERP is updated to include these matters prior to construction of the BESS. Any updated ERP, with matters relevant to the BESS, shall be submitted to the WDC for certification at least four weeks prior to construction of the BESS. The updated ERP shall address the requirements of Condition X, including engagement with Fire and Emergency New Zealand."

- 10.23 This condition has been imposed as condition 27.

Condition 10 – Construction Traffic Management Plan

- 10.24 WDC sought an amendment to this condition requiring the addition of text to the advice note which states:

"This consent does not constitute authorisation to work on the road. Works affecting the road will require approval for access to the corridor. A separate Corridor Access Request will need to be made to WDC."

- 10.25 The Panel has agreed to this request on the basis that it correctly indicates the legal position and provides clarity for the consent holder.

Conditions 8, 10, 22, 26, 28 and 35 - management plan conditions

- 10.26 WDC sought amendments to all conditions concerning management plans (CMP, CTMP, ERP, ERMP, BSSMP and AMP) to expressly require their implementation. The Panel considers that such amendments are unnecessary because inherent in the conditions is a requirement that they be implemented.

Additional WDC comments

- 10.27 In its response to the draft conditions, WDC made some general comments regarding responsibility for maintaining farm drains and management of flood risk. WDC did not propose any conditions to address these matters. The Panel has determined not to impose conditions concerning these matters, on the basis that they are adequately addressed by condition 1 which requires the Project to be undertaken in accordance with the application materials.

The Panel's findings - conditions

- 10.28 Overall, the Panel is satisfied that the final condition set imposed, comprising the use of management plans, monitoring and reporting, and a range of other requirements and restrictions, represents an appropriate means to:
- (a) Address (avoid, remedy or mitigate) any potential adverse effects associated with the Project; and
 - (b) Achieve positive environmental outcomes.

11. CONCLUSION

- 11.1 The Panel has considered the AEE and supporting information, the comments received on the Application and on the draft conditions, as well as the further information provided by the Applicants, WDC and WRC.
- 11.2 For all the foregoing reasons and on the basis of the findings throughout this decision report, the Panel has decided to grant the consent sought by RSFL and Transpower, subject to the conditions in Appendix 1, to enable an operational period of 40 years plus a two year decommissioning period.
- 11.3 Overall, we are satisfied that the relevant considerations in clause 31 of Schedule 6 of the FTCA have been addressed and that the dual purposes of the FTCA and the RMA are achieved by this decision. In reaching that view, we have had regard to the actual and potential effects on the environment of allowing the activity and the relevant planning documents. We have also applied section 6 of the FTCA.

11.4 In concluding, we would like to thank:

- (a) Waikato-Tainui and mana whenua for their participation in the process, in particular in terms of clarifying and confirming matters pertaining to ongoing engagement with the Applicants.
- (b) All commenters for their helpful contributions.
- (c) WDC and WRC for their timely assistance with the provision of information requested by the Panel.
- (d) Mr Brabant, Mr Button and Mr Akehurst whose independent advice to the Panel was invaluable. We acknowledge the considerable time pressures those experts have been under and appreciate the efforts to assist the Panel.
- (e) Our EPA Project Lead, Gen Hewett, for excellent support throughout the FTCA process.



(Kate Storer)



(Cherie Lane)



(James Whetu)

APPENDIX 1 - CONDITIONS OF CONSENT

Rangiriri Solar Farm – conditions of consent

8.1 Rangiriri Solar Farm Limited conditions of consent

8.1.1 Land use consent for solar farm (including Battery Energy Storage System facility (“BESS”)) and sheep grazing activities under the Operative and Proposed District Plans

General Conditions

1. *The design, construction and operation of the works shall be undertaken in accordance with the information submitted in the documentation entitled ‘Rangiriri Solar Farm Project – Resource Consent Application and Assessment of Environmental Effects, prepared by Boffa Miskell, dated July 2023 (and further information subsequently provided in November 2023) and listed in Attachment 1. Where there is any discrepancy between this documentation and the conditions below, the requirements of the conditions will prevail.*

Consent duration

2. *The consent will commence in accordance with section 116 of the Resource Management Act 1991 (“RMA”) and provides for the operation of the solar farm for a period of 40 years from its commercial operating date (being the first date that the project is commercially exporting power to the National Grid, excluding operations under test conditions) after construction has concluded. The consent will expire and cease to authorise the activities 2 years after the cessation of generation, to enable the decommissioning of the solar farm.*

Lapse

3. *The consent shall lapse 2 years after the date on which it is granted unless given effect to before that date.*
4. *Pursuant to section 36(1)(c) of the Resource Management Act 1991, the Consent Holder shall pay Waikato District Council (WDC) all actual and reasonable costs associated with monitoring this consent, including but not limited to costs associated with:*
 - i. *Site visits;*
 - ii. *Review and certification of management plans;*
 - iii. *Monitoring of works; and*
 - iv. *Administration.*

Complaints Management

5. *The Consent Holder shall maintain a register of any complaints received regarding the construction activities authorised by these resource consents at all times that physical works are being undertaken. As a minimum, the register shall include:*
 - i. *The name and contact details (if supplied) of the complainant;*
 - ii. *The nature and details of the complaint;*
 - iii. *The location, date and time of the complaint and the alleged event giving rise to the complaint;*
 - iv. *The weather conditions at the time of the complaint, where relevant to the complaint;*
 - v. *Other activities in the area, unrelated to the Project, that may have contributed to the complaint;*
 - vi. *The outcome of the Consent Holder’s investigation into the complaint; and*
 - vii. *A description of any measures taken to respond to the complaint.*

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6. *The Consent Holder shall notify WDC of any complaint received that relates to the activities authorised by these resource consents as soon as reasonably practicable and no longer than two (2) working days after receiving the complaint.*
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7. *The Consent Holder shall respond to any complainant as soon as reasonably practicable and, within five (5) working days, advise WDC and the complainant of the outcome of the Consent Holder's investigation and all measures taken, or proposed to be taken, to respond to the complainant.*
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Construction Conditions

Construction Management

8. *A Construction Management Plan (CMP), or a series of CMPs, shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to the commencement of any physical works for the initial construction of the Project, and shall address the management of all construction works, including details of how the adverse effects of construction will be managed. In particular, the CMP shall contain details covering the following matters:*
- i. An outline construction programme for the works indicating, in particular, staging of work, construction methodology and the likely duration of any temporary road closures and related traffic management measures.*
 - ii. Identification of the key personnel and contact person(s) and their contact details.*
 - iii. Pre-start meeting to ensure Council staff and Consent Holders are aware of and understand the requirements of compliance with the conditions of the consent and the certified CMP.*
 - iv. Procedures for ensuring that surrounding property owners and occupiers are given prior notice of the commencement of construction works and are informed about the expected duration of those works.*
 - v. Procedures for communicating with surrounding property-owners and occupiers during construction works, including engaging with property owners and occupiers to minimise disruption to farming activities, consulting prior to any high noise generating activities, and implementing procedures to ensure action is taken into any complaints received.*
 - vi. The location of notice boards that clearly identify the name, telephone number and address for service of the site manager.*
 - vii. The location and layouts of any construction compound(s) proposed within the site, including details of any turning areas, laydown areas, site offices, storage containers, and staff parking.*
 - viii. Construction noise management measures to ensure compliance with Condition 14.*
 - ix. Erosion and sediment control measures in accordance with Waikato Regional Council's Erosion and Sediment Control Guidelines to ensure sediment is not transferred off site or into watercourses.*
 - x. Dust management measures for earthworks, the movement of vehicles and any other dust generating activity to ensure that any dust that is noxious, dangerous, offensive or objectionable, will be contained in a Dust Management Plan ("DMP").*
 - xi. Road management measures to ensure road inspection, maintenance, and remediation of any construction related damage to the condition of the local road network.*
 - xii. Measures for the protection of utility services, including electricity distribution within the road reserve.*
 - xiii. Measures to be adopted to maintain the land in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities.*
 - xiv. Measures to ensure the safety of the general public where potentially affected by construction activities.*
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- xv. Measures to ensure the continued safe and efficient operation and maintenance of the existing National Grid transmission network, including ongoing compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances 2001 (NZECP 34:2001).

Advice Note: Resource consent issued to Rangiriri Solar Farm Limited for earthworks activities requires the preparation and implementation of a Dust Management Plan to be certified by Waikato Regional Council (WRC). The requirements of Condition 8 x. above can therefore be addressed through incorporation and/or cross-reference to the certified DMP.

9. The CMP prepared under condition 8 shall be prepared in collaboration with a suitably qualified and experienced bat ecologist with the objective to minimise any potential disturbance of long-tailed bats within the site. The CMP may include the following:
- i. Restrictions on enabling works or construction works between 0.5 hours before sunset and 0.5 hours after sunrise, including associated traffic movements, within 50m of potential roost trees as identified in the Rangiriri Solar Farm Ecological Impact Assessment (Boffa Miskell, April 2023) (EclA).
 - ii. Restrictions on artificial lighting at night associated with enabling works or construction works and if needed for security reasons, provision for motion sensor controlled lighting that is directed away from potential roost trees as identified in the EclA:
 - iii. To minimise any potential impacts on maternity roosts, during the months of November to January inclusive:
 - Restrictions on piling works occurring within 50m of potential roost trees as identified in the EclA,
 - Restrictions on construction and vehicle movements (outside of site entry and exit points identified within the CMP) within 20m of potential roost trees as identified in the EclA,
- in each case unless a bioacoustic survey, following current best practice, has demonstrated that no bats have been detected at the location in the previous two nights.
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Construction Traffic Management Plan

10. A Construction Traffic Management Plan (CTMP) shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to the commencement of any physical works for the initial construction of the Project.

The CTMP, which is to be prepared in accordance with the Rangiriri Solar Farm Construction Traffic Management Framework (Rangiriri Solar Farm Integrated Transport Assessment (ITA), Stantec, March 2023), is to include, but not be limited to, details of the following:

- i. Roles, responsibilities and contact details, including for public enquiries and for members of the public to communicate any traffic issues arising as a result of the construction works.
 - ii. Construction staging and proposed activities.
 - iii. Expected number of vehicle movements, particularly heavy vehicle numbers during each phase of construction.
 - iv. Hours of work.
 - v. Points of site access.
 - vi. Construction traffic routes.
 - vii. Nature and duration of any temporary traffic management proposed.
 - viii. Location of on-site parking and loading areas for deliveries.
 - ix. Measures to prevent, monitor and remedy tracking of debris onto public roads and dust onto sealed sections.
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- x. Measures for regular communications with residents located along transport routes utilised by vehicles associated with solar farm construction activities.
 - xi. Any temporary traffic management measures and the associated Carriageway Access Request (CAR) and approved Traffic Management Plan (TMP) for works within the road corridor.
 - xii. Pre- and post-construction inspections of the adjacent local road network to enable WDC to ascertain the condition of these roads prior to and following consented activities.
 - xiii. Any maintenance of the adjacent local road network during the construction phase to a minimum of the condition that existed prior to the commencement of the consented activities.
 - xiv. Measures to identify and provide for remediation of any damage to the adjacent local road network pavements associated with construction works associated with these consents, including timelines for remediation to be agreed with WDC.
 - xv. Permits for any over-dimensions/over-weight vehicles as required.
 - xvi. Measures for establishing safe and efficient travel routes, minimising effects on local amenity and managing the safety and efficiency of stock movements.

Advice Note: To ensure any maintenance and remediation on the adjacent local road network required by WDC to be undertaken by the consent holder (in accordance with items (iii) and (iv) above) is appropriately commensurate to the impact of the consented activities, the CTMP will factor in other known construction activities and land uses in the surrounding area that utilise the same network.

This consent does not constitute authorisation to work on the road. Works affecting the road will require approval for access to the corridor. A separate Corridor Access Request will need to be made to WDC.

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11. The CMP and CTMP prepared under conditions 8-10 above, shall be implemented for the duration of the construction period. Any material amendments to the CMP or CTMP shall be submitted to WDC for certification prior to implementation.

Advice Note: A single CMP (and CTMP) may be prepared for certification in satisfaction of (i) conditions 8-10 above, and (ii) condition 1 of resource consent held by Transpower New Zealand Limited in respect of the substation to be constructed at the Rangiriri Solar Farm.

Accidental Discovery - heritage and cultural

12. Where during Project works any archaeological feature, artefact or human remains are accidentally discovered or are suspected to have been discovered, the following protocol shall be followed by the Consent Holder:

- i. Immediately cease all works within 20m of the discovery.
- ii. Secure/tape off the discovery area (including a buffer area) to ensure sensitive material remains undisturbed.
- iii. Advise Mana Whenua in the first instance if the discovery relates to taonga tuuturu, an archaeological site, or kōiwi (or human remains).
- iv. Advise New Zealand Police if the discovery is kōiwi or human remains.
- v. Advise Heritage New Zealand Pouhere Taonga if the discovery is an archaeological site, or kōiwi (or human remains).
- vi. Attend and enable the site to be inspected by the relevant authorities outlined in iii-v (above).
- vii. Ensure no further action be undertaken until responses have been received from all notified parties, and if the discovery is kōiwi it shall not be removed until advised by Heritage New Zealand Pouhere Taonga.

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13. Work may recommence if Mana Whenua, and Heritage New Zealand Pouhere Taonga provides a statement in writing to WDC, that appropriate action has been undertaken in relation to any Taonga tuuturu or Māori
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cultural heritage material, and archaeological site respectively. The WDC shall advise the Consent Holder on written receipt from Mana Whenua, and Heritage New Zealand Pouhere Taonga that work can recommence.

Construction Noise and Vibration

14. All construction work shall be designed, managed and conducted to ensure noise levels at the façade of any occupied dwelling on any other site shall comply with the following limits, when measured and assessed in accordance with NZS6803:1999 Acoustics-Construction Noise:

Time period	Maximum noise levels	
	LAeq	LAFMax
7.30am to 6.00pm, Monday to Saturday	70dB	85dB
All other times and on Public Holidays	45dB	70dB

15. Noise shall be measured from the commencement of construction work and for the duration of all construction work in accordance with NZS6803:1999 Acoustics-Construction Noise and the results of that monitoring provided to the Team Leader Monitoring WDC.

16. In the event that noise monitoring completed under condition 15 above, demonstrates that the noise standards set out in condition 14 have not been complied with, the Consent Holder shall:

- Take all necessary steps to reduce noise and provide details of those steps to the Team Leader Monitoring WDC;
- Carry out further monitoring in accordance with the requirements of condition 15.

The requirements of subclauses (i) and (ii) must be repeated as required until such time that compliance with the noise standards set out in condition 14 are complied with.

17. Construction vibration shall be measured and assessed in accordance with German Standard DIN 4150-3:1999 "Structural Vibration – Part 3: Effects of Vibration on Structures" and comply with the limits in Tables 1 and 3 of the Standard.

Landscape Mitigation

18. A detailed landscape plan shall be submitted to WDC for certification at least four weeks (20 working days) prior to the commencement of any Project works. The plan shall:
- be in general accordance with the recommendations of the Rangiriri Solar Farm Landscape and Visual Assessment Graphic Supplement and Ecological Impact Assessment submitted as part of the application; except that it shall also include additional planting along the northeastern boundary of the Site as shown in Attachment 2 to screen the property at 197 Glen Murray Road. The planting in this location may also serve as riparian planting as required under Condition 22(i);
 - include details of how low flammability plant species identified on the Fire and Emergency New Zealand website (<https://www.checkitsalright.nz/reduce-your-risk/low-flammability-plants>) as at 1 November 2023 have been incorporated into the design; and
 - include details of the existing vegetation within the site that is to be retained, as identified in the Assessment of Landscape Effects submitted as part of the application.

19. The detailed landscape plan prepared under condition 18 above shall be implemented in the first full planting season following the commencement of the works.

20. All landscaping required under the detailed landscape plan, shall be maintained for the duration of the consent. Should proposed mitigation planting or existing tree cover along the site boundaries be removed and / or die or fail during the operational lifespan of the solar farm, such that they no longer provide effective
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screening, it shall be replaced with a similar species within the next planting season to ensure that visual amenity effects are appropriately managed.

21. Any proposed new trees or vegetation within 12 metres either side of the centreline of National Grid transmission lines must not exceed 2 metres in height at full maturity and must comply with the Electricity (Hazards from Trees) Regulations 2003, or any subsequent revision of the regulations.
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Ecological Restoration Management Plan (ERMP)

22. An Ecological Restoration Management Plan (ERMP), with the objective to enhance the riparian habitats onsite and screen perennial waterways from the solar panels, shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to commencement of construction of the solar farm. The ERMP shall include, but not be limited to:
- i. Details of proposed riparian planting along all perennial waterways as identified in Appendix 5 of the Rangiriri Solar Farm Ecological Impact Assessment (Boffa Miskell, April 2023) (EclA). Where practicable, this is to be a minimum of five metres in width. Along the northeastern boundary of the Site as shown in Attachment 2, the riparian planting may also serve as screening planting as required under Condition 18(i);
 - ii. Fencing requirements for planted areas to ensure permanent exclusion of all livestock to allow successful establishment and maintenance of plantings;
 - iii. Measures to control and manage pest plants, including monitoring requirements, to ensure pest plants do not inhibit the establishment of the plantings and natural regeneration of native species;
 - iv. Details of revegetation planting, including plant eco-sourcing, time of planting, site preparation, plant locations, numbers and densities, riparian buffer planting, and planting and plant maintenance requirements;
 - v. Details of tree species within plantings included on the site that are suitable potential roosts for long-tailed bats;
 - vi. Animal pest control measures to manage pest animals that may inhibit the establishment of revegetation plantings where required;
 - vii. A finalised works programme;
 - viii. Ongoing post-establishment maintenance requirements during the lifetime of the consent;
 - ix. Performance criteria and monitoring requirements; and
 - x. Details of proposed off site ecological enhancement initiatives.
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Vehicle Access

23. The site access point on Glen Murray Road should be formed to the Waikato Regional Infrastructure Technical Specification Heavy Commercial Rural Entranceway Standard with the driveway widened to 7m at the gateway to allow for two-way traffic movement prior to construction commencing.
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Solar Panels

24. Solar Panels shall be a maximum of 3500mm above finished ground level at their highest point and tilt a maximum of 60° from horizontal.
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Incidental Fauna Discovery Protocol

25. *An Incidental Fauna Discovery Protocol shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to construction of the solar farm. The Incidental Discovery Protocol shall apply during the construction, operation and decommissioning of the solar farm and shall require that:*

- i. All incidental bat sightings (including dead individuals) shall be reported to the Department of Conservation within 48 hours, and a copy of that report shall be provided to WDC, and if bats are injured they shall be immediately transported to a veterinarian (approved by the Department of Conservation) experienced in indigenous wildlife rehabilitation. Where possible, the location, photographs and cause of injury/death shall be reported to the Department of Conservation.*
- ii. All incidental discoveries of dead or injured birds shall be reported to the Department of Conservation within 48 hours, and a copy of that report shall be provided to WDC, and injured birds shall be immediately transported to a veterinarian (approved by the Department of Conservation) experienced in indigenous wildlife rehabilitation. Where possible, the location, photographs and cause of injury/death shall be reported to the Department of Conservation.*
- iii. All incidental discoveries of dead or injured native lizards shall be reported to the Department of Conservation within 48 hours, and a copy of that report shall be provided to WDC, and injured lizards shall be immediately transported to a veterinarian (approved by the Department of Conservation) experienced in indigenous wildlife rehabilitation. Where possible, the location, photographs and cause of injury/death shall be reported to the Department of Conservation.*
- iv. The Incidental Fauna Discovery Protocol shall include a list of approved veterinarians and their contact details. This list shall be updated annually.*

The number of incidental fauna discoveries will be included in the annual report to WDC and include a summary of actions taken in response.

Emergency Response Plan (ERP)

26. *An Emergency Response Plan (ERP) shall be submitted to WDC for certification at least four weeks prior to commencement of construction of the Project. The ERP shall be based on the draft Emergency Response Plan (dated November 2023) and shall be prepared by a suitably qualified practitioner.*

The Consent Holder shall prepare the ERP in consultation with Fire and Emergency New Zealand. The Consent Holder shall provide evidence to WDC that engagement with Fire and Emergency New Zealand has occurred including evidence that any concerns raised by Fire and Emergency New Zealand have been addressed or provide reasons they are not addressed.

The ERP shall outline the procedures to be followed in the event that an emergency (including a fire or the spill of hazardous substances) occurs on site, and is to provide details on, but not be limited to, the following:

- i. A facility description, including infrastructure details, operations, number of personnel, and operating hours.*
- ii. A site plan depicting key infrastructure: site access points and internal access tracks; firefighting facilities; water supply system; drainage; and neighbouring properties.*
- iii. Details of emergency resources, including communication systems; personal protective equipment; first aid.*
- iv. Up-to-date contact details for facility personnel, and any relevant off-site personnel that could provide technical support during an emergency.*
- v. Emergency procedures for all credible hazards and risks, including building, infrastructure and vehicle fire, grass fire.*
- vi. How Fire and Emergency New Zealand will be alerted of an emergency incident.*
- vii. Site evacuation procedures.*
- viii. A list of hazardous goods stored on site.*
- ix. Hazardous spill procedures.*

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27. *The ERP prepared and certified under Condition 26 may exclude matters relating to the BESS provided that the ERP is updated to include these matters prior to construction of the BESS. Any updated ERP, with matters relevant to the BESS, shall be submitted to WDC for certification at least four weeks prior to construction of the BESS. The updated ERP shall address the requirements of Condition 26, including engagement with Fire and Emergency New Zealand.*
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Battery Storage Safety Management Plan (BSSMP)

28. *The Consent Holder is to prepare a final Battery Storage Safety Management Plan (BSSMP). The BSSMP is to be provided to WDC for certification at least four weeks (20 working days) prior to commencement of construction of the BESS.*

The Consent Holder shall prepare the BSSMP in consultation with Fire and Emergency New Zealand. The Consent Holder shall provide evidence to WDC that engagement with Fire and Emergency New Zealand has occurred including evidence that any concerns raised by Fire and Emergency New Zealand have been addressed or provide reasons they are not addressed.

The final BSSMP shall be based on the draft BSSMP (attached as Attachment 2 to the response to further information request dated 9 November 2023) and must set out the details of the following:

- i. Design considerations to enable fire mitigation and suppression, including adequate separation from units, appropriate on-site water storage facilities and safe access route for fire services to manoeuvre within the site;*
- ii. BESS facility location and layout;*
- iii. Automatic fire detection systems;*
- iv. Monitoring systems;*
- v. Operational procedures for mitigation of thermal runaway; and*
- vi. Fire suppression systems.*

Operational Conditions**Solar Farm Operation**

29. *Once construction has concluded, the solar farm shall operate for a maximum of 40 years.*
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30. *Prior to the operation of the substation and BESS, the Consent Holder shall construct an artificial wetland to treat and attenuate stormwater runoff from the related hardstand areas. The design of the artificial wetland is to be in general accordance with the recommendations set out in the Rangiriri Solar Farm Civil Servicing Report (Lysaght, March 2023).*

National Grid access

31. *The consent holder shall ensure that access is maintained to the National Grid transmission lines within the site, including support structures, for maintenance at all reasonable times, and emergency works at all times.*

Electric and Magnetic Fields (EMF)

32. *The works shall be designed and constructed to limit the EMF exposure at or beyond the boundary of the substation site to the International Commission on Non-Ionising Radiation Protection Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (1 Hz to 100 kHz) (Health Physics, Vol 99, No. 6, Pg 818-836, Dec 2010) (ICNIRP Guidelines) to public reference levels of 5 kV/m for electric fields and 200µT for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e. when there are no faults in the transmission system).*
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Radio Frequency Interference

33. Any substation works or equipment shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage AC Power Systems, 0.15 to 1000 MHz.

Operational Noise

34. The noise (rating) level from all plant associated with the operation of the solar farm shall comply with the following noise levels when measured and assessed at any notional boundary (as defined in the acoustics report by Styles Group, Assessment of Noise Effects, 19 May 2023) on another site. Noise shall be measured in accordance with New Zealand Standard NZS 6801:2008 Acoustics - Measurement of Environmental Sound and assessed in accordance with the requirements of New Zealand Standard NZS 6802:2008 Acoustics - Environmental noise:

Timeframe	Noise limit
7:00am to 7:00pm	50 dB L_{Aeq}
7:00pm to 10:00pm	45 dB L_{Aeq}
10:00pm to 7:00am	40 dB L_{Aeq} and 65 dB L_{Amax}

Avifauna Monitoring Plan

35. An Avifauna Monitoring Plan (AMP) shall be prepared by a suitably qualified ecologist and provided to WDC for certification at least four weeks (20 working days) prior to operation of the solar farm. In accordance with the avifauna recommendations in Section 6.5 of the Rangiriri Solar Farm Ecological Impact Assessment (Boffa Miskell, April 2023) (EclA), the AMP is to include:
- Frequency and duration of surveys (for a minimum of 24 months);
 - Monitoring methods;
 - Statistical analyses to be applied to carcass detection/removal rates and annual mortality estimates; and
 - Criteria for determining whether the operation of the solar farm has given rise to a more than low level of effect on avifauna in accordance with the assessment criteria (based on the Environment Institute of Australia and New Zealand (EIANZ) guidance for ecological impact assessment) outlined in the Rangiriri Solar Farm EclA (Boffa Miskell, April 2023).
36. At the conclusion of the monitoring period, an independent suitably qualified ecologist on behalf of the Consent Holder is to submit a report to WDC setting out:
- The results of the monitoring; and
 - If the monitoring identifies that a more than low level of collision effect on At-Risk or Threatened avifauna species is detected, recommendations with respect to the preparation and content of an Avifauna Management Plan, as outlined in the avifauna recommendations in Section 6.5 of the Rangiriri Solar Farm EclA (Boffa Miskell, April 2023), to ensure that the level of ecological effect on avifauna does not exceed a low level of effect. Such content shall include:
 - details of proposed ongoing monitoring to be undertaken; and
 - details of collision prevention/deterrent measures that should be implemented at the site.
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Avifauna Management Plan Review

37. Pursuant to Section 128(1)(a)(i) of the Resource Management Act 1991, the consent authority may review the avifauna conditions in the event that the report (required by Condition 36) concludes that the operation of the solar farm has given rise to a more than low level of effect on avifauna (in accordance with the assessment criteria outlined in the Rangiriri Solar Farm Ecological Impact Assessment (Boffa Miskell, April 2023)). The review is to determine whether an Avifauna Management Plan, as outlined in the avifauna recommendations in Section 6.5 of the Rangiriri Solar Farm EclA (Boffa Miskell, April 2023), is required.

Cleaning

38. Solar Farm Infrastructure within the site (including, but not limited to panels and cabinets) shall be cleaned with water only.

Decommissioning Conditions**Decommissioning**

39. A Decommissioning and Rehabilitation Plan shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to the cessation of the solar farm's operation. The Decommissioning and Rehabilitation Plan shall provide details of the duration and nature of the decommissioning works, and address the management of these decommissioning works, including measures to minimise negative impacts on flora and fauna. Any rock column ground improvements as part of the substation platform foundations greater than 0.8m below surface level need not be removed.
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8.1.2 Resource consent for disturbance of soil under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

Condition

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1. *Conditions 1 and 3-7 in 8.1.1 Land use consent for solar farm (including Battery Energy Storage System facility ("BESS")) and sheep grazing activities under the Operative and Proposed District Plans also apply to this consent.*
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Site Management Plan (Contaminated Land)

2. *Prior to any soil disturbance works commencing the Consent Holder shall submit a Site Management Plan (SMP - CL) prepared by a suitably qualified and experienced practitioner ("SQEP") in accordance with the current edition of the Ministry for Environment Contaminated Land Management Guidelines No.1 – Reporting on Contaminated Sites in New Zealand. The SMP - CL shall detail the procedures, controls and contingency measures that must be implemented for the duration of the works in order to protect human health by ensuring exposure pathways are minimised for the duration of the soil disturbance works taking into account the findings of the Preliminary Site Investigation 241 Glen Murray Road (Contaminated Site Investigation, July 2022).*

The SMP- CL shall include, but not be limited to:

- i. Erosion and sediment controls;*
 - ii. Environmental controls for stockpiling;*
 - iii. Procedures to minimise on-site contaminant dispersal;*
 - iv. Unexpected contamination discovery protocols; and*
 - v. Transport and disposal of any on-site contaminated materials to off-site (if required).*
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8.1.3 Resource consent for earthworks under the Waikato Regional Plan

General condition

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1. *Conditions 1 and 3 to 7 under 8.1.1 Land use consent for solar farm (including Battery Energy Storage System facility ("BESS")) and sheep grazing activities under the Operative and Proposed District Plans also apply to this consent.*
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Pre-works Requirements

2. *The Consent Holder shall inform Waikato Regional Council (WRC) in writing, at least 10 working days prior to commencement of any works, of the start date of the works authorised by this resource consent.*
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3. *The Consent Holder shall arrange and conduct a pre-construction site meeting and invite (with a minimum of 10 working day's notice), WRC, the site representative nominated under conditions of this consent, the contractor, and any other party representing the Consent Holder prior to any works authorised by this consent commencing on the site.*

Advice Note: *In the case that any of the invited parties, other than the site representative does not attend this meeting, the Consent Holder will have complied with this condition, provided the invitation requirement is met.*

Winter works

4. *The Consent Holder shall inform WRC in writing, at least 10 working days prior to commencement of any works, of the start date of the works authorised by this resource consent.*
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5. *The Consent Holder shall ensure that the site is appropriately stabilised by 30 April of each year unless otherwise approved in writing by WRC. Stabilisation shall be undertaken by providing adequate measures (vegetative and/or structural and including, pavement, metalling, hydroseeding, revegetating and mulching) that will minimise erosion of exposed soil to the extent practicable.*
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6. *Requests to undertake earthworks during the period 1st May to 30th September inclusive shall be submitted in writing to WRC by 1st April, and shall be in the form of amendments to the approved Erosion and Sediment Control Plan.*

Advice Note: *In considering a request for the continuation of winter works, WRC will consider a number of factors; including:*

- *the nature of the site and the winter soil disturbance works proposed;*
 - *the quality of the existing/proposed erosion and sediment controls;*
 - *the compliance history of the site/operator;*
 - *seasonal/local soil and weather conditions;*
 - *sensitivity of the receiving environment; and*
 - *any other relevant factor.*
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Erosion and Sediment Control

7. *At least 10 working days prior to the commencement of earthworks within any part of the site, the Consent Holder shall provide WRC with a finalised Erosion and Sediment Control Plan (E&SCP). The objective of the E&SCP shall be to minimise sediment discharge from the site to the extent practicable over the earthworks period.*
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8. *The E&SCP shall, as a minimum, be based upon and incorporate those specific principles and practices which are appropriate for the activity authorised by this consent and contained within the WRC document titled "Erosion and Sediment Control – Guidelines for Soil Disturbing Activities" (Technical Report No. 2009/02 – dated January 2009), and shall include at least the following;*
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- a) *Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control to minimise the potential for sediment discharge from the site;*
 - b) *The design criteria and dimensions of all key erosion and sediment control structures;*
 - c) *A site plan of a suitable scale to identify;*
 - i. *The locations of waterways;*
 - ii. *The extent of soil disturbance and vegetation removal;*
 - iii. *Any “no go” and/or buffer areas to be maintained undisturbed adjacent to watercourses;*
 - iv. *Areas of cut and fill;*
 - v. *Locations of topsoil stockpiles;*
 - vi. *All key erosion and sediment control structures;*
 - vii. *The boundaries and area of catchments contributing to all stormwater impoundment structures;*
 - viii. *The locations of all specific points of discharge to the environment; and*
 - ix. *Any other relevant site information.*
 - d) *Construction timetable for the erosion and sediment control works and the bulk earthworks proposed;*
 - e) *A detailed staging plan and methodology for the works including details of staging of the works and of how the extent of exposed works will be minimised on site;*
 - f) *Detailed dewatering methodology including treatment methods for any sediment contaminated water pumped from the site excavations;*
 - g) *Timetable and nature of progressive site rehabilitation and re-vegetation proposed;*
 - h) *Maintenance, monitoring and reporting procedures;*
 - i) *Rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall events and/or the failure of any key erosion and sediment control structures;*
 - j) *Procedures and timing for review and/or amendment to the E&SCP; and*
 - k) *Identification and contact details of personnel responsible for the operation and maintenance of all key erosion and sediment control structures.*

The E&SCP shall be approved in writing by WRC acting in a technical certification capacity prior to any works authorised by this consent commencing and the Consent Holder shall undertake all earthworks authorised by this consent in accordance with the approved E&SCP.

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- 9. *Any changes proposed to the E&SCP shall be confirmed in writing by the Consent Holder and approved in writing by WRC acting in a technical certification capacity, prior to the implementation of any changes proposed.*
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- 10. *The Consent Holder shall ensure that a copy of the approved E&SCP, including any approved amendments, is kept onsite and this copy is updated within 5 (five) working days of any amendments being approved.*
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- 11. *Prior to bulk earthworks commencing on any area, the Consent Holder shall submit to WRC a certificate signed by an appropriately qualified and experienced engineer to certify that the erosion and sediment controls have been constructed in accordance with the approved erosion and sediment control plans and in accordance with the document titled “Erosion and Sediment Control Guidelines for Soil Disturbing Activities January 2009”. Certified controls shall include any sediment retention pond, decanting earth bunds, silt fences and diversion channels/bunds. The certification for these measures shall be supplied within five working days of completion of construction of those measures.*

Information supplied if applicable shall include:

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- a) Contributing catchment area;
 - b) Retention volume of structure (dead storage and live storage measured to the top of the primary spillway);
 - c) Shape and dimensions of structure;
 - d) Position of inlets/outlets;
 - e) Stabilisation of the structure;
 - f) Compliance with the WRC document titled "Erosion and Sediment Control Guidelines for Soil Disturbing Activities January 2009" (Technical Report No. 2009/02); and
 - g) Compliance with any relevant conditions of this consent.

Advice Note: An example template and the information required for the As Built Certification Statements can be found on the WRC website www.waikatoregion.govt.nz/earthworks.

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12. The Consent Holder shall ensure that all sediment laden run-off from the site is treated by sediment retention structures. These structures are to be fully operational before bulk earthworks commence and shall be maintained to perform at least at 80% of their full operational capacity.
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13. The Consent Holder shall ensure that all clean water run-off from stabilised surfaces including catchment areas above and around the site shall be diverted away from the earthworks area via a stabilised diversion system.
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14. The Consent Holder shall ensure that all runoff diversion systems are designed and installed to convey flows from contributing catchment areas up to the 20% AEP rainfall event plus 300mm of freeboard without overtopping and shall also ensure that these systems incorporate adequate protection against erosion where required.
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15. The Consent Holder shall ensure that all erosion and sediment controls are inspected and in good working order prior to, and immediately after rain events. The Consent Holder shall further ensure that all erosion and sediment controls are maintained such that optimal sediment capture efficiency is achieved at all times.
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16. The Consent Holder shall construct a stabilised construction entrance at the site entrance point and shall manage all traffic leaving the site to prevent the tracking of sediment onto the public road surface.
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17. In the event that any persistent sediment tracking effects are identified, the Consent Holder shall install an appropriate wheel wash facility to prevent any ongoing effects.
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18. The erosion and sediment controls specified in the Erosion and Sediment Control Plan, shall not be disestablished without the prior written approval of WRC, acting in a technical certification capacity.
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Flocculation

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19. All decanting earth bunds and sediment retention ponds established on site in accordance with the approved E&SCP shall incorporate a suitable rain activated flocculant dosing system unless otherwise approved by WRC.
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20. Prior to the commissioning of any flocculation treatment system, the Consent Holder shall provide WRC with a Flocculation Management Plan (FMP), for the written approval of WRC. The FMP shall include as a minimum:
- a) Specific design details for the flocculation system;
 - b) Monitoring, maintenance (including post-storm) and a recording system;
 - c) Details of optimum dosage (including assumptions);
 - d) Results of any initial flocculation trial;
 - e) Batch dosing methodology;
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- f) A spill contingency plan; and
 - g) Contact details of the persons responsible for the operation and maintenance of the flocculation treatment system and the organisational structure to which this person shall report.

The FMP shall be approved in writing by WRC acting in a technical certification capacity prior to any works authorised by these consents commencing. Any changes proposed to the approved FMP shall be confirmed in writing by the Consent Holder and approved in writing by WRC acting in a technical certification capacity, prior to the implementation of any changes proposed.

Monitoring and Maintenance

- 21. *The Consent Holder shall ensure that the erosion and sediment controls at the site are inspected a minimum of once per week and within 24 hours of each rainstorm event that is likely to impair the function or performance of the controls.*
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- 22. *The Consent Holder shall carry out monitoring and maintenance of erosion and sediment controls in accordance with the conditions of this consent and shall maintain records detailing:*
 - a) *The date, time and results of the monitoring undertaken;*
 - b) *The erosion and sediment controls that required maintenance;*
 - c) *The time when the maintenance was undertaken; and*
 - d) *The type of maintenance carried out.*

These records shall be provided to WRC on request.

Sampling

- 23. *If requested in writing by WRC the Consent Holder shall take samples of the discharges from all sediment control devices on the site a minimum of once per month and after all rainfall events greater than 20 millimetres in the preceding 24 hours, excepting times when there are no discharges. The Consent Holder shall take the samples within four hours of becoming aware of a rainfall event greater than 20 millimetres in the preceding 24 hours.*
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- 24. *Within one working day of taking any samples required, the Consent Holder shall have those samples analysed for suspended solids and turbidity. The results of the analysis shall be forwarded to WRC within 5 days of analysis.*
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- 25. *The concentration of suspended solids in the downstream watercourses shall not exceed 150 grams per cubic metre suspended solids concentration as a result of the exercise of this consent. This standard shall apply, except where the suspended solids concentration in the named water body, unaffected by the activity, is greater than the standard specified. When the concentration of suspended solids in the named water body, unaffected by the activity, exceeds 150 grams per cubic metre then there shall not be any increase in the suspended solids concentration in the named water body as a result of activities authorised by this consent.*

Advice Note: *When assessing compliance with this condition a minimum of three water samples should be collected: (a) upstream and unaffected by the activities authorised by this consent; (b) the point source discharge from the activities authorised by this consent; and (c) downstream after reasonable mixing.*
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- 26. *The Consent Holder shall ensure that the soluble aluminium concentration of any discharge from a sediment control device flocculated in accordance with a Flocculation Management Plan approved in accordance with condition 20 shall not exceed 0.2 grams per cubic metre.*
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- 27. *The Consent Holder shall ensure that the pH of any discharge from a sediment control device flocculated in accordance with a Flocculation Management Plan approved in accordance with condition 20 shall not be less than 5.5 or greater than 8.5 pH units.*
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28. Any sampling required by this resource consent, the frequency of sampling, analyses and reporting shall be altered or reduced with the written agreement of WRC.
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Dust

29. All earthworks activities carried out on site shall be conducted and managed in such a manner as to ensure that all dust and particulate emissions are kept to a practical minimum to the extent that there are no dust discharges beyond the boundary of the site that cause an objectionable effect.
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30. The Consent Holder shall ensure that the soil moisture of any exposed surfaces is maintained at sufficient levels to prevent dust generated by normal earthmoving operations from remaining airborne beyond the boundary of the work site.
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31. The Consent Holder shall ensure that, outside of normal working hours, staff are available on-call at all times to operate the water application system for dust suppression.
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32. If so required by WRC, the Consent Holder shall carry out immediate sealing of any problematic dust generating surfaces within the site using hydro-seed/hydro-mulch, polymer soil stabilisers or a similar dust control product to provide instant remediation of any areas to prevent any ongoing dust effects.
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33. The Consent Holder shall ensure that an adequate supply of water for dust control (sufficient to apply a minimum of 5 mm/day or 50m³/ha to all exposed areas of the site), and an effective means for applying that quantity of water, is available at all times during construction, and until such time as the site is fully stabilised unless otherwise agreed with WRC.

Advice Note: Agreement to a reduced water supply rate may be accepted by WRC on the basis of the development of alternative best practice dust control methods which shall be approved WRC.

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34. The Consent Holder shall provide WRC with a detailed Dust Management Plan (DMP), at least 10 working days prior to the commencement of activities authorised by this consent. The DMP shall be based upon those measures outlined in the preliminary DMP submitted as part of the consent application documents and the main objective of the DMP shall be to outline the site management methods to ensure that compliance with conditions 29-33 is achieved throughout the earthworks and as a minimum shall address the following items:
- a) Confirmation of the parties responsible for dust management throughout the works;
 - b) Detailed monitoring methods for weather/soil conditions to ensure that any periods of elevated dust risk are appropriately anticipated and managed;
 - c) Finalised works staging plan to ensure exposed surfaces at any one time are minimised in accordance with the requirements of this consent;
 - d) Proposed dust control methods to ensure damp ground conditions can be maintained within the site during high dust risk periods;
 - e) Confirmation of a suitable capacity water supply for dust suppression;
 - f) Methods for managing dust risk outside of standard working hours e.g weekends;
 - g) Contingency methods for controlling any identified dust effects e.g cease works/site stabilisation; and
 - h) Protocols for responding to and addressing any dust complaints received.

The DMP shall be approved in writing by WRC acting in a technical certification capacity prior to any works authorised by this consent commencing and the Consent Holder shall undertake all earthworks authorised by this consent in accordance with the approved DMP.

Machinery

35. All earthmoving machinery, pumps and generators shall be operated in a manner which ensures that spillages of fuel, oil and similar contaminants are prevented, particularly during refuelling and machinery servicing and
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maintenance. Refuelling and lubrication activities shall be carried out away from any surface water such that any spillage can be contained and does not enter any surface water.

36. *Prior to entering the site all machinery shall be appropriately cleaned and inspected to minimise any 'containment' and/or 'eradication' plant pest species being introduced to the site.*

Advice Note: *For the purposes of this condition, 'containment' and 'eradication' plant pest species are those species that are listed as such in the Waikato Regional Pest Management Strategy 2014-2024, or any subsequent version of that publication that is published after the granting of this resource consent.*

Stabilisation/Rehabilitation

37. *The site shall be stabilised against erosion as soon as practicable and in a progressive manner as earthworks are finished over various areas of the site. The Consent Holder shall monitor and maintain the site until vegetation is established to such an extent that it prevents erosion and prevents sediment from entering any watercourse.*

The discharge of untreated surface runoff from any area where soil has been disturbed as a result of the exercise of this resource consent shall only occur after consultation and the prior written approval of WRC acting in a technical certification capacity. In this regard, the main issues that will be considered by WRC include:

- a) The quality of the stabilisation and/or covering vegetation;*
 - b) The quality of the water discharged from the rehabilitated land; and*
 - c) The quality of the receiving water.*
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38. *If so required by WRC, the Consent Holder shall carry out immediate stabilisation of any required area of exposed earthworks surfaces on site using straw mulching, pinned geotextile or similar instant stabilisation techniques to prevent any potential adverse sediment or dust effects.*
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8.1.4 Review conditions for all Rangiriri Solar Farm Limited consents (8.1.1 to 8.1.3)

Review

1. *WDC may, under sections 128 and 129 of the Resource Management Act 1991 (Act), initiate a review of any or all conditions of this resource consent on the first, second and third anniversary of the commencement of the consent and every five years after that, for the duration of the resource consents, provided that any such review of conditions shall be for the purposes of:*
 - i. responding to any adverse effect on the environment which may arise from the exercise of the consent and which it is most appropriate to deal with at a later stage. These effects include, but are not limited to, those that may arise in relation to:*
 - a) dust management during construction;*
 - b) noise effects during construction;*
 - c) traffic effects during construction;*
 - d) ecological impacts;*
 - e) landscaping; and*
 - f) access.*
 - ii. dealing with any unanticipated adverse effects on the environment which may arise from the exercise of the consent, which it is appropriate to deal with at a later stage; and*
 - iii. ensuring that the conditions are effective and appropriate in managing the effects of the activities authorised by these consents.*

8.2 Transpower New Zealand Limited conditions of consent

8.2.1 Land use consent for substation and line connections under the Operative and Proposed District Plans

General Conditions

1. *The design, construction and operation of the works shall be undertaken in accordance with the information submitted in the documentation entitled 'Rangiriri Solar Farm Project – Resource Consent Application and Assessment of Environmental Effects, prepared by Boffa Miskell, dated July 2023 (and further information subsequently provided in November 2023) and listed in Attachment 1. Where there is any discrepancy between this documentation and the conditions below, the requirements of the conditions will prevail.*

Consent duration

2. *The consent will commence in accordance with section 116 of the Resource Management Act 1991 ("RMA") and provides for the operation of the substation for a period of 40 years from its commercial operating date (being the first date that the project is commercially exporting power to the National Grid, excluding operations under test conditions) after construction has concluded. The consent will expire and cease to authorise the activities 2 years after the cessation of generation, to enable the decommissioning of the solar farm.*

Lapse

3. *The consent shall lapse 2 years after the date on which it is granted unless given effect to before that date.*
4. *Pursuant to section 36(1)(c) of the Resource Management Act 1991, the Consent Holder shall pay WDC all actual and reasonable costs associated with monitoring this consent, including but not limited to costs associated with:*
 - i. *Site visits*
 - ii. *Review and certification of management plans;*
 - iii. *Monitoring of works; and*
 - iv. *Administration.*

Complaints Management

5. *The Consent Holder shall maintain a register of any complaints received regarding the construction and operational activities authorised by these resource consents at all times that physical works are being undertaken.*

As a minimum, the register shall include:

 - i. *The name and contact details (if supplied) of the complainant;*
 - ii. *The nature and details of the complaint;*
 - iii. *The location, date and time of the complaint and the alleged event giving rise to the complaint;*
 - iv. *The weather conditions at the time of the complaint, where relevant to the complaint;*
 - v. *Other activities in the area, unrelated to the Project, that may have contributed to the complaint;*
 - vi. *The outcome of the Consent Holder's investigation into the complaint; and*
 - vii. *A description of any measures taken to respond to the complaint.*

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6. *The Consent Holder shall notify WDC of any complaint received that relates to the activities authorised by these resource consents as soon as reasonably practicable and no longer than two (2) working days after receiving the complaint.*
 7. *The Consent Holder shall respond to any complainant as soon as reasonably practicable and, within five (5) working days, advise WDC and the complainant of the outcome of the Consent Holder's investigation and all measures taken, or proposed to be taken, to respond to the complainant.*
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Construction Conditions

Construction Management Plan

8. *A Construction Management Plan (CMP), or a series of CMPs, shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to the commencement of any physical works for the initial construction of the Project, and shall address the management of all construction works, including details of how the adverse effects of construction will be managed. In particular, the CMP shall contain details covering the following matters:*
 - i. *An outline construction programme for the works indicating, in particular, staging of work, construction methodology and the likely duration of any temporary road closures and related traffic management measures.*
 - ii. *Identification of the key personnel and contact person(s) and their contact details.*
 - iii. *Pre-start meeting to ensure Council staff and Consent Holders are aware of and understand the requirements of compliance with the conditions of the consent and the certified CMP.*
 - iv. *Procedures for ensuring that surrounding property owners and occupiers are given prior notice of the commencement of construction works and are informed about the expected duration of those works.*
 - v. *Procedures for communicating with surrounding property-owners and occupiers during construction works, including engaging with property owners and occupiers to minimise disruption to farming activities, consulting prior to any high noise generating activities, and implementing procedures to ensure action is taken into any complaints received.*
 - vi. *The location of notice boards that clearly identify the name, telephone number and address for service of the site manager.*
 - vii. *The location and layouts of any construction compound(s) proposed within the site, including details of any turning areas, laydown areas, site offices, storage containers, and staff parking.*
 - viii. *Construction noise management measures to ensure compliance with Condition 14.*
 - ix. *Erosion and sediment control measures in accordance with WRC's Erosion and Sediment Control Guidelines to ensure sediment is not transferred off site or into watercourses.*
 - x. *Dust management measures for earthworks, the movement of vehicles and any other dust generating activity to ensure that any dust that is noxious, dangerous, offensive or objectionable, will be contained in the Dust Management Plan ("DMP").*
 - xi. *Road management measures to ensure road inspection, maintenance, and remediation of any construction related damage to the condition of the local road network.*
 - xii. *Measures for the protection of utility services, including electricity distribution within the road reserve.*
 - xiii. *Measures to be adopted to maintain the land in a tidy condition in terms of disposal/storage of rubbish, storage and unloading of building materials and similar construction activities.*
 - xiv. *Measures to ensure the safety of the general public where potentially affected by construction activities.*
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- xv. Measures to ensure the continued safe and efficient operation and maintenance of the existing National Grid transmission network, including ongoing compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances 2001 (NZECP 34:2001).
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9. The CMP prepared under condition 8 shall be prepared in collaboration with a suitably qualified and experienced bat ecologist with the objective to minimise any potential disturbance of long-tailed bats within the site. The CMP may include the following:

- a) Restrictions on enabling works or construction works between 0.5 hours before sunset and 0.5 hours after sunrise including associated traffic movements, within 50m of potential roost trees as identified in the Rangiriri Solar Farm Ecological Impact Assessment (Boffa Miskell, April 2023) (EclA).
- b) Restrictions on artificial lighting at night associated with enabling works or construction works and if needed for security reasons, provision for motion sensor controlled lighting that is directed away from potential roost trees as identified in the EclA:
- c) To minimise any potential impacts on maternity roosts, during the months of November to January inclusive:
 - Restrictions on piling works occurring within 50m of potential roost trees as identified in the EclA,
 - Restrictions on construction and vehicle movements (outside of site entry and exit points identified within the CMP) within 20m of potential roost trees as identified in the EclA,

in each case unless a bioacoustic survey, following current best practice, has demonstrated that no bats have been detected at the location in the previous two nights.

Construction Traffic Management Plan

10. A Construction Traffic Management Plan (CTMP) shall be prepared and provided to WDC for certification at least four weeks (20 working days) prior to the commencement of any physical works for the initial construction of the Project.

The CTMP, which is to be prepared in accordance with the Rangiriri Solar Farm Construction Traffic Management Framework (Rangiriri Solar Farm Integrated Transport Assessment (ITA), Stantec, March 2023), is to include, but not be limited to, details of the following:

- i. Roles, responsibilities and contact details, including for public enquiries and for members of the public to communicate any traffic issues arising as a result of the construction works.
 - ii. Construction staging and proposed activities.
 - iii. Expected number of vehicle movements, particularly heavy vehicle numbers during each phase of construction.
 - iv. Hours of work.
 - v. Points of site access.
 - vi. Construction traffic routes.
 - vii. Nature and duration of any temporary traffic management proposed.
 - viii. Location of onsite parking and loading areas for deliveries.
 - ix. Measures to prevent, monitor and remedy tracking of debris onto public roads and dust onto sealed sections.
 - x. Measures for regular communication with residents located along transport routes utilised by vehicles associated with solar farm construction activities.
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- xi. Any temporary traffic management measures and the associated Carriageway Access Request (CAR) and approved Traffic Management Plan (TMP) for works within the road corridor.
 - xii. Pre- and post-construction inspections of the adjacent local road network to enable WDC to ascertain the condition of these roads prior to and following consented activities.
 - xiii. Any maintenance of the adjacent local road network during the construction phase to a minimum of the condition that existed prior to the commencement of the consented activities.
 - xiv. Measures to identify and provide for remediation of any damage to the adjacent local road network pavements associated with construction works associated with these consents, including timelines for remediation to be agreed with WDC.
 - xv. Permits for any over-dimensions/over-weight vehicles as required.
 - xvi. Measures for establishing safe and efficient travel routes, minimising effects on local amenity and managing the safety and efficiency of stock movements.

Advice Note: To ensure any maintenance and remediation on the adjacent local road network required by WDC to be undertaken by the consent holder (in accordance with items (iii) and (iv) above) is appropriately commensurate to the impact of the consented activities, the CTMP will factor in other known construction activities and land uses in the surrounding area that utilise the same network.

This consent does not constitute authorisation to work on the road. Works affecting the road reserve will require approval for access to the corridor. A separate corridor access request will need to be made to WDC.

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11. The CMP and CTMP prepared under conditions 8-10 above shall be implemented for the duration of the construction period. Any material amendments to the CMP or CTMP shall be submitted to WDC for certification at least 10 working days prior to implementation.

Advice Note: A single CMP (and CTMP) may be prepared for certification in satisfaction of (i) conditions 8-10 above, and (ii) conditions 8-10 of resource consent held by Rangiriri Solar Farm Limited in respect of the solar farm, sheep grazing activities and Battery Energy Storage System facility ("BESS") activities at the Rangiriri Solar Farm.

Accidental Discovery - heritage and cultural

12. Where during Project works any archaeological feature, artefact or human remains are accidentally discovered or are suspected to have been discovered, the following protocol shall be followed by the Consent Holder:

- i. Immediately cease all works within 20m of the discovery.
- ii. Secure/tape off the discovery area (including a buffer area) to ensure sensitive material remains undisturbed.
- iii. Advise Mana Whenua in the first instance if the discovery relates to taonga tuuturu, an archaeological site, or kōiwi (or human remains).
- iv. Advise New Zealand Police if the discovery is kōiwi or human remains.
- v. Advise Heritage New Zealand Pouhere Taonga if the discovery is an archaeological site, or kōiwi (or human remains).
- vi. Attend and enable the site to be inspected by the relevant authorities outlined in iii-v (above).
- vii. Ensure no further action be undertaken until responses have been received from all notified parties, and if the discovery is kōiwi it shall not be removed until advised by Heritage New Zealand Pouhere Taonga.

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13. Work may recommence if Mana Whenua, and Heritage New Zealand Pouhere Taonga provides a statement in writing to WDC, that appropriate action has been undertaken in relation to any Taonga tuuturu or Māori cultural heritage material, and archaeological site respectively. The WDC shall advise the Consent Holder on written receipt from Mana Whenua, and Heritage New Zealand Pouhere Taonga that work can recommence.
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Construction Noise and Vibration

14. All construction work shall be designed, managed and conducted to ensure noise levels at the façade of any occupied dwelling on any other site shall comply with the following limits, when measured and assessed in accordance with NZS6803:1999 Acoustics-Construction Noise:

Time period	Maximum noise levels	
	LAeq	LAFMax
7.30am to 6.00pm, Monday to Saturday	70dB	85dB
All other times and on Public Holidays	45dB	70dB

15. Noise shall be measured from the commencement of construction work and for the duration of all construction work in accordance with NZS6803:1999 Acoustics-Construction Noise and the results of that monitoring provided to the Team Leader Monitoring WDC.

16. In the event that noise monitoring, completed under condition 15 above, demonstrates that the noise standards set out in condition 14 have not been complied with, the Consent Holder shall:

- Take all necessary steps to reduce noise and provide details of those steps to the Team Leader Monitoring WDC;
- Carry out further monitoring in accordance with the requirements of condition 15.

The requirements of subclauses (a) and (b) must be repeated as required until such time that compliance with the noise standards set out in condition 14 are complied with.

17. Construction vibration shall be measured and assessed in accordance with German Standard DIN 4150-3:1999 "Structural Vibration – Part 3: Effects of Vibration on Structures" and comply with the limits in Tables 1 and 3 of the Standard.

Operational Conditions**Operation**

18. Once construction has concluded, the substation and line connections shall operate for a maximum of 40 years.

Electric and Magnetic Fields (EMF)

19. The works shall be designed and constructed to limit the EMF exposure at or beyond the boundary of the substation site to the International Commission on Non-Ionising Radiation Protection Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (1 Hz to 100 kHz) (Health Physics, Vol 99, No. 6, Pg 818-836, Dec 2010) (ICNIRP Guidelines) to public reference levels of 5 kV/m for electric fields and 200µT for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e. when there are no faults in the transmission system).

Radio Frequency Interference

20. Any substation works or equipment shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage AC Power Systems, 0.15 to 1000 MHz.

Operational Noise

21. The noise (rating) level from all plant associated with the operation of the solar farm shall comply with the following noise levels when measured and assessed at any notional boundary (as defined in the acoustics report) on another site. Noise shall be measured in accordance with New Zealand Standard NZS 6801:2008 Acoustics -
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Measurement of Environmental Sound and assessed in accordance with the requirements of New Zealand Standard NZS 6802:2008 Acoustics - Environmental noise:

Timeframe	Noise limit
7:00am to 7:00pm	50 dB L_{Aeq}
7:00pm to 10:00pm	45 dB L_{Aeq}
10:00pm to 7:00am	40 dB L_{Aeq} and 65 dB L_{Amax}

Review

22. WDC may, under sections 128 and 129 of the Resource Management Act 1991 (Act), initiate a review of any or all conditions of this resource consent on the first, second and third anniversary of the commencement of the consent and every five years after that, for the duration of the resource consents, provided that any such review of conditions shall be for the purposes of:
- i. responding to any adverse effect on the environment which may arise from the exercise of the consent and which it is most appropriate to deal with at a later stage. These effects include, but are not limited to, those that may arise in relation to:
 - a) dust management during construction;
 - b) noise effects during construction;
 - c) traffic effects during construction;
 - d) landscaping; and
 - e) access.
 - ii. dealing with any unanticipated adverse effects on the environment which may arise from the exercise of the consent, which it is appropriate to deal with at a later stage; and
 - iii. ensuring that the conditions are effective and appropriate in managing the effects of the activities authorised by these consents.
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ATTACHMENT 1: TABLE OF PLANS AND REPORTS

Report title and reference	Author	Rev	Dated
Cover letter from the applicant explaining corrected version of AEE	Boffa Miskell	-	2 August 2023
Corrected assessment of environmental effects	Boffa Miskell	7	6 July 2023
Appendix 1 - Application forms		-	30/06/2023
Appendix 2 - Notice of decision	COVID-19 Recovery (Fast-track Consenting) Referred Projects (Rangiriri Solar Farm and Waerenga Solar Farm) Amendment Order 2023	-	11 April 2023
Appendix 3 - Adjacent sites	Plan prepared for IGP by Boffa Miskell Limited		Plan dated 13 March 2023
Appendix 4 - Records of title			
Appendix 5 – Plans of Proposal Part A	Illustrative Layout	V3	23/3/23
	Illustrative Layout	V2	06/02/23
	Mounting Structure Details – Side and Top Views	V3	15/03/23
Appendix 5 – Plans of Proposal Part B	Solar PV and Battery Storage – Conversion Unit Details	V3	15/03/23
	Battery Energy Storage System Layout	V3	22/03/23
	Battery Energy Storage System Layout	V3	22/03/23
	Battery Storage	V2	30/01/23
	Indicative Construction compound	V3	15/03/23

Report title and reference	Author	Rev	Dated
	Internal Access Tracks	V4	20/3/23
	Deer Fencing Details	V3	02/02/23
	Substation and Energy Storage Fence and Gate Elevations	V3	15/03/23
	CCTV Pole Details	V2	30/01/23
	Rangiriri West Substation – Substation Locality Plan	Sheet 1 Rev1	DWG IGP5762-101
	Rangiriri West Substation – Substation Locality Plan 3D Overview	Sheet 2	DWG IGP5762-101
	Rangiriri West Substation – 220/33kV Switchyard Isometric Layout (Concept)	Sheet 1 Rev 1	DWG IGP5762-05
	Rangiriri West Substation 220/33kV Switchyard Plan view (Concept)	Sheet 2 Rev 1	DWG IGP5762-05
	Rangiriri West Substation 220/33kV Switchyard section views (Concept)	Sheet 3 Rev -	DWG IGP5762-05
Appendix 6 - Assessment of landscape effects part A	Boffa Miskell	Rev 3	17 April 2023
Appendix 6 - Assessment of landscape effects part B	Viewpoint VS1A Viewpoint VS1B Viewpoint VS2A Viewpoint VS2B	0	January 2023

Report title and reference	Author	Rev	Dated
	Viewpoints 3 & 4		
Appendix 6 - Assessment of landscape effects part C	Viewpoints 5 & 6 Viewpoint 7&8 View point 9 Solar Photovoltaic Glint and Glare Study – PagerPower	0 1	January 2023 October 2022
Appendix 7 - Noise assessment	Styles Group – Assessment of Noise Effects Photovoltaic Solar Farm - Rangiriri	4	19 May 2023
Appendix 8 - Integrated transportation assessment	Rangiriri Solar Farm – Integrated Transport Assessment prepared by Stantec	-	22/03/23
Appendix 9 - Ecological impact assessment	Ecological Impact Assessment prepared by Boffa Miskell	3	19 April 2023
Appendix 10 - Soil and resource report	Soil and Resource Report for Rangiriri Solar Farm prepared by Hanmore Land Management	-	4 November 2022
Appendix 11 - Geotechnical investigation assessment – Part A Appendix 11 - Geotechnical investigation assessment – Part B	Rangiriri Solar Farm, 253 Glen Murray Road, Rangiriri West Geotechnical Investigation Report prepared by CMW Geosciences	2	12 April 2023
Appendix 12 - Archaeological assessment	Archaeological Assessment prepared for Island Green Power UK Limited by Sian Keith	-	1 March 2023
Appendix 13 - Contaminated land assessment	Preliminary Site Investigation 241 Glen Murray Road and part of 836A Rotongaro Road Rangiriri West prepared for Waikato Solar Farms Ltd by	-	11/06/2022

Report title and reference	Author	Rev	Dated
	CSI Contaminated Site Investigation		
Appendix 14 - Cultural impact assessment	Rangiriri Solar Farm – Cultural Impact Assessment prepared by Te Hira Consultants Ltd for Mana Whenua	-	June 2023
Appendix 15 – Civil Servicing Infrastructure assessment	Lysaght – Rangiriri Solar Farm Limited Civil Servicing Report Rangiriri Solar Farm 253 Glen Murray Road, Rangiriri West	2	02/03/23
Appendix 16 - Flood modelling assessment	Rangiriri Solar Farm – Flood Assessment prepared by Stantec	1	10/03/2022
Appendix 17 - Economic assessment	Assessment of economic effects of the proposed Rangiriri solar farm prepared for Rangiriri Solar Farm Limited by Brown Copeland & Co Ltd	-	19/12/2022
Appendix 18 - National environmental standards for electricity transmission activities (NESETA) assessment	-	-	-
Appendix 19 - Emissions calculations	-	-	-
Appendix 20 - Transpower line advice	-	-	-
Appendix 21 Site LUC mapping - Site map of soils vs100-year flood depths	Soils vs 100 year flood depth prepared by Boffa Miskell – Map 1	0	13 April 2023
Appendix 23 – TSE and other parties consultation record	Rangiriri Solar Farm – Record of consultation with relevant iwi authorities	-	-
Appendix 24 Te Waka support letter	Te Waka Anga Whakamua Waikato – Waikato Regional	-	27 June 2023

Report title and reference	Author	Rev	Dated
	Economic Development Agency		
Further information request 1			
Memorandum of Counsel – Further Information Request No1 dated 25 September 2023	Chapman Tripp	-	25 September 2023
Further information request 2			
Cover letter dated 9 November 2023	Boffa Miskell	-	9 November 2023
Attachment 1: Hazardous substance assessment	Hazardous Substances Consultant	1	26 October 2023
Attachment 2: Rangiriri Solar Farm Limited – Outline Draft Battery Storage Safety Management Plan (draft)	Island Green Power	00	November 2023
Attachment 3: Outline emergency response plan for the Rangiriri Solar Farm (draft)	-	-	-
Attachment 4: Proposed Sheep grazing regime for Rangiriri Solar Farm report	Total Ag Limited	-	November 2023
Attachment 5: Sustainable pasture growth letter from Island Green Power dated 9 November 2023	Island Green Power	-	9 November 2023
Further information request 3			
Cover letter dated 17 November 2023	Boffa Miskell	-	17 November 2023
Attachment 1: Landscape and visual addendum to support RFI 3 – dated 17 November 2023	Boffa Miskell	-	17 November 2023
Attachment 3: Addendum – Additional Screening Analysis Rangiriri Solar Farm Limited – November 2023 – Report by PagerPower	PagerPower	2	November 2023

Report title and reference	Author	Rev	Dated
Applicant's Response to Comments received on the application			
Letter - Responses in relation to comments received on the Rangiriri Sola Farm under the COVID-19 Recovery (Fast-track Consenting) Act 2020 Attachment 1 – Responses to Comments	Boffa Miskell	-	7 November 2023
Attachment 3 – Memorandum response to comments received from Royal Forest and Bird Protection Society of New Zealand and Director General of Conservation relating to ecological effects	Boffa Miskell	-	7 November 2023
Applicant's Response to draft Conditions			
Attachment 3 – Preliminary Dust Management Plan			December 2023

ATTACHMENT 2

ADDITIONAL SCREENING ON NORTH EASTERN BOUNDARY



APPENDIX 2 - SUMMARY OF COMMENTS RECEIVED

Name	Key matters raised	Recommendations
Kerr Farms Ltd	<ul style="list-style-type: none"> Comment outlined support for the project but did not provide reasons. 	<ul style="list-style-type: none"> Deer fence around boundary of site. Mitigate visual effects of the panels to the extent practical.
Property Council New Zealand	<ul style="list-style-type: none"> Not able to provide comments on a specific application as a member organisation. Support legislation that enhances economic growth, development, liveability and growing communities. Generally, favour development. 	<ul style="list-style-type: none"> No recommendations provided.
Director General, Department of Conservation	<p>Impacts on long-tailed bats</p> <ul style="list-style-type: none"> Application relies on a single bioacoustics survey to conclude very low levels of bat activity throughout the project area. Long-tailed bats have a conservation status of Threatened – Nationally Critical. DOC's experience is that there could be higher numbers found at different times of the year. Application relies on Incidental Discovery Protocol to mitigate effects. This condition is not carried through to applicant's proposed conditions. <p>Impacts on birds and lizards</p> <ul style="list-style-type: none"> Reference to Incidental Discovery Protocol was not carried through to proposed conditions. 	<ul style="list-style-type: none"> Inclusion of an Incidental Discovery Protocol condition to work in conjunction with proposed the general review condition.
Mike Simpson	<ul style="list-style-type: none"> Has requested the amount paid to mana whenua to allow the project to proceed. 	<ul style="list-style-type: none"> The same amount paid to mana whenua be paid to the local fire brigade.
Fire and Emergency New Zealand	<p>Firefighting water supply</p> <ul style="list-style-type: none"> Supports the applicant's firefighting water supply measures (eight 30m² water tanks for the automatic misting system and Fire and Emergency Response and two firefighting connection points). Supports further consultation at detailed design stage to confirm that the water source will be sufficient and physically accessible to fire response personnel. <p>Access</p> <ul style="list-style-type: none"> Emergency service access has been considered in relation to the Construction Management Plan, but fire appliances have not been considered within section 13.1.2 of the ITA nor section 7 of the Civil Servicing Report. Not clear whether turnaround areas and corners are suitable for fire appliances. 	<ul style="list-style-type: none"> Requests the development of an Emergency Response Plan, in consultation with Fire and Emergency New Zealand at the earliest opportunity to ensure appropriate measures and plans are in place in the event of a fire. Inclusion of a condition that requires the preparation of an Emergency Management Plan in consultation with Fire and Emergency New Zealand prior to commencement of construction. Use of low-flammable plant species for buffer planting to mitigate fire spread.

Name	Key matters raised	Recommendations
	<p>Landscaping</p> <ul style="list-style-type: none"> Dry grass and electrical installations increase fire risk of running fire and spread. <p>Emergency Response Plan</p> <ul style="list-style-type: none"> Unlike the Waerenga Solar Farm the Rangiriri Solar Farm has not provided an outline of an Emergency Response Plan or related conditions. 	
Royal Forest & Bird Protection Society of New Zealand Inc	<ul style="list-style-type: none"> Generally supportive of renewable energy projects if undertaken in the right locations and in a way that does not cost the protection of indigenous biodiversity. Supports retention of natural wetlands, native vegetation and mature trees on the site. <p>Long-tailed bats</p> <ul style="list-style-type: none"> NPS-IB policy direction includes the importance of maintaining indigenous biodiversity outside SNAs, and areas outside SNAs that support specified highly mobile fauna should be identified and managed to maintain populations across their natural range. The NPS-IB also provides that information and awareness of highly mobile fauna is improved. One-off bat survey of three weeks is not sufficient to understand the baseline presence of bats over time across the site, given the mobile nature of bats. Uncertainty about the effects that may be caused. EIA and AEE give no consideration to cumulative effects on long-tailed bat habitat, e.g., while the use of the site by long-tailed bats appears low, the value may in fact be higher due to development beyond the site and may increase as a result of plantings and protection of waterbodies included in the proposal. Effects on bats from the removal of the solar farm have not been considered. Lack of measures to mitigate adverse effects or monitor changes in bat behaviour during construction, operation and future removal. <p>Construction light and noise disturbance on bats</p> <ul style="list-style-type: none"> EIA concluded an incorrect level of effect. Given the high ecological value of long-tailed bats, the level should be low-moderate, using Table 8 of the EIA. EIANZ guidance requires careful assessment and mitigation of effects that are 'moderate'. 	<ul style="list-style-type: none"> Further bioacoustics surveys and echolocation testing should be undertaken pre- and post-construction. A precautionary approach to potential adverse effects on bats from undertaking activities including construction and removal. Further baseline information on the use of the site by long-tailed bats. Baseline surveys are to be undertaken for aquatic insects to be compare with operational monitoring for changes abundance. Baseline surveys for insect abundance over pasture areas and whether there is a benefit to bat forage. Monitoring of setbacks and plantings to protect aquatic insects and forage for bats. Supports a 10m buffer width along each side of the length of the water course to mitigate potential aquatic insect attraction rather than 5m. Inclusion of animal pest control to ensure safe habitat for avifauna, lizards and bats. Expert advice be considered in response to potential noise from inverter conversion units on bats and ensure that they are located accordingly to avoid effects on roosting.

Name	Key matters raised	Recommendations
	<ul style="list-style-type: none"> The proposed security fence to be placed within existing vegetation, as well as not planting within these areas and along riparian areas, may impact areas where potential roost trees are located. <p>Operation effects on bats</p> <ul style="list-style-type: none"> Not clear if operational noise effects have been considered with respect to bats. Not clear if invert conversion units will cause disturbance across the site. Relying on a baseline of "lack of detected use of the site" is inappropriate in this context. <p>Bat habitat and forage effects</p> <ul style="list-style-type: none"> EIA's conclusion with regards to whether retaining vegetation and a similar land use would result in no change in bat usage as a result of this proposal is uncertain. Uncertain whether the positive impacts as a result of insect attraction to PV solar panels will occur and can be relied upon in assessing the effects of the proposal. Potential reduction in aquatic insects as a result of additional insect attraction and impacts that this may have on bat forage during operation and after removal of the solar farm. Low potential collision effects for long-tailed bats does not negate the need for monitoring of changes in the behaviour and presence of bats as a result of solar. <p>Removal of solar farm</p> <ul style="list-style-type: none"> Measures need to manage effects during construction should also apply to solar farm removal activities. <p>Invertebrates</p> <ul style="list-style-type: none"> Not clear how the conclusion was reached that effects on freshwater macroinvertebrates would be low. The EIA fails to consider the wider implications of potential effects on invertebrates on aquatic ecosystems. No certainty that the setbacks and plantings proposed will be sufficient to avoid and mitigate the effects – untested method. <p>Wetlands and riparian buffers</p> <ul style="list-style-type: none"> Unclear if fencing to exclude farm animals from wetlands is proposed. Unclear if the 10m minimum setback from solar panels is sufficient to mitigate insect attraction. 	

Name	Key matters raised	Recommendations
	<ul style="list-style-type: none"> Unclear if earthworks will also have a 10m setback from wetlands. Proposed conditions fail to include clear objectives for management plans. No Ecological Restoration Management Plan proposed. Plans proposed by proposed conditions 5, 22 and 23 need to provide a basis for certification of those plans. Conditions as proposed are not sufficient to manage / mitigate risks. 	
Heritage Zealand New Zealand Pouhere Taonga	<ul style="list-style-type: none"> Supportive of the application containing a Cultural Impact Assessment and an Archaeological Assessment. Conditions reflect that ongoing consultation with Mana Whenua will occur. HNZPT staff concur with the recommendations of the Archaeological Assessment, including the proposal to proceed under the Accidental Discovery Protocol. 	<ul style="list-style-type: none"> See proposed amendments to conditions.
Te Whakakitenga o Waikato (Waikato Tainui)	<ul style="list-style-type: none"> Steadfast support for renewable energy projects. Informed that the CIA highlighted the engagement process undertaken with Te Riu o Waikato and Nga Muka marae. 	<ul style="list-style-type: none"> CIA reaffirms key mitigation recommendations to deal with any adverse effects on culture, heritage and environment.
Waikato District Council	<ul style="list-style-type: none"> Both the Operative and Proposed Waikato District Plan's generally support renewable energy projects but need to avoid, remedy and mitigate adverse effects. Sheep grazing is a PA under the relevant plans, and activities involved in the conversion of the site are outside the scope of the current proposal. This suggests that the applications proposed concurrent use for primary production may not necessarily form part of the activity proposed – WDC submits that it should be included. Having regard to the provision of the Rural Zone and General Rural Zone, WDC supports the dual use of the site as a solar and sheep farm. If granted, WDC would like further information regarding the timing and extent of any proposed road upgrades associated with the application. Generally considers the conditions proposed by the applicant as suitable but suggests a number of additions. 	<ul style="list-style-type: none"> During the construction period, the Council will require the applicant to maintain the road during this time (condition proposed). Supportive of a review condition given the lack of expertise and experience dealing with solar farms within WDC and potentially a lack of expertise across the country. Considers it appropriate to include traffic effects during the construction phase as a matter that may initiate a review.

Name	Key matters raised	Recommendations
Waikato Regional Council	<ul style="list-style-type: none"> • Accepts the applicant's assessment of the following: <ul style="list-style-type: none"> ○ Activity status under the Waikato Regional Plan (Section 4 of the application). ○ Assessment of Environmental Effects. ○ Activity status assessment the new wastewater treatment system for onsite office. ○ Ecological Impact Assessment. ○ Assessment of activities against the NES-FW Regulations 45 and 47. • WRC is of the view that the recommended measures to manage the effects of earthworks contained in the engineering assessment, along with a Comprehensive Management Plan should ensure adverse effects from erosion and sedimentation are appropriately managed. This is on the basis that proper implementation, regular inspections and maintenance occur. • Pursuant to Chapter 3 of the WRP, any groundwater required beyond that stated within the application will require separate resource consent to construct an additional bore, if required. 	<ul style="list-style-type: none"> • Provides a set of recommended alternative conditions commonly used by WRC in relation to consents for land disturbance.