# APPLICATION REPORT AND ASSESSMENT OF ENVIRONMENTAL EFFECTS

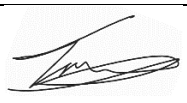
## 138 Hectare / 100 MW Agrivoltaic Development, including Battery Energy Storage System

**3954A State Highway 2, Waingawa**

**Carterton District Council – Land Use Consent**

**Greater Wellington Regional Council – Land Use and Beds of Rivers Consents**

**Quality Control:**

| | | |
|---|---|---|
| **Report prepared by:**<br>Tracey Morse<br>Senior Planner |  | 29 February 2024 |

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## 1.0 EXECUTIVE SUMMARY

1.0.1 This application applies for resource consents from the Carterton District Council and Greater Wellington Regional Council in relation to Masterton Solar and Energy Storage Ltd establishing and operating an agrivoltaic development, including battery energy storage systems at 3954A State Highway 2.

1.0.2 The proposal will include establishing a utility-scale 100-megawatt renewable energy project, supported by a battery energy storage system that will have a 100 megawatt / 200-400 megawatt hour capacity. This will include erecting solar panels, inverters, transformers, battery energy storage system, a substation, a site office, and establishing a connection to the nearby Masterton Substation. It is proposed to occupy approximately 138ha of the subject site. It is proposed that the resource consent will have a duration of 40 years.

1.0.3 Under the Wairarapa Combined Operative District Plan, which includes Carterton District Council, the following are the reasons for consent applicable to this proposal:

- The construction of buildings not for primary production or residential purposes over 25m$^2$ gross floor area;
- The establishment of buildings for energy generation facilities over 10m$^2$ gross floor area;
- To undertake an activity on Contaminated Land as listed in Appendix 3.1 of the ODP; and
- To undertake an activity that is not otherwise specified as a controlled or restricted discretionary activity.

1.0.4 Overall, resource consent is required from the Carterton District Council under the Wairarapa Combined Operative District Plan as a **Discretionary Activity**.

1.0.5 There have been no reasons for consent identified following review of the proposal under the Wairarapa Combined Proposed District Plan that have immediate legal effect.

1.0.6 Under the Greater Wellington Regional Council's Natural Resources Plan, the proposal needs resource consent for earthworks over an area greater than 3,000m$^2$ associated with renewable energy generation, which requires resource consent as a **Restricted Discretionary Activity**.

1.0.7 Following a review of the relevant National Environmental Standards, the following reasons for consent are considered to be applicable to this proposal:

- Under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, as the application does not include a detailed site

investigation, resource consent is required from Carterton District Council as a **Discretionary Activity**.

- Under the National Environmental Standards for Freshwater, as the proposed culverts will be less than the permitted width relevant to a river of this size, resource consent is required from Greater Wellington Regional Council as a **Discretionary Activity**.

1.0.8 Overall, the proposal will require resource consent from both the Carterton District Council and Greater Wellington Regional Council as a **Discretionary Activity**, for the above-listed reasons for consent under the relevant local plans and national environmental standards.

1.0.9 The proposal will result in effects on the environment that are no more than minor overall and is not subject to any relevant requirements for public notification. Therefore, it is considered that the proposal does not require public notification. With regards to effects on those parties adjoining and adjacent to the subject site, it is considered the landowner of 3920 State Highway 2 is an affected person whom the proposal should be limited notified to.

1.0.10 Following an assessment of the proposal against the relevant legislative provisions, it is considered that the proposal will achieve outcomes that are consistent with the Part 2 Purpose and Principles of the Resource Management Act. It was also found that the proposal will achieve outcomes that are consistent with those sought under the relevant National Policy Statements, namely the:

- National Policy Statement for Freshwater Management;
- National Policy Statement for Highly Productive Land;
- National Policy Statement for Indigenous Biodiversity;
- National Policy Statement for Renewable Electricity Generation; and
- National Policy Statement for Electricity Transmission.

1.0.11 The proposal is also considered to achieve outcomes that are consistent with those anticipated under the Regional Policy Statement, Natural Resources Plan, the Wairarapa Combined Operative District Plan, and the Wairarapa Combined Proposed District Plan.

1.0.12 Overall, it is considered that both the Carterton District Council and Greater Wellington Regional Council could approve this combined application for a Discretionary Activity. This report assesses the effects will be no more than minor, through the implementation of measures to avoid, remedy, and mitigate adverse effects. It is recommended that the suggested measures form part of the decision as conditions of consent.

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## APPENDICES

## 2.0 INTRODUCTION

2.0.1 The following is a combined application for Land Use Consents and Bed of River Consent by Masterton Solar and Energy Storage Limited (trading as NZ Clean Energy Ltd, NZCE) to establish an agrivoltaic development, including supporting Battery Energy Storage Systems (BESS). NZCE seek to establish the agrivoltaic development at 3954A State Highway 2, Waingawa. This application is submitted to Carterton District Council (CDC) and Greater Wellington Regional Council (GWRC) in accordance with Section 88 of the Resource Management Act 1991 (RMA), and includes all information required under Schedule 4 of the RMA, including the relevant District and Regional Council application forms contained within Appendix 1.

2.0.2 The proposal will include establishing a utility-scale 100-megawatt (MW) renewable energy project, supported by BESS that will have a 100 MW / 200-400 megawatt hour (MWH) capacity. This will include erecting solar panels (photovoltaic / PV modules) via pile driving only, inverters, transformers, BESS, a substation, and a site office. It is proposed to occupy approximately 138ha of the subject site. It is proposed that the resource consent will have a duration of 40 years.

2.0.3 Site works associated with the construction of the development, including earthworks, tree trimming and, in places, removal, will also be required to enable the agrivoltaic development to be established. The proposal will also include establishing security fencing and undertaking landscaping in appropriate places. The construction period is proposed to take 12 to 18 months to complete.

2.0.4 To support this application, NZCE have engaged a range of technical experts to provide assessment of the actual and potential effects of the proposal. The reports are appended to this AEE and form part of this application. The technical reports are set out in Table 1 below.

***Table 1:*** *Technical Assessments Provided in Support of Application*

| Appendix # | Report Title | Author | Report Scope |
|---|---|---|---|
| 7 | Landscape, Natural Character and Visual Assessment Report (Landscape Report) | Mansergh Graham Landscape Architects | To consider landscape and visual effects and glint and glare effects of the proposal<br>Land use consent – District Council |
| 8 | Glint and Glare Analysis, Hood Aerodrome | Mansergh Graham Landscape Architects | To determine if the proposal results in glint and glare effects on the nearby Hood Aerodrome<br>Land use consent – District Council |

| | | | |
|---|---|---|---|
| 9 | Assessment against NPS-HPL (Land Use Capability Assessment) | AgFirst | To consider the implications of the proposal against the provisions of the National Policy Statement for Highly Productive Land<br>Land use consent – District Council |
| 10 | Assessment of Noise Effects (Acoustic Assessment) | Styles Group | To consider the potential acoustic effects of the proposal during construction and once operational on the sensitive receivers within the surrounding environment<br>Land use consent – District Council |
| 11 | Transportation Assessment | Don McKenzie Consulting | To consider the potential effects on the safe and efficient operation of the surrounding road network<br>Land use consent – District Council |
| 12 | Assessment of Ecological Effects (Ecological Assessment) | EcoLogical Solutions | To identify the ecological features of the site and consider the potential impact of the proposal on those features<br>Land use consent – District Council<br>Land use consent and bed of river consent – Regional Council |
| 13 | Engineering and Infrastructure Report (Engineering Report) | CKL | To identify the proposed earthworks, sediment and erosion control measures, and site servicing requirements<br>Land use consent – District Council<br>Land use consent and bed of river consent – Regional Council |
| 14 | Stormwater Management Plan | CKL | To provide a high-level assessment of the stormwater management strategy and flood risk assessment for the proposal<br>Land use consent – District Council<br>Land use consent and bed of river consent – Regional Council |
| 15 | Contamination - PSI | Babbage | To identify the potential sources of risk to human and environmental health associated with the site's contamination history<br>Land use consent – District Council<br>Land use consent – Regional Council |

2.0.5 The PV modules will be mounted in groups on single axis tracking tables. The tracking tables allow the angle of the PV modules to alter east to west each day, following the sun, to achieve optimal solar access. The PV modules will be mounted at a height that enables grazing of sheep to occur under and around the panels, to maintain grass levels. At the end of this 40-year duration, it is proposed to remove all equipment associated with the renewable energy development and reinstate the site to its former state.

2.0.6 Consultation has been undertaken with the following key stakeholder groups:

- Carterton District Council (as Consent Authority);
- Greater Wellington Regional Council (as Consent Authority);
- Mana whenua (Rangitāne o Wairarapa and Ngāti Kahungunu ki Wairarapa) and associated post-Treaty settlement groups (Rangitāne Tū Mai Rā Trust and Ngāti Kahungunu ki Wairarapa – Tāmaki-nui-a-Rua Trust);
- Transpower;
- Fire and Emergency NZ (FENZ);
- Masterton District Council (as owner of Hood Aerodrome);
- Carterton District Council (as infrastructure manager of the Taratahi Water Race Scheme); and
- Waka Kotahi | New Zealand Transport Agency (WK NZTA).

2.0.7 Consultation has commenced and is on-going with all adjoining and adjacent landowners that may be considered affected by the proposal has been undertaken. This consultation commenced prior to submitting this application to CDC and GWRC. A public drop in event was also held on 15 November 2023, which was attended by approximately 25 interested persons, including some of those from adjoining and adjacent properties.

2.0.8 The proposal requires Land Use Consent for the reasons from the CDC under the Wairarapa Combined Operative District Plan (ODP) as outlined below in Table 2.

***Table 2:*** *Reasons for Consent under the ODP*

| Rule # | Rule Text | Proposal |
|---|---|---|
| **Part A, Section 4: Rural Zone** | | |
| **4.5.5 Restricted Discretionary Activities** | | |
| **(c)** | Any activity that is not required for primary production and residential purposes that requires either:<br>(a) the construction or use of a building over 25m$^2$ in gross floor area; or<br>(b) the external storage of goods, products or vehicles (including contractors yards); and is not otherwise listed as a controlled, restricted discretionary, discretionary or non-complying activity. | **Does Not Comply**<br>(a) The proposal includes the construction of buildings >25m$^2$ in total gross floor area.<br>The area of each of the proposed 12 water tanks is anticipated to be approximately 11.25m$^2$.<br>Each BESS unit will have an approximate floor area of 14.65m$^2$ and approximately 240 units are proposed.<br>A site office (approximately 36m$^2$) and switching station building |

| | | |
|---|---|---|
| | | (approximately 30m$^2$) are also proposed.<br>Therefore, an approximate total gross floor area of 3,720m$^2$ is proposed.<br>The PV modules are considered not to be subject to this rule. |
| **Part B: District-Wide Provisions** | | |
| **21.1.24 – Permitted Activities, Network Utilities and Energy Generation Activities** | | |
| **(iii)** | **Building**<br>(1) No building located above ground for network utility purposes shall exceed 10m$^2$ in gross floor area.<br>(2) Buildings used for network utilities purposes may encroach the minimum building setbacks in the respective Environmental Zone in which it is located, subject to compliance with the following:<br>(a) 3 metres from any boundary when located on a site in the Residential Zone, or adjoining the Residential Zone;<br>(b) Compliance with the Noise Standards for the respective Environmental Zone in which it is located. | **Does Not Comply**<br>As outlined under Rule 4.5.5(c) above, the site includes a number of buildings. The total gross floor area for these buildings will be approximately 3,720m$^2$. |
| **21.4.10, Restricted Discretionary Activities, Activities within Contaminated Land** | | |
| **(a)** | Any activity (including site remediation or redevelopment) on Contaminated Land as listed in Appendix 3.1. | **Does Not Comply**<br>The proposal includes activities on Contaminated Land as listed in Appendix 3.1. |
| **21.6 Discretionary Activities** | | |
| **(a)** | Any activity that does not comply with the standards for permitted activities or is otherwise not specified as a controlled, or restricted discretionary activity. | **Does Not Comply**<br>The proposal does not comply with the permitted activity standard associated with Rule 21.1.24(iii) for Network Utilities and Energy Generation Facilities – Buildings.<br>The proposal is also for an activity that is not otherwise specified as a controlled or restricted discretionary activity. |

2.0.9 There are also three rules under the Proposed Combined Wairarapa District Plan that the proposal does not comply with, however it is noted that none of those rules have immediate legal effect.

2.0.10 In addition, resource consent from Carterton District Council has also been identified in accordance with the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS) associated with the historic contamination of the site. In accordance with Clause 11(1), the proposal therefore requires resource consent as a Discretionary Activity under the NES-CS.

2.0.11 Overall, the proposal requires consent as a Discretionary activity from the Carterton District Council. It is considered that the overall effects associated with these components of the proposal will be less than minor. Accordingly, it is sought that this application be processed on a non-notified basis by Carterton District Council.

2.0.12 Land use consent is also sought from the Greater Wellington Regional Council for the following reason:

- Rules R101 and R106, for earthworks over an area greater than 3,000m$^2$ that is associated with renewable energy generation, which requires resource consent as a Restricted Discretionary Activity.

2.0.13 An additional reason for consent from the Greater Wellington Regional Council is has also been identified in accordance with the National Environmental Standards for Freshwater (NES-F). The proposal seeks to establish three proposed new culverts within the Taratahi water race / Waikoukou Stream (which is classified as a river under the NES-F). Due to these culverts not being able to comply with the permitted width requirements, consent is sought under Clause 71(1) of the NES-F as a Discretionary Activity under the NES-F.

2.0.14 Overall, the proposal requires consent as a Discretionary activity from the Greater Wellington Regional Council. It is considered that the overall effects associated with these components of the proposal will be less than minor. Accordingly, it is sought that this application be processed on a non-notified basis by Greater Wellington Regional Council.

2.0.15 It is assessed that the overall adverse effects of this proposal can be avoided, remedied, and mitigated, and that this combined application to Carterton District Council and Greater Wellington Regional Council could be approved.

## 3.0 SECTION 88 – LODGEMENT OF APPLICATION

3.0.1 This combined application is submitted to Carterton District and Greater Wellington Regional Councils, as the relevant consent authorities. This application seeks approval by these consent authorities of the relevant resource consents for this proposal as outlined within Section 6.0 of this report, in accordance with Section 88(1) of the RMA.

3.0.2 In accordance with Section 88(2) of the RMA, this application is made in the prescribed form and manner (refer to the balance of this report and Appendix 1) and includes information regarding the activity (refer Section 5.0) and an assessment of effects (refer Section 7.0).

## 4.0 SITE AND LOCALITY DESCRIPTION

### 4.1 General Site and Locality Description

4.1.1 The subject site is located at 3954A State Highway 2, which is within the area of Waingawa, and is shown below in Figure 1. It is a roughly square shape, with a total area of approximately 147 hectares. The subject site has frontages onto State Highway 2, Cornwall Road, and Hughes Line, as shown below in Figure 2.

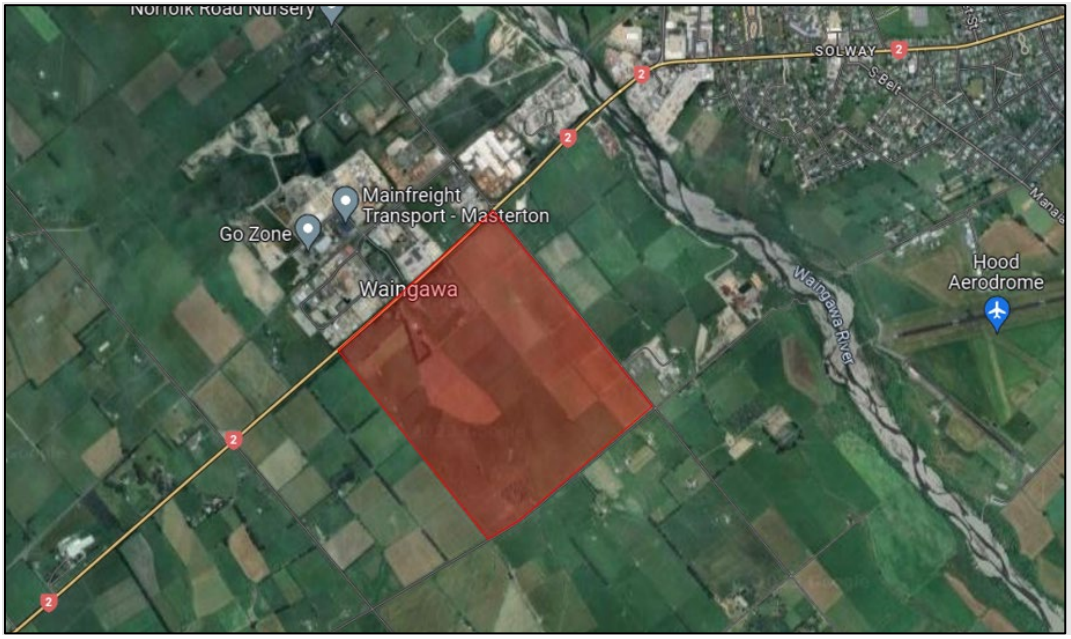


***Figure 1:*** *Aerial photograph of subject site (red polygon) (Google Maps, accessed 22/08/2023).*

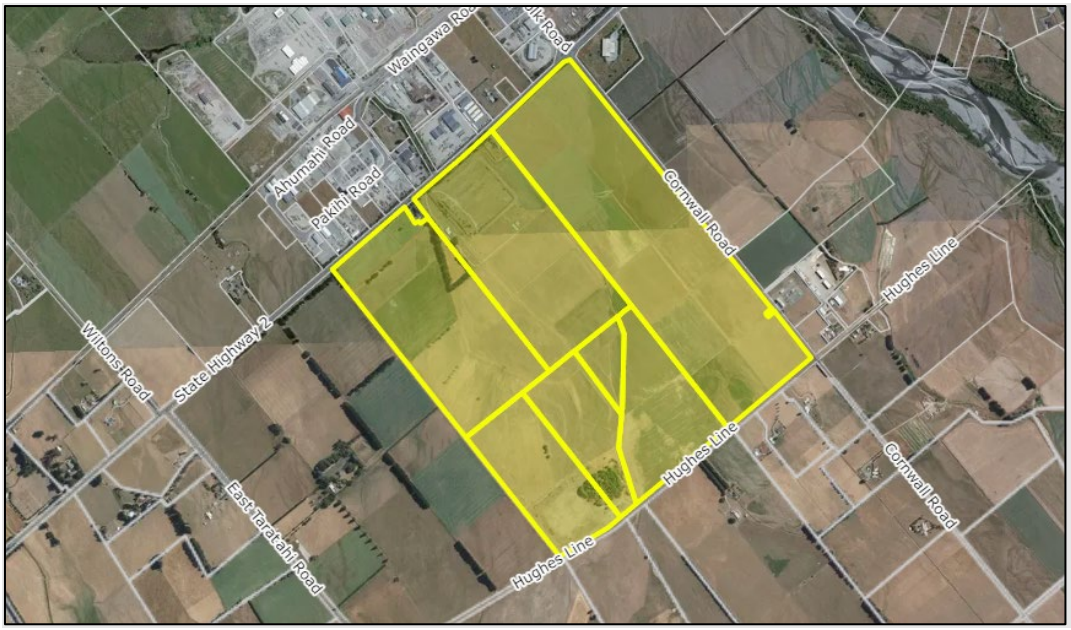


***Figure 2:*** *Closer view of subject site (yellow shading) (GRIP maps, accessed 25/02/2024).*

4.1.2 The site is rural in nature, as is the immediately surrounding area to the north-east, south, and south-west. The land located on the opposite side of State Highway 2, to the north-west of the site, is occupied by a number of large and small-scale industrial activities.

4.1.3 Located adjacent to the south-eastern corner of the subject site is the Masterton substation, which forms part of the National Grid transmission network. Immediately behind the substation is a contractors yard, as well as a small cluster of dwellings that have frontage onto Hughes Line. A number of rural lifestyle properties are located also with frontage to Hughes Line, that are located immediately adjacent to the southern boundary of the subject site. Located approximately 1.3km east of the site is the township of Masterton and the Hood Aerodrome.

### 4.2 Relevant Plan Zoning and Overlays

4.2.1 The subject site is located within the Carterton District, within the Greater Wellington Region. The boundary between the Carterton and Masterton District Councils is located approximately 850m east of the site.

#### 4.2.a Carterton District Council – Operative District Plan

4.2.2 The Wairarapa Combined District Plan is the Operative District Plan (ODP) for the Carterton, Masterton, and South Wairarapa District Councils, which was made operative in May 2011.

4.2.3 Under the ODP, the subject site is within the Special Rural Zone, and is also identified as being subject to a number of overlays and other features on the planning maps, as shown below in Figure 3. The other planning features under the ODP for the site are as follows:

- Contaminated site, reference Cc02 for waste storage/treatment (the large rectangular area located midway along the frontage onto State Highway 2 and extending into the centre of the site);
- Airport obstacle limitation surface, for the Masterton Airport / Hood Aerodrome (the large polygon area across the centre of the site, widening as it crosses the site from east to west); and
- Air noise contour, 50 dBA Ldn (the irregular line that affects the eastern corner of the site).

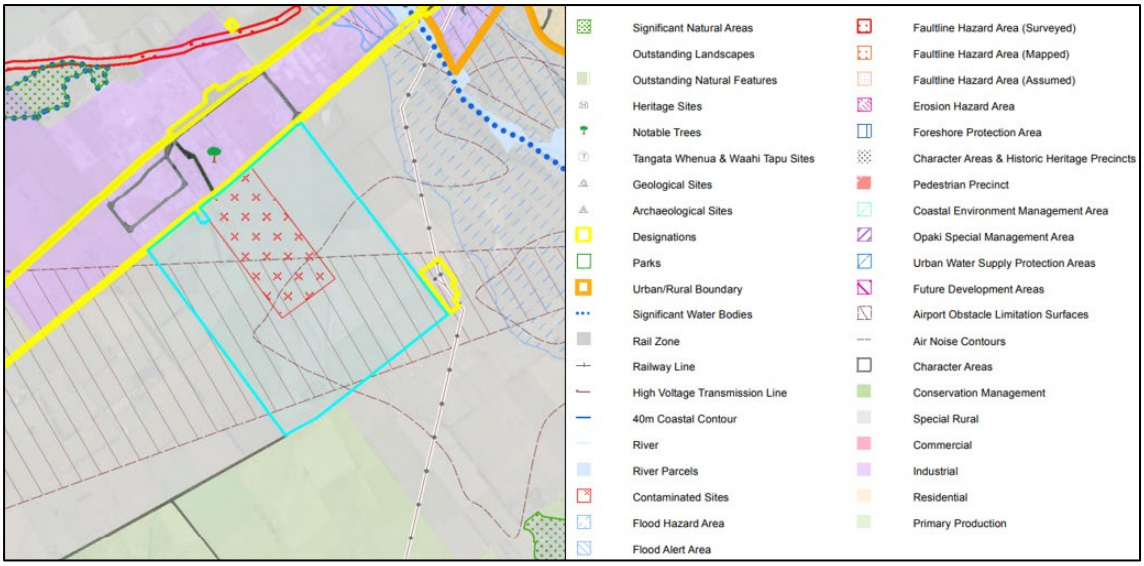


***Figure 3:*** *ODP GIS for subject site (turquoise line) (online map viewer accessed 22/08/2023).*

4.2.4 The developed area on the northern side of State Highway 2 is zoned Industrial. The remainder of the surrounding area is zoned rural. The adjacent rural land located east and west of the site is zoned Special Rural. The land adjacent to the south-western corner of the site is zoned Primary Production.

### 4.2.b Carterton District Council – Proposed District Plan

4.2.5 The Wairarapa Combined District Councils are currently reviewing the ODP. The review is in the initial stages of the formal statutory processes under the RMA and is thus referred to as the Proposed District Plan (PDP). The PDP was publicly notified for initial submissions on 11 October 2023, with the submission period closing 19 December 2023.

4.2.6 Following analysis of the initial submissions by the Wairarapa Combined District Councils, a further submissions period will commence in early 2024. Further submissions will be followed by a period of analysis and reporting by the Wairarapa Combined District Councils prior to hearings being held, after which a Decisions Version of the PDP will be available.

4.2.7 Under the PDP, the subject site is within the General Rural Zone. The other planning features under the PDP for the site are as follows:

- Airport obstacle limitation surface, for the western and southwestern runways of the Masterton Airport / Hood Aerodrome;
- Air noise contour, 50 dBA Ldn (the irregular line that affects the eastern corner of the site);
- Highly productive land, land use classification 3; and
- Noise boundary for State Highway 2.

4.2.8 The developed area on the northern side of State Highway 2 is zoned Industrial. All of the land adjacent to the site not within the Waingawa Industrial Zone is identified as General Rural Zone.

### 4.2.c Greater Wellington Regional Council

4.2.9 The operative regional plan for the GWRC is the Natural Resources Plan (NRP). Under the NRP, the subject site is identified as being affected by the following features:

- Selected Land Use Register – SN/07/006/02, for the former Waingawa Freezing Works Treatment Ponds, which is identified as Contamination Confirmed (Category III);
- Schedule Y – Priority Catchments, within the Parkvale catchment;
- River Classes Table 3.4, the site includes watercourses identified as low gradient and small, which have NZ Reach identification numbers of 9006761 and 9005766;
- Wairarapa Water Races, within the Taratahi scheme (two are identified within site);
- Category 2 Surface Waterbodies, under the lowland areas for category 2 surface water bodies for the Ruamāhanga River; and
- Water quality is administered by the Ruamāhanga Whaitua Committee.

## 4.3 Legal Descriptions and Titles

4.3.1 The subject site is held within seven Records of Title (RTs), which are as outlined in the below Table 1 and Figure 4. All of these RTs are freehold titles, which are owned by Raymond Owen Busby and Independent Trust Company (2021) Limited (the site Landowner).

***Table 3:*** *Records of Title for Subject Site*

| # | RT Ref. | Legal Description | Area (ha) | Date Created |
|---|---|---|---|---|
| 1 | WNF1/1189 | Pt Lot 2 DP 2099 | 27.9819 | 23/11/1966 |
| 2 | WNF1/1188 | Pt Lot 3 DP 2099 | 28.313 | 23/11/1966 |
| 3 | WN17B/749 | Pt Lot 1 DP 46533 | 50.0816 | 13/03/1977 |
| 4 | WN765/45 | Lot 1 DP 19148 | 0.0376 | 05/11/1957 |
| 5 | WND1/413 | Pt Lot 4 DP 2099 | 13.8024 | 25/01/1965 |
| 6 | WN638/13 | Lot 1 DP 17189 | 3.0461 | 14/12/1954 |
| 7 | WN248/15 | Lot 1 DP 3447 | 9.9947 | 26/05/1915 |
| 8 | WN213/272 | Pt Lot 4 DP 2099 | 13.7593 | 27/11/1912 |

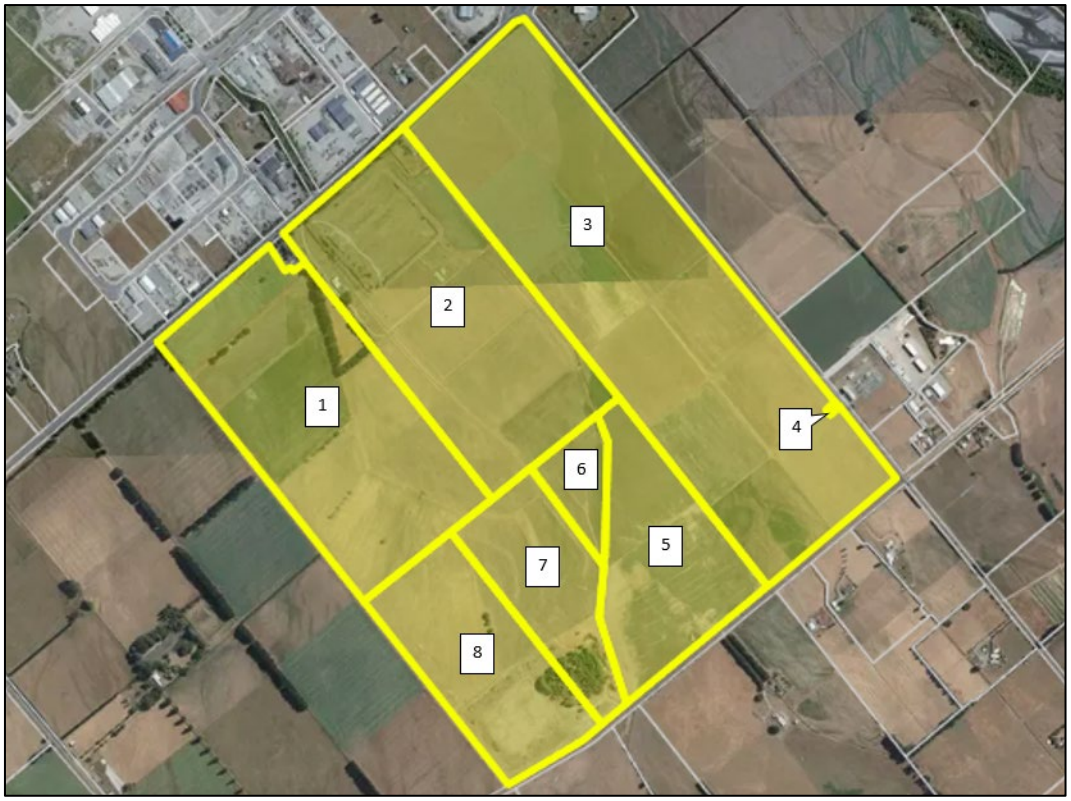


***Figure 4:*** *Subject site RT boundaries (yellow lines) (GRIP map, accessed 18/12/2023).*

4.3.2 The below table (Table 4) outlines the interests that apply to the above records of title.

***Table 4:*** *Interests registered against Titles for Site*

| # | RT Ref. | Interest Ref. | Interest Details and Comments |
|---|---|---|---|
| 1 | WNF1/1189 | 693495 | Appurtenant hereto is a nuisance right<br>This is a notice identifying that the properties affected by this interest were utilised by the nearby (former) Waingawa Meat works, that was signed 17 October 1966. This interest served as a combined form of no-complaints covenant document with the effect of an easement.<br>Any owners of the affected title (servient tenement) could not interrupt the adjoining Waingawa Meat Works (dominant tenement) from continued operation of this trade and business free from complaint of the servient tenement associated with any nuisance on the servient tenement from undertaking those activities on the dominant tenement. Further, the dominant tenement has a right to access and utilise the servient tenement for effluvia (waste discharge) as well as buildings associated with the grazing or housing of stock to be slaughtered on the dominant tenement.<br>***Comments:***<br>*The operation of the Waingawa Meat Works has ceased. As such, this interest is no longer required. Following this* |

| | | | |
|---|---|---|---|
| | | | *proposal successfully obtaining the relevant resource consents and grid connections, arrangement shall be made to remove reference to this interest from the affected titles.* |
| | | 757970 | Gazette Notice declaring portion of No.2 State Highway (Pokeno-Wellington) to be a limited access road<br>The portion of State Highway 2 that the site has frontage to was identified as a limited access road on 23 May 1968. This prevents the establishment of new vehicle crossings or the alteration of current vehicle crossings (including the scale and nature of use of existing vehicle crossings) without prior special approval from Waka Kotahi New Zealand Transport Agency.<br>Within this Gazette Notice, there are five existing vehicle crossings recorded for the subject site along this frontage.<br>***Comments:***<br>*The proposal as outlined within Section 5.0 below does not propose to establish a new vehicle crossing, physically alter any existing vehicle crossing, or utilise any existing vehicle crossing onto State Highway 2. Therefore, no further action in relation to this interest is required.* |
| 2 | WNF1/1188 | 693495 | Appurtenant hereto is a nuisance right<br>This is the same as noted above for RT WNF1/1189, with this title comprising part of the servient tenement. |
| | | 757970 | Gazette Notice declaring portion of No.2 State Highway (Pokeno-Wellington) to be a limited access road<br>This is the same as noted above for RT WNF1/1189. |
| | | B492190.2 | Subject to stormwater drainage rights over part marked B on DP 77839<br>This is a drainage easement that affects the subject site in the locations marked on the title plan at the end of this easement document (as the servient tenement), in favour of AFFCO as the operator of the (former) adjoining Waingawa Meat Works.<br>The easement affords AFFCO the right to clear, scour, and (if necessary) widen the open drain so that at all times it provides free and unimpeded flow. Further, AFFCO has full and unimpeded rights to access the site to maintain the drain. This easement was established on 29 September 1995.<br>It is noted that, within this easement, it also identifies RT WN17B/749, WN213/272, WN638/13, WNF1/1189, and WN765/45 as being servient tenements under this easement. However, none of these other titles have this interest registered to them as currently active.<br>***Comments:***<br>*The operation of the adjoining AFFCO facility has ceased. As such, this interest is no longer required. Following this proposal successfully obtaining the relevant resource* |

| | | | |
|---|---|---|---|
| | | | *consents and grid connections, arrangement shall be made to remove reference to this interest from the affected titles.* |
| 3 | WN17B/749 | 757970 | Gazette Notice declaring portion of No.2 State Highway (Pokeno-Wellington) to be a limited access road<br>This is the same as noted above for RT WNF1/1189. |
| | | B045596.3 | Gazette Notice acquiring part herein (125m2) hatched black for Limited Access Road and Pursuant to Section 11(1A) National Roads Act 1953 shall form part of State Highway No.2 and shall vest in the Crown<br>This is a document identifying an area of land that was acquiring a section of the affected title to be incorporated into the adjoining State Highway 2.<br>***Comments:***<br>*The affected area of land has been acquired and utilised for operation of State Highway 2. Therefore, no further action in relation to this interest is required.* |
| 4 | WN765/45 | N/A | |
| 5 | WND1/413 | N/A | |
| 6 | WN638/13 | No ref. | For frontage to a public road see Certificate of Title WN248/15<br>There is no document associated with this interest. It is merely included to identify that this parcel has no frontage or legal access onto a public road, and that this is provided to this title over WN248/15.<br>***Comments:***<br>*This proposal will not alter or affect the legal frontages or access arrangements for this title. Therefore, no further action in relation to this interest is required.* |
| 7 | WN248/15 | B492190.2 | Subject to stormwater drainage rights over part marked C on DP 77839<br>This is the same as noted above for RT WNF1/1188, except that it relates to a different section of the easement (C). |
| 8 | WN213/272 | N/A | |

4.3.3 It is noted that there are mortgages registered against the above titles. For the purposes of a resource consent application, these are not considered to be relevant, and have not been included within this report or Appendix 2.

### 4.4 Topography and Features

4.4.1 The subject site is flat, with minor undulations adjacent to the watercourses and drains that traverse the site, as indicated below in Figure 5. There are also several man-made rock piles, comprised of loose rock from within the adjacent paddocks, located in the south-western part of the subject site, as shown below in Figure 6.

4.4.2 A former effluent pond, that is no longer is use, is visible due to the bunds that had formed its perimeter, and there are associated irrigation channels for draining the pond, which all add to the variations in contour in the northern and central areas of the site, as shown below in Figure 7. The immediately surrounding area displays the same contours as those found within the subject site.

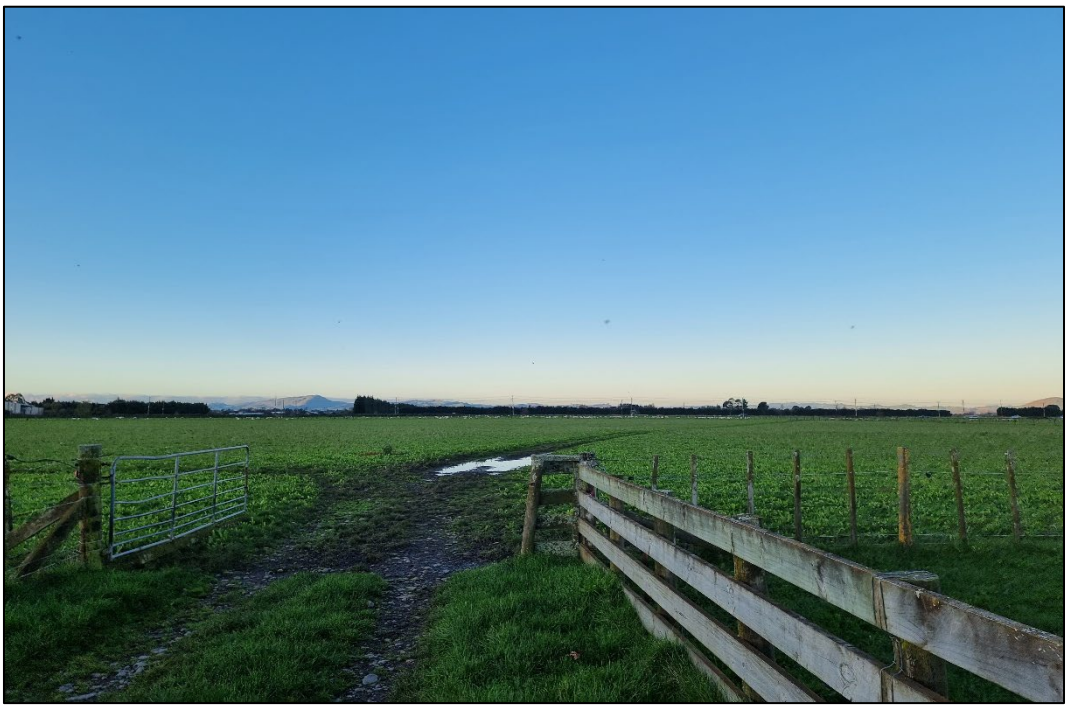

***Figure 5:*** *Photograph of centre of site, showing flat contour.*

***Figure 6:*** *Photograph of south-western part of site, with a large rock pile, centre of frame.*

***Figure 7:*** *Photograph of former effluent pond (centre) and an drainage bund (left foreground).*

### 4.5 Ecological Features

4.5.1 An Ecological Assessment, prepared by EcoLogical Solutions (Appendix 12) has been prepared for the subject site. The Ecological Assessment identified a number of key ecological features within the site, which are summarised to a high level below.

### 4.5.a Watercourses

4.5.2 As previously mentioned within this report, the subject site includes a number of farm drains and watercourses, as shown below in Figure 8. The farm drains are only seasonally wet / ephemeral, as shown in Figure 9 below. These do not meet the criteria of a natural watercourse / river under the National Environmental Standard for Freshwater (NES-F).

4.5.3 There is a water race located within the south-eastern corner of the site. The part of this water race that is located within the site is piped and is not visible from the surface. The location of this water race is indicated within Figure 8, below.

4.5.4 There is a permanently flowing watercourse that flows through the site in a roughly north to south direction, also shown in Figure 8, above. This is a water race, part of the Taratahi water race scheme, that is administered by the Carterton District Council, for providing stock drinking water only. The water race had historically been a natural watercourse, the Waikoukou Stream. The water race is fed by the nearby Waingawa River and is pumped to provide a consistent flow rate.


***Figure 8:*** *Plan of waterbodies within subject site (EcoLogical Solutions, Appendix 11).*

***Figure 9:*** *Photograph of a farm drain within the south-western part of site.*

4.5.5 Associated with the streams current use as a water race, it is subject to regular maintenance by the Council, which includes removing any soft sediment accumulated in the bed of the race. This has resulted in much of the stream having an incised channel form, although there are a few areas where the stream has retained a natural channel form, as shown below in Figure 10.

***Figure 10:*** *Photograph of Taratahi water race, traverses roughly through the centre of the site.*

**4.5.b Wetlands**

4.5.6 As indicated in Figure 8 above, the subject site was found by the ecologists to include three wetland areas. The wetland identified in the figure as Wetland 1 has been classified as an induced wetland. This means that the wetland is wholly manmade and is dependant on unnatural sources of water supply. Therefore, this wetland is not subject to the National Environmental Standard for Freshwater (NES-F).

4.5.7 The wetland identified within Figure 8 as Wetland 2 meets the criteria for a natural inland wetland. This wetland is located within an area currently utilised for grazing. It is fed by naturally occurring water sources and displays the relevant wetland vegetation that are associated with natural wetlands. Therefore, this wetland is subject to the NES-F.

4.5.8 There is a third area comprising of a number of smaller wetlands, identified collectively as Wetland 3 in Figure 8. This area of wetlands is also located within a paddock utilised for grazing. However, this wetland area is predominantly under a stand of large willow trees, making it less accessible by stock. It is fed by naturally occurring water sources, and displays the relevant wetland vegetation associated with natural wetlands and is therefore subject to the NES-F.

### 4.5.c Vegetation

4.5.9 With regards to vegetation, the site is dominated by pastoral grazing species. However, in relation to trees, the Ecological Assessment has identified each of the specimens and stands of these as shown below in Figure 11.


***Figure 11:*** *Plan of vegetation within subject site (EcoLogical Solutions, Appendix 11).*

4.5.10 There is one main stand of vegetation, located towards the south-western corner, comprised wholly of willow trees (in the same location as Wetland 3). There are also a number of hedgerows positioned along the boundary with State Highway 2 and surrounding the woolshed mid-way along the same frontage. The species within these areas are predominantly pine, macrocarpa, Leyland cypress, London plane, gum trees, tree lucerne, and poplar. There are also five kānuka trees scattered around the site. The kānuka are the only indigenous tree specimens found within the site.

4.5.11 There are areas, predominantly within the area of the former effluent pond and, to a lesser extent, along the southern banks of the Taratahi water race / Waikoukou Stream, that had thick stands of gorse and broom. North of the large stand of willow trees were located several thickets of blackberry. There are grazed rushes scattered throughout the site.

### 4.5.d Indigenous Fauna

4.5.12 The Ecological Assessment identifies three main categories of indigenous fauna that may be found within the site or that have suitable habitat for them within the site: avifauna, herpetofauna, and bats. With regards to avifauna, the ecologists noted that there was an

extensive list of potential indigenous species that were found within a 10km radius of the site. Further, several of those species had previously been recorded on-site. However, due to the current features on the site, it was likely that only one indigenous bird species that is subject to Department of Conservation (DoC) protection is still potentially found on the site – the New Zealand pipit.

4.5.13 Five herpetofauna (lizard) species are found within a 10km radius of the site. Within the site, the ecologists found several areas of potential lizard habitat – the boulder piles within the south-western part of the site, the thickets of blackberry near Wetland 3, and a stonefield area near the former effluent pond. These areas all provided potential habitat for copper skink, northern grass skink, Kupe skink, and Raukawa gecko. The highly modified nature of the site and current and historic grazing practices for the site all reduce the likelihood of those potential habitat areas being utilised by indigenous lizards.

4.5.14 The subject site is located within the potential home range for long-tailed bats (an indigenous bat species) that have been recorded approximately 11km from the site. Almost all of the large trees within the site display features that make them potential roost habitat for the long-tailed bats. Given that indigenous bat species are now being identified in other highly modified areas, such as within urban areas of Hamilton city and around Te Awamutu, the modified nature of the site's history does not affect the potential for long-tailed bats to utilise these trees.

### 4.6 Land Use Capability

4.6.1 As outlined within the Land Use Capability Assessment (Appendix 9), the current use of the site is for dry stock (cattle and sheep) pastoral grazing. The stock are managed between this site and a large station on the East Coast of Wairarapa. This site provides grazing support to the larger farm, as a feed buffer. This method of farming enables maximum flexibility, to reflect the considerable variation in feed availability between seasons.

4.6.2 With regards to Land Use Capability classification, approximately 67ha (45.6% of the site area) is classified as Class 3 land. The remainder of the site (80ha / 54.4%) is classified as Class 4 land. Land that is classified as Land Use Capability classes 1-3 is considered to be highly productive land under the National Policy Statement for Highly Productive Land (NPS-HPL). Land outside of those classifications are not classified as highly productive land and are therefore not subject to the NPS-HPL.

4.6.3 The land use of the surrounding area is predominantly the same as that on the subject site, with most of the land adjoining and adjacent to the site zoned and used for rural purposes. There are however a number of heavy and light industrial activities operating opposite the northern boundary of the site, and to a lesser extent adjacent to the south-eastern corner of the site.

**4.7 Natural Hazards**

4.7.1 The subject site is not identified by either the CDC or GWRC as being affected by any natural hazards.

**4.8 Contamination**

4.8.1 As outlined within the Preliminary Site Investigation (PSI) (Appendix 15), the subject site is identified within the ODP as historically containing an effluent pond and irrigational channels for liquid dispersal from a nearby tannery activity. There was also subsequent dispersal of the sediment from that pond on the surrounding farmland within the subject site. Detailed information regarding these activities is held by Greater Wellington Regional Council, as outlined within the Selected Land Use Register file for the site.

4.8.2 These historic activities are included within the Ministry for the Environment's Hazardous Activities and Industries List (HAIL). This results in the site being considered contaminated. As a result of the site's identification by both the Regional and District Councils as being subject to historic contamination activities, it is subject to the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS).

**4.9 Transportation Features**

4.9.1 The three roads adjoining the subject site (as shown above in Figure 2) are each identified under the Wairarapa Combined District Plan maps as different levels within the road hierarchy under the District Plan. State Highway 2 is identified as an interregional connector road, which is approximately equivalent to a regional road under the WK NZTA road hierarchy. Cornwall Road is identified as a rural connector road, which is approximately equivalent to a secondary collector road under the WK NZTA hierarchy. Hughes Line is identified as a rural road, which is approximately equivalent to an access road under the WK NZTA hierarchy.

4.9.2 The adjoining section of State Highway 2 has a legal speed limit of 80km/h. However, due to extensive road works being undertaken along this part of the state highway, the posted speed

limit for this road is 70km/h. Both Cornwall Road and Hughes Line have a posted/legal speed limited of 100km/h.

4.9.3 All three roads are straight and flat, with little to no nearby impediments to visibility in either direction. State Highway 2 had, prior to the current roadworks, a single marked lane for traffic in each direction. The section of State Highway 2 where it intersects with Cornwall Road has a slip lane, which accommodates westbound traffic turning right from State Highway 2 onto Norfolk Road (opposite Cornwall Road), and also traffic turning right from Norfolk Road to head west along State Highway 2.

4.9.4 There is a large unmarked/informal bus shelter located within the southern side of the road reserve for State Highway 2 adjoining the site, opposite Norman Lane. Also within the southern side of the road reserve for State Highway 2 adjoining the site, halfway between the informal bus shelter and the intersection with Cornwall Road, is a marked Metlink bus stop (for the 200 bus route) with a nearby bench seat.

4.9.5 There are a number of vehicle crossings for the site onto State Highway 2. There is a single basic farm access gate located roughly opposite the shed at 7 Pakihi Road within the Waingawa industrial area. There is a double-width vehicle crossing that serves two separate entrances into the site – a large, double-width gate to the woolshed, and another large, double-width gate to the former effluent pond. There is also a single vehicle crossing providing access to the dwelling within the site that has a RAPID of 3954A State Highway 2.

4.9.6 There are three separate single-width farm entrances from Cornwall Road into the subject site. The first is located immediately south of the intersection of Cornwall Road and State Highway 2. The second is midway along the Cornwall Road frontage of the site, and the third is immediately north of the intersection between Cornwall Road and Hughes Line. There are a further three separate single-width farm entrances from Hughes Line into the site, interspersed along that road frontage.

### 4.10 Built Form

4.10.1 There are currently two areas of buildings within the subject site, one associated with the wool shed and yards, and the other with a dwelling that is currently unoccupied. All of these buildings adjoin the site's frontage onto State Highway 2.

4.10.2 The farm shed and yards and associated ancillary structures are located roughly in the middle of the frontage onto State Highway 2. It extends to a small extent towards the centre of the site. This area is comprised of a number of smaller buildings, including:

- A small pump shed that is used for distribution of stock drinking water across the farm;
- A small water bore shed utilised for irrigation purposes across the farm (and subject to a water take permit);
- A number of small lean-to style vehicle parking buildings;
- A larger shed for storage of agricultural vehicles (tractors etc) and implements; and
- A 300m$^2$ steel framed shearing shed with accompanying uncovered yards.

4.10.3 The dwelling is located near the north-eastern corner of the subject site, marginally setback into the site from State Highway 2. This dwelling is currently unoccupied, with the landowner intending to utilise it as a short-term accommodation facility (listed on an AirBnB type website) for the foreseeable future. It has three bedrooms and a standalone garage, and a floor area of approximately 150m$^2$.

**4.11 Cultural and Historic Heritage Features**

4.11.1 A review of the GIS for the New Zealand Archaeological Association has not identified any known archaeological sites within the subject site. The GIS of both the District and Regional Council has also been reviewed, and do not indicate that there are any known sites of cultural significance or with cultural values, or any historic heritage features within the subject site.

4.11.2 Within the area immediately surrounding the subject site, there is a pending recorded archaeological site shown as being located within the road reserve of State Highway 2 approximately 380 metres east of the subject site. West of that, the GIS for the Greater Wellington Regional Council show that the Waingawa River (Te Awa o Waingawa) is a recognised waterbody of significance to mana whenua in this locality. This river, which is located east of the subject site, is recorded under Schedule B – Ngā Taonga Nui a Kiwa of the NRP.

4.11.3 As noted on the Te Puni Kōkiri website, there are two iwi who's rohe extends over this site – Rangitāne o Wairarapa and Ngāti Kahungunu ki Wairarapa. Both iwi are acknowledged on the Te Puni Kōkiri website as being mana whenua for consultation purposes under the RMA for this locality.

## 5.0 PROPOSAL

5.0.1 This application seeks to establish an agrivoltaic development, also known as a solar farm, within the subject site. This development will occupy approximately 138ha of the subject site, as per in Appendix 3, and indicated in Figure 12 below and is hereon referred to as the development area. This will include erecting solar panels (photovoltaic modules), inverters, transformers, BESS, a substation, and a site office. Indicative details regarding the photovoltaic modules, inverters, and BESS units are also included within Appendix 3.

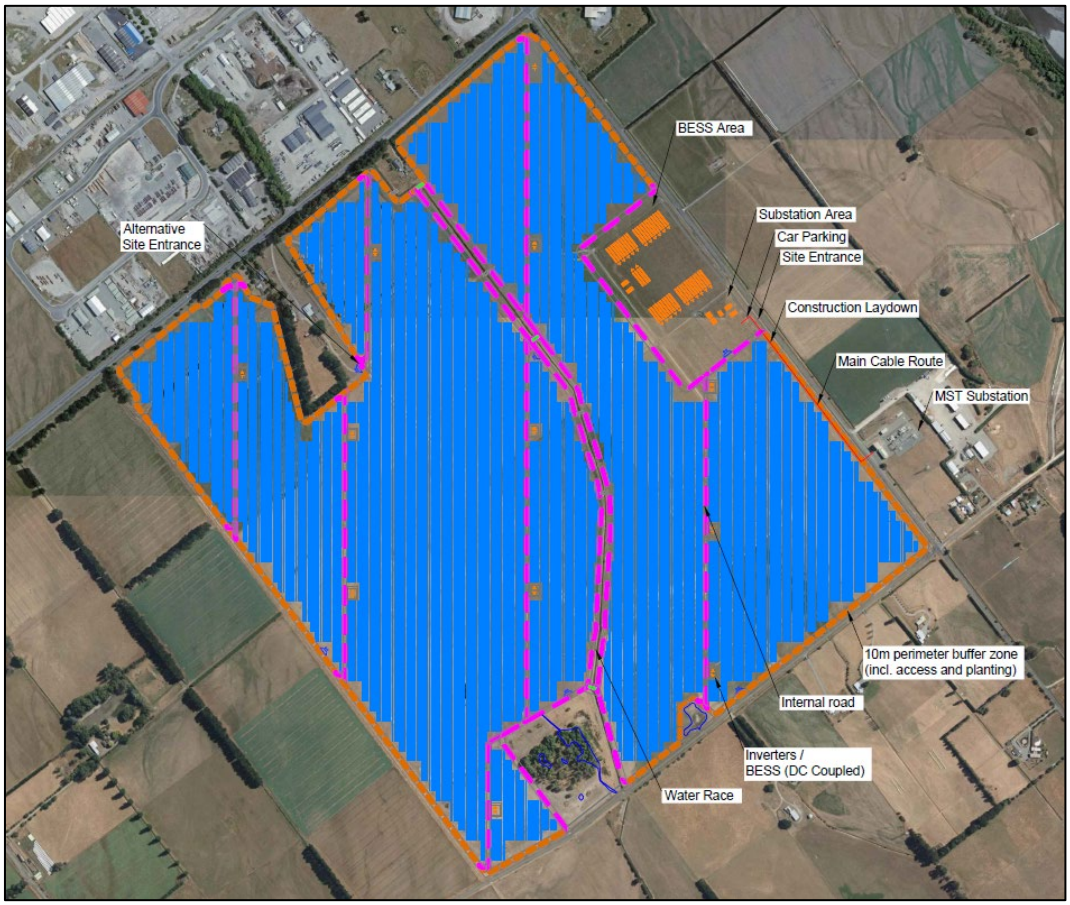


***Figure 12:*** *Proposed site plan (NZ Clean Energy, Appendix 3).*

5.0.2 The proposal will also include establishing security fencing and undertaking landscaping in appropriate places. Site works associated with the construction of the development, including earthworks, tree trimming and, in places, removal, will also be required to enable the agrivoltaic development to be established.

5.0.3 The following subsections outline those various components of the proposal in greater detail. The below detailed descriptions are supported by specialist reports and plans, which are referenced within Table 1 of this report. These specialist reports and plans are appended to

the application, and thus form part of the application. This includes all conclusions and recommendations made within those specialist reports and plans, which are accepted and adopted and thus form part of the proposal.

### 5.1 Photovoltaic Modules (Solar Panels)

5.1.1 The proposal seeks to establish approximately 166,000 photovoltaic (PV) modules. Each module will have approximate dimensions of 1.3m wide, 2.2m high, and 35mm thick, as indicated on Figure 13, below. These modules are proposed to be mounted on single-axis tracking tables (bases). The PV tracking table will be set out in a rectilinear array within the proposed development. Each PV tracking table is proposed to be oriented north-south along its long axis, enabling it to track the sun in an east-west direction.

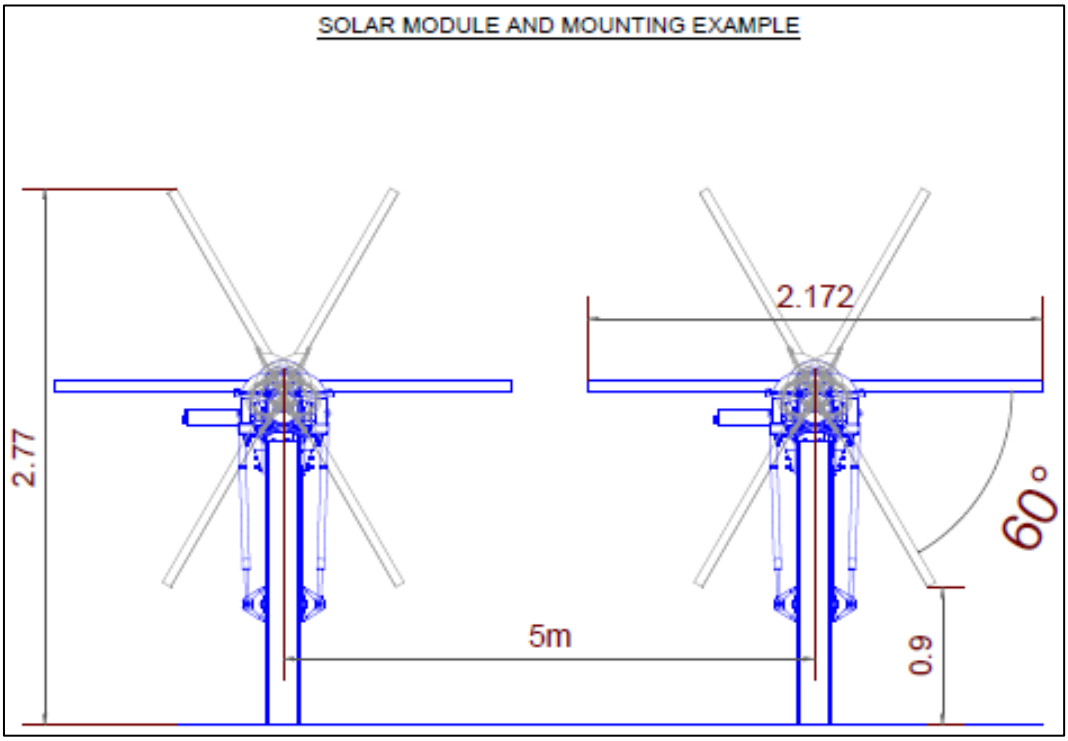


***Figure 13:*** *Indicative PV Module Shape and Dimensions (NZ Clean Energy, Appendix 3).*

5.1.2 The proposed PV tracking tables are anticipated to contain approximately 60 modules each. This will result in each PV tracking table being approximately 78m long. The PV tracking tables will be approximately 2.95m high at a maximum tilt (60° tilt) and 2.2m wide at a minimum tilt (0° tilt). Each row of PV tracking tables is proposed to have a 2.8m (approximate) wide perimeter clearance, to allow for access and maintenance.

5.1.3 It is proposed that the PV tracking tables will operate during all daylight hours of every day of the year.

## 5.2 Solar Inverters

5.2.1 There are proposed to be approximately twelve solar inverters stations, coupled with small transformers, within the development. These inverters are proposed to be located at regular intervals across the agrivoltaic development and will have approximate dimensions of 4.3m long and 2.6m high, as indicated below in Figure 13. These inverters convert the direct current (DC) energy generated by the panels into alternating current (AC) energy, so that it can enter the substation. The agrivoltaic development's internal cabling is proposed to be 33kV.


***Figure 14:*** *Indicative Inverter Dimensions (NZ Clean Energy, Appendix 3).*

## 5.3 Battery Energy Storage Area

5.3.1 BESS units are proposed to be located within the southern part of the site, as identified below in Figure 15. Each BESS will be approximately 6.1m long by 2.4m wide by 2.9m high (plus between 300mm to 800mm for foundations), located within repurposed shipping containers as indicated below in Figure 16.

5.3.2 The BESS are to support the generation of energy from the PV modules, storing the energy generated during the day when generation is at its peak. That stored energy can then be

released into the national grid during peak demand hours, predominantly in the evening, when demand from households is at its greatest.

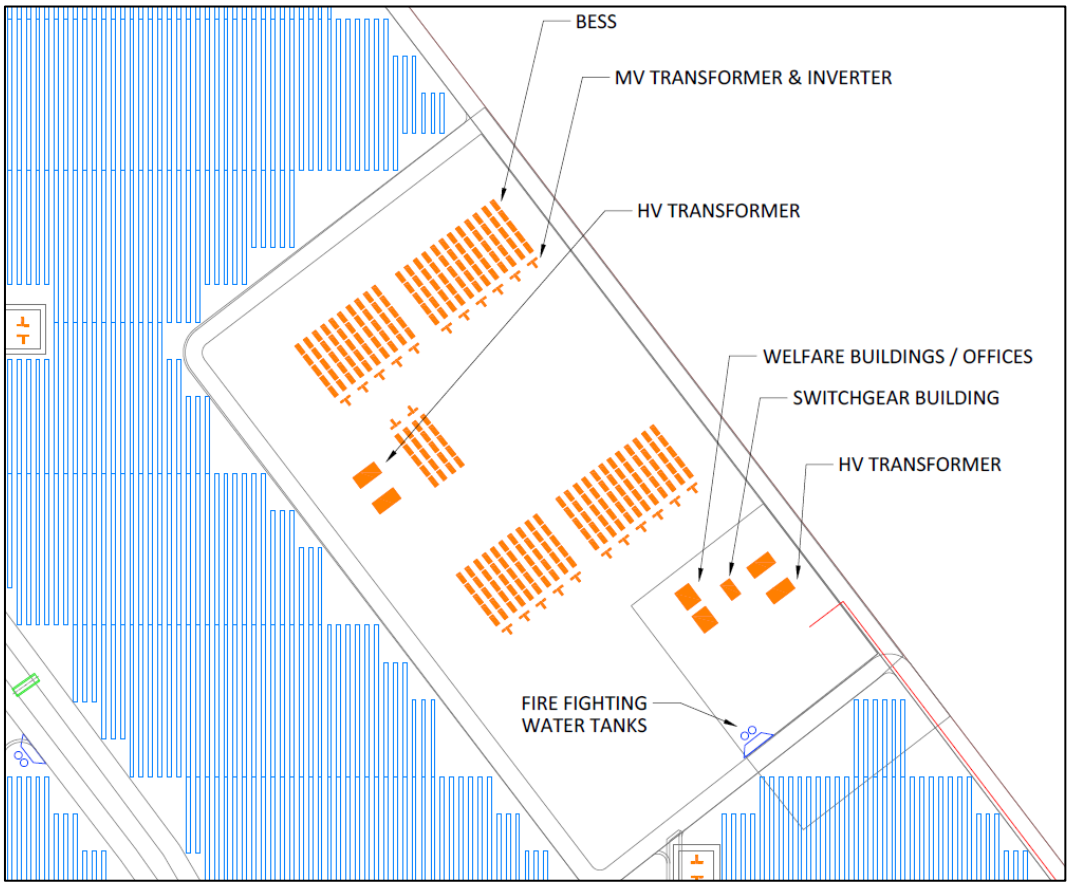


***Figure 15:*** *Detailed view of proposed BESS area (NZ Clean Energy, Appendix 3.*

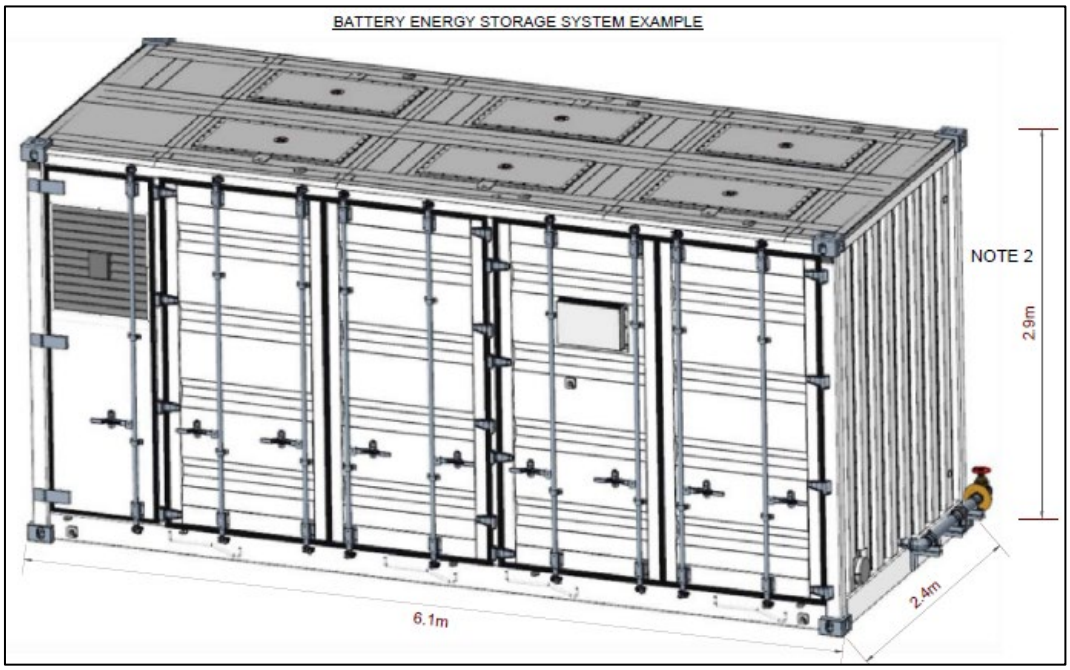


***Figure 16:*** *Indicative BESS Shape and Dimensions (NZ Clean Energy, Appendix 3).*

5.3.3 The batteries will store energy generated by the solar plant for export / distribution at times when it is most required by the National Grid. The battery may also be charged directly from the National Grid under certain conditions, such as during high renewable energy (off-site) output combined with low demand. Stored energy would then be exported at times when it is needed by the National Grid.

### 5.4 Substation, Switching and Site Office

5.4.1 A substation area is proposed to be located immediately south of the BESS area. The substation area is proposed to be up to 1 hectare and includes a switching station building. The switching station building will create a new loop-in-loop-out connection point to the Masterton Substation.

5.4.2 It is also proposed to establish a small site office. This will likely be a small Portacom-type structure. This would have a floor area of approximately 36m$^2$. It is anticipated that there will be a small lunchroom area within this structure, which will be serviced by a small roof-fed water tank. Ablution facilities will be either serviced by a small-scale, compliant on-site wastewater disposal system or by a containment-type septic tank for off-site disposal to an appropriate facility.

### 5.5 Connection to Masterton Substation and the National Grid

5.5.1 As part of this application, the connection to the Masterton Substation, located at 113 Cornwall Road, will be made underground within the road corridor of Cornwall Road from the site. This process and work will be conducted alongside Transpower and in accordance with their requirements and standards. The location of this connection will be confirmed as part of the detailed design process between the Applicant, Council, and Transpower. An indicative location for the connection is shown within the site plan (Appendix 3 and Figure 12, above).

5.5.2 It is also noted that there may be changes required to the existing Masterton Substation as a result of connection of this agrivoltaic development. Any changes to the existing substation designation and any additional resource consents that may be required will be managed directly by Transpower and do not form part of this resource consent application.

## 5.6 Site Works

5.6.1 As outlined within the Engineering Report prepared by CKL (Appendix 13), the construction for the proposed development is expected to last approximately 12 to 18 months. Construction for the proposal will include, not necessarily in the order listed, the following tasks:

- Removal of existing internal fencing and vegetation, where identified in the application, within the proposed development area;
- Formation of a stabilised site access (in the same location as the operational site access) and erection of all erosion and sediment control structures and measures within development area;
- Formation of internal access tracks and hard stand area for BESS, substation, and switching area to a compacted gravel standard;
- Installation of PV tracking tables via pile driving (noting that there will be no pouring of concrete or other materials as part of installation of the tracking tables);
- Installation of BESS, substation, switching area units, and associated internal connections and cabling to the nearby substation;
- Undertaking landscaping planting and erection of security fencing; and
- Connection to Transpower assets.

5.6.2 It is proposed that the construction activities are all undertaken during normal daytime working hours, 7am to 7pm. Overall, the construction activities will be largely limited to the preparation of footings, delivery and construction / installation of prefabricated items (such as solar panels, control room, switching station, battery units, and connection components).

5.6.3 The proposed earthworks will involve predominantly surface soil scraping, in order to establish the required access tracks and hard stand areas for the inverters, BESS, and associated equipment. This will occur over an estimated area of up to 10.8ha, and will involve internal displacement of approximately 32,550m$^3$.

5.6.4 It is also proposed to remove several of the larger earthen bunds that were established as part of the historic wastewater management system for the nearby tannery. These will be small, localised areas of soil displacement. Due to the nature of the soil, any removed material will be managed in accordance with a Remediation Action Plan (RAP), that will be prepared by a suitably qualified and experienced profession (SQEP).

5.6.5 The proposed erosion and sediment control measures to be implemented while site works are being undertaken will include a combination of:

- Stabilised site entrance;
- Establishment of clear water diversion bunds around the site perimeter;
- Erecting silt and super silt fencing;
- Utilising decanting earth bunds if necessary;
- Progressive stabilisation of disturbed soil through construction of finished surfaces to limit the amount of exposed soil at any given period throughout;
- Undertaking works during drier weather as much as practicable; and
- Implementation of dust suppression measures such as intermittent water spraying.

5.6.6 As outlined previously within this report, there are several areas within the site have been identified as potential indigenous herpetofauna habitat. The Ecological Assessment (Appendix 12) includes recommendations to avoid any of the site works within those areas of the site harming any indigenous lizards:

- Immediately prior to any site works being undertaken within the affected parts of the site, a lizard survey will be undertaken by a suitably qualified and DoC-authorised specialist to determine if there are any specimens occupying the affected land; then
- If any lizards are found within the works area, they will be relocated to an acceptable alternative location by a suitably qualified and DoC-authorised specialist, in accordance with DoC herpetofauna handling protocols.

**5.7 Staff Numbers**

5.7.1 The construction phase for the project is anticipated to generate the equivalent approximately 100 jobs, comprised of a mix of full and part time roles. Approximately 20 jobs, predominantly part time, are anticipated to be required for the operation and maintenance of the project.

**5.8 Landscaping**

5.8.1 A Landscape Assessment has been prepared for this proposal by Mansergh Graham Landscape Architects (Appendix 7). Within that Landscape Assessment, it notes that a security fence, similar to a deer fence, will be installed around the site perimeter, that will be approximately 2.4m high. Primary access into the site will be from Cornwall Road, in a location approximately 200m north of the adjacent access to the Masterton Substation. Alternative accesses, for

emergency services use only, will be available in two locations on the western parts of the site frontage onto Hughes Line, and at the centre of the site frontage onto State Highway 2. All of the emergency services accesses will utilise existing vehicle crossings.

5.8.2 An access track network will be developed around the perimeter of the development area and internal to the site to enable suitable access throughout the lifetime of the project.

5.8.3 Planting for landscape screening purposes will be established around parts of the perimeter of the site, in locations recommended within the Landscape Assessment, as identified in Figure 17 below. This landscape screening, once fully established, will be maintained to a height of between 2 to 3m for the duration of the project.

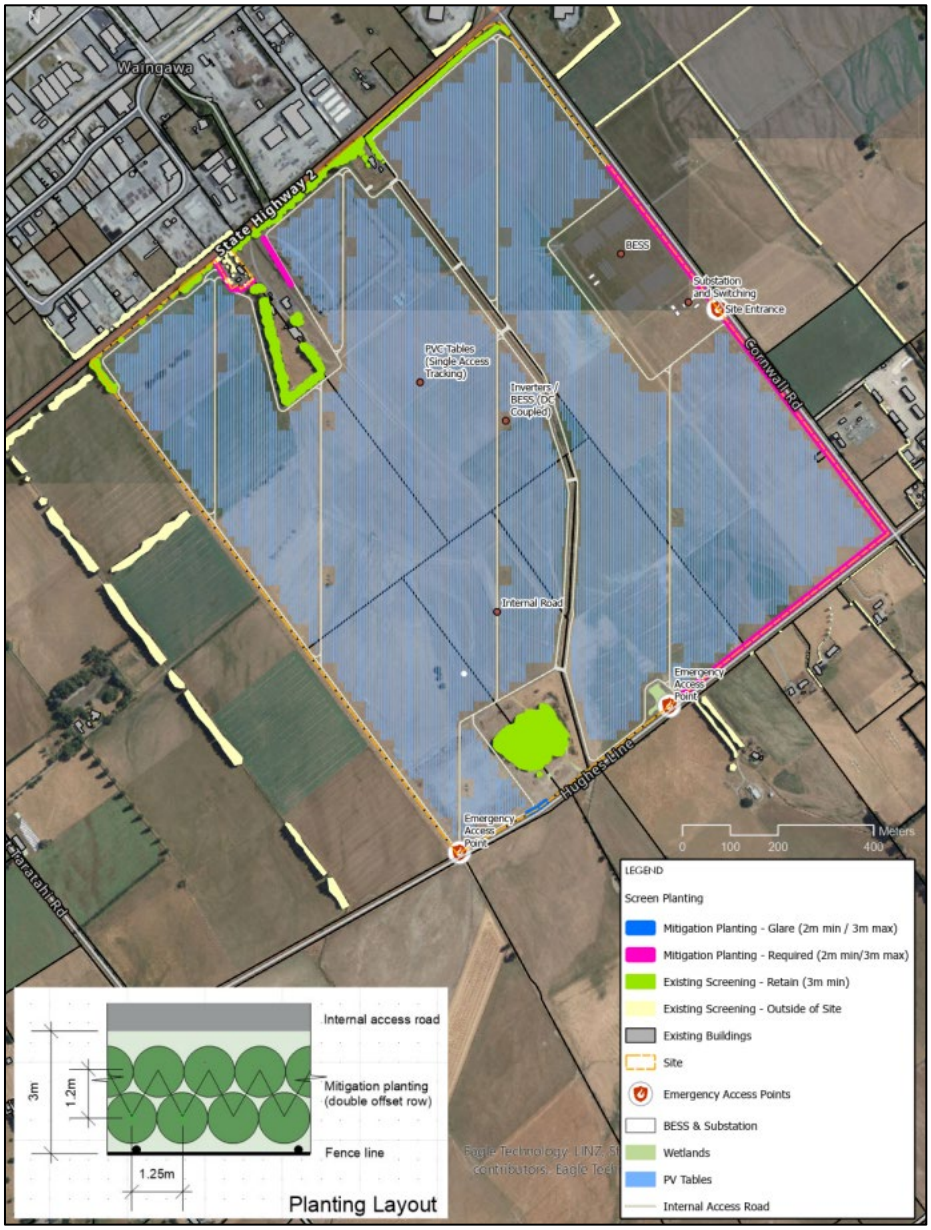


***Figure 17:*** *Plan of mitigation planting (Mansergh Graham Landscape Architects, Appendix 7).*

5.8.4 Wetlands 2 and 3 in the southern part of the site will be fenced and excluded from the development. The proposed perimeter access tracks and security fencing will be located on the internal boundary between this wetland area and the proposed development.

**5.9 Glint and Glare**

5.9.1 Glint and glare modelling with regards to surrounding properties and land-based was undertaken and provided as part of the Landscape Assessment prepared for the proposal (Appendix 7). Additional glint and glare modelling was undertaken with regards to the operation of the nearby Hood Aerodrome, which was also undertaken by Mansergh Graham Landscape Architects (Appendix 8). These two modelling exercises considered the potential for the PV modules to generate glint (the fleeting flash seen from fast-moving receivers) and glare (the more enduring brightness seen from a slow-moving or static receiver).

5.9.2 PV modules are designed to absorb rather than reflect light, as part of generating energy from solar irradiation. As such, they are considerably less reflective than most common flat glass surfaces like windows. Further, due to the PV tracking tables, the panels will primarily be orientated towards the sun to enhance the degree of solar irradiation absorption.

5.9.3 The glint and glare modelling found that there was a negligible effect on the surrounding dwellings from the proposal. This is a result of the relatively low positioning of the PV modules, the flat topography of the locality, and most of the nearby dwellings having some form of surrounding landscaping.

5.9.4 In relation to passing vehicles along the three road frontages that the subject site has, the modelling found that only a small stretch of Hughes Line was affected by any glint and glare effect, for a limited period of time each day. Through communication with the manufacturer of the PV tracking tables, it has been confirmed that the software for these mechanisms can be set to avoid the angle of the PV modules for that period of the day, each day. Through implementation of this mitigation measure, there will be negligible glint and glare effect for users of the surrounding road network.

5.9.5 With regards to the analysis of glint and glare effects on the nearby Hood Aerodrome, it was found that the PV modules in the south-eastern section of the proposed development would result in glint and glare effects on planes utilising Approach Path 6 for a limited period of time, for just under an hour, each day.

5.9.6 Applying the same mitigation measure of manipulating the PV tracking table software to avoid the offending angles at the appropriate time each day is sufficient to ensure that the glint and glare effect on passing planes is within the acceptable levels under the modelling, which is based on American Aviation standards (as New Zealand's Civil Aviation Authority currently doesn't have similar standards in place).

**5.10 Noise Emissions**

5.10.1 An Acoustic Assessment has been prepared by Styles Group (Appendix 10). This assessment found that there are several aspects of the proposal that have the potential to generate limited levels of noise, as follows:

- During construction, sources will predominantly be the use of earthworks machinery to establish the access tracks and hard stand areas, the use of pile driving machinery to install the poles for the PV tracking tables (this will be limited to approximately one month of the 12 to 18 month construction period), and the installation of the various elements of the proposed development, all of which will occur only during normal business hours as outlined in Subsection 4.7 above;
- Once operational, there will be some negligible noise associated with the PV tracking tables altering the angles of the PV modules during daylight hours;
- The proposed inverters that are spread throughout the development will generate localised noise levels, although this will largely be during the day when the PV modules are discharging energy; and
- The proposed BESS units, as well as the substation and switching station building will also generate noise, which can occur during the day when the energy generated from within the site is transferred either into the National Grid or into the BESS units, or in the evenings when energy is transferred from the BESS units into the National Grid.

5.10.2 The acoustic modelling for during construction found the noise emissions at the notional boundary of all of the surrounding dwellings during the day will be compliant with the relevant Council standards. This could potentially require implementation of noise mitigation measures in relation to a dwelling adjacent to that area to ensure compliance with the standards are achieved.

5.10.3 All other adjacent dwellings are located a sufficient distance that the higher daytime noise limits for construction can be complied with without the need for implementation of noise

mitigation measures. It is noted that construction of the development will occur in different phases and will not occur across the whole site at any given time.

5.10.4 Once operational, the acoustic modelling found that the mechanisms from the PV tracking tables would be well within the permitted daytime noise levels. Similarly, due to the positioning of the inverters spread out within the site, internal to the PV tracking tables, these were determined to be compliant with all relevant noise standards in relation to the notional boundaries for adjoining and adjacent dwellings.

5.10.5 The centralised nature of the BESS units and associated substation and switching station building mid-way along the Cornwall Road frontage means that there is at least 250m separation between these noise sources and the nearest dwellings. This aspect of the proposal is most likely to operate during the quieter night-time noise level period. The acoustic modelling found that it would be compliant with the relevant standards at the notional boundary for the adjacent dwellings, without the need to implement any acoustic mitigation measures.

### 5.11 Transportation

5.11.1 There are a number of components to the transportation elements of the proposal, relating to both the construction and operational phases of the development. The following summarises details regarding each of these elements, as outlined within the Transportation Assessment prepared by Don McKenzie Consulting (Appendix 11).

#### 5.11.a Construction

5.11.2 Construction related vehicle movements will comprise construction workers and deliveries. It is expected that the majority of equipment and plant deliveries will occur via vans, and heavy vehicles (12.5m and 19m trucks). A Construction Traffic Management Plan (CTMP) will be prepared prior to construction activities commencing.

5.11.3 Vehicle movements during construction will be approximately:

- 10 light vehicles one-way (‘in’ or ‘out’) vehicle movements per day.
- 20 heavy vehicle (truck) one-way (‘in’ or ‘out’) vehicle movements per day.
- This equates to a total of 30 ’in’ or ‘out’ vehicle movements over an entire day (i.e. one-way movements), or 60 ‘in’ and ‘out’ vehicle movements over an entire day (i.e. total two-way movements).

- It is noted that during non-peak construction activities, construction related traffic movements are expected to be significantly less.

**5.11.b Site Accesses**

5.11.4 The proposal will have one site entrance for the daily operation of the development. This will be located approximately mid-way along the site frontage onto Cornwall Road. The site access is proposed to be located over 200m north of the existing entrances to the contractor's yard and substation that are located on the opposite side of Cornwall Road to the subject site. This vehicle crossing will be formed, sealed, and marked in accordance with the relevant Council standards.

5.11.5 Two emergency accesses to the site onto the site frontage on Hughes Line have been requested by FENZ. These accesses are located in the south-western corner of the site, and approximately mid-way along the site frontage onto Hughes Line. These accesses are not proposed to be utilised for any purpose other than enabling emergency services vehicles to access the site in case of an emergency. These vehicle crossings will be formed, sealed, and marked in accordance with the relevant Council standards. The existing site access for the woolshed onto State Highway 2 will also be available as an alternative emergency services access. It is considered that this access is already formed to an appropriate standard.

5.11.6 The proposal also includes an internal network of access tracks to enable the maintenance of the development. Those access tracks around the perimeter of the site have been positioned within the 10m setback between the PV modules and the development area boundaries, as well as within the 10m setback between the PV modules along either side of the Taratahi water race / Waikoukou Stream.

5.11.7 The internal access tracks have been designed to comply with the FENZ manoeuvring requirements for a rural firefighting tanker truck, which is anticipated to be the largest appliance that would attend an emergency on site. The access tracks will be approximately 4m wide and formed to a compacted gravel standard. This will ensure that all FENZ appliances, as well as any vehicles utilising the tracks for maintenance purposes, will be able to safely and efficiently manoeuvre around the site.

**5.11.c Parking**

5.11.8 A total of approximately 20 parking spaces are proposed within the temporary construction compound and laydown area. These will be informally identified and marked, to a standard

commensurate with the temporary nature of the parking spaces.

5.11.9 Once the construction phase is completed, it is proposed to establish six car parking spaces adjacent to the site office. These will be formed to a suitable all-weather standard and marked in accordance with the relevant Council requirements. There is sufficient area within the surrounding site entrance hard stand area for on-site manoeuvring of vehicles, to ensure that all vehicles can exit the site in a forward-facing manner.

**5.11.d Vehicle Movements**

5.11.10 It is anticipated that up to 2 staff and 1 technician could potentially be expected to be on-site at any given time. As such, post-construction vehicle movements are anticipated to be approximately:

- Up to three entry and egress movements per day (3 'in' and 3 'out') could be expected to be generated by the proposed solar energy facility during normal operation.
- These will be comprised of light vehicles (passenger cars) and utility vans / maintenance trucks.

**5.12 Existing Farm Infrastructure and Shelterbelts**

5.12.1 The existing woolshed, dwelling, utility sheds, stockyards, water races (including the Taratahi water race / Waikoukou Stream) and the shelterbelts along State Highway 2 and to the immediate west of the stockyards will be retained. The existing shelterbelts located along the boundary with State Highway 2, as well as those around the perimeter of the woolshed and adjacent utility sheds will be trimmed. The trimmed height of the shelterbelts will be maintained to stay between 2-3m.

5.12.2 All other trees and shelterbelts within the footprint of the PV tables, BESS area and inverter locations proposed to be removed.

5.12.3 As outlined previously within this report, almost all of the trees within the site have been identified as potential long-tailed bat roost habitat. The Ecological Assessment (Appendix 12) includes recommendations to avoid the removal or initial trimming of the trees harming any long-tailed bats, predominantly through a two-stage approach:

- First it is sought to get a more certain indication as to whether the trees are utilised by long-tailed bats through undertaking two weeks of monitoring within the site; then

- It is proposed to undertake monitoring of each of the sets of trees for two nights immediately prior to the removal or initial trimming works to ensure that there are no long-tailed bats utilising the trees when they are modified.

### 5.13 Site Maintenance

5.13.1 The agrivoltaic development will require regular maintenance (such as cleaning of the PV modules) approximately every 3 months, and ground maintenance. Cleaning of PV modules will involve washing the modules with deionised water. The water for the cleaning of the PV modules will either be:

- Sourced from the existing bore on the subject site via trickle feed in compliance with the current groundwater take consent. It will be stored within the water tanks located throughout the development for firefighting purposes as surplus volume accessed via a separated orifice. If this method is selected, the water will be deionised on-site; or
- Sourced from an external water supply as required. If this method is selected, the water may either be deionised before cartage to the site or on-site prior to use on the modules.

5.13.2 Sheep will be grazed around the PV modules in order to maintain the grass to a reasonable level. This will ensure that the grass will not result in a fire hazard nor impede solar access for the PV modules.

### 5.14 Drainage

5.14.1 As outlined within the Stormwater Management Plan (SMP), prepared by CKL (Appendix 13), the proposal will result in minimal introduction of impervious surfaces to the subject site. It found that the stormwater runoff associated with the proposed BESS units, substation, switching station building, site office and associated hard standard areas would be managed through implementation of a standard cesspit collection system for dispersal via a soakage system. Stormwater runoff from the PB modules would be readily absorbed into the underlying ground in a manner not dissimilar to what currently occurs on site during heavy rainfall events, utilising existing ground soakage and overland flow path networks during high rainfall events.

5.14.2 The proposal does not include any identified potential contaminant sources, with the proposed structures utilising appropriate cladding, and through the hard stand areas being categorised as low traffic areas. The earthworks proposed to be undertaken within the areas

of identified historic contamination are also confined and localised to a small area within the site, setback from all potentially sensitive receivers. As such, the Stormwater Management Plan did not determine that stormwater treatment would be required for the proposal.

5.14.3 The SMP also assessed the available information regarding flood hazards for this area and found that there is no identified flood hazard for the subject site. The proposed stormwater management measures were considered appropriate for the proposal and would not generate any new flood hazard risk.

### 5.15 Signage

5.15.1 It is proposed that there will be signage erected associated with each of the key phases of the project. Initially, there will be signage associated with the construction phase of the project (including site safety and traffic management signage), as well as preliminary site name signage on the site. Once established and operative, there will likely only be site entrance, site name, and operational health and safety information signage erected. There will also likely be signage associated with managing the decommissioning of the development, which will be similar in nature to that required for the construction phase.

5.15.2 All signage erected will be prepared, sited, and maintained in accordance with the relevant District Plan and roading authority requirements and standards.

### 5.16 Duration

5.16.1 Consent is being sought for the development to operate for approximately 40 years. This period includes time required to undertake the construction of the development, as well as time at the end of the development to decommission the site.

### 5.17 Site Ownership Structure

5.17.1 The Applicant has an agreement to proceed with a 40-year lease agreement for the part of the subject site proposed to be occupied by the development, should all relevant grid connection and resource consent approvals be successfully obtained. The current landowner will retain ownership of the site for the duration of the proposed operation of the agrivoltaic development.

5.17.2 The lease applies to the entire subject site, i.e. including areas of the subject site that are excluded from the development area. As such, this is not considered to be a subdivision of land under Section 218(1)(a)(iii) of the RMA.

## 5.18 Decommissioning of Activity

5.18.1 Prior to the end of the 40-year lease, it is proposed that the site will be decommissioned to enable the site to return to its current agricultural use. Most of the plant associated with the development is not permanently affixed to the site, either just pile driven into the ground (without concrete being poured) or located on concrete piles. As such, the removal of the bulk of the development infrastructure will simply require the uplift of all of the plant via heavy vehicles.

5.18.2 There will be some soil disturbance associated with removal of the concrete piles and any underground wiring and cables. This will be minimal, and readily managed through implementation of appropriate sediment and erosion control measures, based on industry and Council best practices and standards.

5.18.3 Prior to decommissioning the development, the Applicant will prepare a Decommissioning Management Plan (DMP). This DMP will cover:

- The detailed methodology for the removal of all structures and equipment;
- The intended disposal location for all of the removed structures and equipment; and
- The methodology for reinstatement of the site to predevelopment standard.

5.18.4 Switchyard and substation facilities are listed within the HAIL. Therefore, the establishment of switchyard and substation facilities within the site has the potential to result in identification of part of the development area as contaminated land. To mitigate this, as part of the decommissioning of the development at the end of the operational period, it is proposed to test the area to determine if any contamination has occurred. Should any contamination be discovered, it will be remediated as necessary in accordance with recommendations from a suitably qualified and experienced contamination professional.

# 6.0 REASONS FOR CONSENT

## 6.1 Carterton District Council

6.1.1 The ODP became fully operative on 25 May 2011. However, there is also the PDP that was notified on 11 October 2023. Currently, the PDP is within the consultation period, with initial submissions closing on 19 December 2023. As such, both the ODP and PDP must be considered in accordance with Schedule 4(2)(1)(g) and Section 104(1)(b)(vi) of the RMA.

### 6.1.a Wairarapa Combined Operative District Plan

6.1.2 Following a review of the ODP, as outlined within Appendix 15, it is considered that the following are the reasons for consent applicable to this proposal:

- Rule 4.5.5(c), as the proposal includes construction of buildings not required for primary production or residential purposes that will result in greater than 25m2 of gross floor area (an approximate total gross floor area of 3,720m2 is proposed, comprised of twelve 30,000L water tanks, approximately 240 BESS units, a site office, and a switching station building), which requires resource consent as a Restricted Discretionary Activity;
- Rule 21.1.24(iii), for the establishment of buildings for energy generation facilities that will result in greater than 10m2 of gross floor area (an approximate total gross floor area of 3,720m2 is proposed), which requires resource consent as a Discretionary Activity;
- Rule 21.4.10(a), for an activity on Contaminated Land as listed in Appendix 3.1 of the ODP, which requires resource consent as a Restricted Discretionary Activity; and
- Rule 21.6(a), to undertake an activity that is not otherwise specified as a controlled or restricted discretionary activity, which requires resource consent as a Discretionary Activity.

6.1.3 Overall, the above reasons for consent will result in this application seeking consent from Carterton District Council for a **Discretionary Activity**.

### 6.1.b Wairarapa Combined Proposed District Plan

6.1.4 Following a review of the PDP, as outlined within Appendix 16, it is considered that the following are the reasons for consent applicable to this proposal:

- Rule GRUZ-R19(1), for an activity within the GRUZ which is not otherwise provided for, which requires resource consent as a **Discretionary Activity**;

- Rule ENG-R6(1), to establish a large-scale renewable energy generation activity, which requires resource consent as a **Discretionary Activity**; and
- Rule TR-R1(1), for a development that will provide less than the minimum required number of accessible parking bays (1 is required, none are proposed), which requires resource consent as a **Restricted Discretionary Activity**.

6.1.5 Overall, the above reasons for consent will result in this application seeking consent from Carterton District Council for a **Discretionary Activity**. However, it is noted that all of the above reasons for consent under the PDP are rules that do not have immediate legal effect.

**6.1.c Summary of Reasons for Consent from Carterton District Council**

6.1.6 Should the Carterton District Council consider that there are additional reasons for consent applicable under either the ODP and/or the PDP, these are accepted and adopted for the purposes of this application. Overall, the above reasons for consent will result in this application seeking consent from Carterton District Council for a **Discretionary Activity**.

**6.2 Greater Wellington Regional Council**

6.2.1 The NRP became fully operative on 28 July 2023. The NRP is considered the only relevant Regional Plan for consideration in accordance with Schedule 4(2)(1)(g) and Section 104(1)(b)(vi) of the RMA. Following a review of the NRP, as outlined within Appendix 17, it is considered that the following is the reason for consent applicable to this proposal:

- Rules R101 and R106, for earthworks over an area greater than 3,000m$^2$ (the proposed works will occur over a total area of approximately 10.8ha, although that will predominantly comprise of soil scraping) that is associated with renewable energy generation, which requires resource consent as a **Restricted Discretionary Activity**.

6.2.2 Should the Greater Wellington Regional Council consider that there are additional reasons for consent applicable, these are accepted and adopted for the purposes of this application. Overall, the above reason for consent will result in this application seeking consent from Greater Wellington Regional Council for a **Restricted Discretionary Activity.**

**6.3 Other Reasons for Consent**

6.3.1 There are currently ten national environmental standards operative under the RMA, with those relevant identified as follows:

- National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS);
- National Environmental Standards for Electricity Transmission Activities (NES-ETA); and
- National Environmental Standards for Freshwater (NES-F).

6.3.2 A detailed assessment of the proposal against those relevant national environmental standards has been undertaken within Appendix 19. A summary of the assessments of the proposal in relation to those relevant national environmental standards is provided below.

**6.3.b National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS)**

6.3.3 The subject site is identified by both the District and Regional Council as having been subject to historic contamination activities. Under Clause 5(7)(b) of the NES-CS, the subject site is therefore considered to be "land covered" by the NES-CS. Further, the proposal will include the disturbance of soil, which is an "activity" under Clause 5(4)(a) of the NES-CS. Therefore, this proposal must be assessed against the NES-CS to determine if there are any additional reasons for consent.

6.3.4 The proposal seeks to undertake soil disturbance on land covered by the NES-CS, which is subject to Clause 9(1) for controlled activities under the NES-CS. However, in accordance with Clause 9(1)(a) of the NES-CS, such an activity may only be considered as a controlled activity if a detailed site investigation exists at the time of seeking consent.

6.3.5 A DSI is yet to be prepared. This is proposed to be prepared following approval of all relevant resource consent applications and provided to both the District and Regional Councils once complete. In accordance with Clause 11(1), the proposal therefore requires resource consent as a **Discretionary Activity**.

**6.3.c National Environmental Standards for Electricity Transmission Activities (NES-ETA)**

6.3.6 The proposal includes the connection of the agrivoltaic development within the development area to the nearest connection point for the National Grid – the Masterton Substation. This connection will be made underground within the road corridor of Cornwall Road.

6.3.7 A new dedicated cable will be installed underground to connect the proposal to the Transpower National Grid. As this will involve the transmission of electricity from the development area to the Substation, the proposal must be assessed against the relevant clauses of the NES-ETA to determine if there are any additional reasons for consent.

6.3.8 The National Grid connection is currently subject to agreement with Transpower, which is being addressed concurrent to this resource consent application. Any statutory applications, including Outline Plan (or waiver), or resource consent required under the NES-ETA will be addressed via the grid connection process.

**6.3.d National Environmental Standards for Freshwater (NES-F)**

6.3.9 The development area includes the Taratahi water race / Waikoukou Stream, which is considered a river in accordance with the definition under Clause 3 of the NES-F. The proposal seeks to establish three new culverts to enable vehicles to cross this river. Culverts are structures that may affect the passage of fish and are therefore subject to the NES-F in accordance with Subpart 3.

6.3.10 Detail regarding the design of these culverts will be developed following obtaining resource consent approval from the District and Regional Councils for this proposal. The design of these culverts will take into account the requirements for structures and the passage of fish (Clause 62) and regarding culverts (Clauses 63 and 70). It is anticipated that the proposed culverts will be able to be compliant with most of the requirements of these clauses.

6.3.11 The proposal however will not be able to comply with all of the Permitted activities conditions outlined under Clause 70(2) of the NES-F. In particular, Clause 70(2)(d) for the width of the culvert requires that culverts for a river of this size require a width that is 1.3 times the current width of the river. Due to the incised nature of the river for most of its course through the development area, it will not be practical to provide a culvert of this width. Therefore, consent is sought under Clause 71(1) of the NES-F as a **Discretionary Activity**.

**6.4 Overall Consents Sought and Activity Status**

6.4.1 Based on the most restrictive activity status outlined above, the proposal requires resource consent as a **Discretionary Activity** overall from Carterton District Council, and as a **Discretionary Activity** overall from the Greater Wellington Regional Council under Sections 9 and 13 of the RMA.

## 7.0 ASSESSMENT OF EFFECTS

7.0.1 In accordance with Section 88 and Schedule 4(3) of the RMA, this application includes an assessment of environmental effects. This assessment of effects is considered to be commensurate to the nature, scale, and location of the proposal. It is also considered to appropriately address all matters of control and consideration that have been identified in the relevant planning documents.

7.0.2 For this proposal, it is considering that the following are relevant effects to be assessed, and which are examined in greater detail in the following subsections of this report:

- Cultural;
- Historic heritage;
- Landscape, visual amenity, and rural character;
- Glint and glare;
- Reverse sensitivity;
- Land use capability;
- Acoustic;
- Construction;
- Transportation;
- Contamination;
- Ecological; and
- Positive effects.

### 7.1 Cultural Effects

7.1.1 The subject site is located within the rohe of both Ngāti Kahungunu ki Wairarapa and Rangitāne o Wairarapa, who are both identified as mana whenua for this area based on the information available from Te Puni Kōkiri Ministry of Māori Development. The subject site is also located within the areas of interest for the Te Tiriti settlements for both iwi – Rangitāne Tū Mai Rā Trust and Ngāti Kahungunu ki Wairarapa Tāmaki-nui-a-Rua Settlement Trust. There are no identified sites of cultural significance for either iwi identified at either a district or regional council level for this site associated with either of these iwi.

7.1.2 Prior to lodgement, there have been a number of discussions with both iwi regarding this proposal, and information regarding the proposal has been shared with representatives from

each iwi. Consultation with the two post-Treaty settlement groups has been less consistent, for a number of reasons. At the time of lodgement, consultation with both iwi and post-Treaty settlement groups has not progressed beyond that initial consultation phase. No comment indicating that there is any concern regarding this proposal has been received from either iwi of post-Treaty settlement group, as noted within Appendix 4.

7.1.3 The Applicant acknowledges that this consultation process, and the associated consideration of all cultural effects from the proposal, are an ongoing process. Due to the proposed duration of the development, the Applicant is progressing with this consultation and considers maintaining a collaborative relationship with both iwi a fundamental part of this proposal.

7.1.4 With regards to providing a consideration of the cultural effects of the proposal in relation to the process of this application, it is noted that neither iwi has any form of Iwi Management Plan or Environmental Management Plan to provide policy or guidance on their environmental priorities and aspirations. In the absence of guidance from such documents, the following are noted in relation to common environmental priorities and aspirations identified in such documents:

- The proposal's effects on the land, air, and water during construction of the development are to be managed through the implementation of erosion and sediment control measures and through adherence with all actions to be outlined within a pending RAP in relation to the contaminated land within the site. This will reduce the potential effects arising from potential contamination on land and water resources. and will help to protect the life-supporting capacity of these resources for future generations.
- Once operational, the proposal seeks to maintain these less than minor effects on land, air and water resources. On land, this will be managed through no further disturbance of any soil across the site as a result of normal operations. Should soil need to be disturbed in order to undertake maintenance of the development, this will be undertaken in accordance with the mitigation measures outlined for the construction phase.
- Further, the proposal does not include any discharges of contaminants to land from either stormwater or other sources. The site has limited sources of stormwater, which are all associated with the access tracks, the area surrounding the BESS and switchyard facilities, and around the inverters that are located throughout the site. None of the stormwater generated from these hardstand surfaces within the development area are considered to

be high contaminant generating sources that would require treatment to remove any contaminants.

- The proposed establishment of switchyard and substation facilities within the site has the potential to result in identification of part of the development area as a HAIL. However, as part of the decommissioning of the development at the end of the operational period, it is proposed to test the area to determine if any contamination has occurred. Should any contamination be discovered, it will be remediated as necessary in accordance with recommendations from a suitably qualified and experienced contamination professional.
- The proposal does not propose to discharge any material, including stormwater, to any of the watercourses or waterbodies within the subject site. The establishment of three new culverts over the Taratahi water race / Waikoukou Stream within the site will be undertaken in accordance with suitable ecological controls, and the design of the culverts will incorporate suitable fish passage measures. The proposal will otherwise be setback from the watercourse, as well as the wetlands, as identified on the application plans (Appendix 3).
- The only aspect of the proposal that may result in discharges to air, is dust associated with the construction phase and vehicle movements on the hardstand areas. The hardstand areas will be formed to a compacted gravel standard, and, once the development is operational, there will be only intermittent use of these areas, for security and maintenance purposes.
- It is considered that the above potential impacts on land, air, and water resources during both the construction and operational phases of the proposal and associated mitigation measures will ensure that the mauri / life supporting capacity of these resources is protected for future generations.

7.1.5 It is considered that, overall, the only parties who can fully provide an assessment of the cultural effects of the proposal are Rangitāne o Wairarapa, Ngāti Kahungunu ki Wairarapa, Rangitāne Tū Mai Rā Trust, and Ngāti Kahungunu ki Wairarapa Tāmaki-nui-a-Rua Settlement Trust. The Applicant will provide such assessments to Council as they become available.

### 7.2 Historic Heritage Effects

7.2.1 As the proposal involves disturbance of soil in parts of the site, as well as erection of a number of different structures across the development area, there is a potential for it to affect any

historic heritage features that may be located within the site. In this instance, the subject site is not identified as including any recorded historic heritage features (buildings, areas, or sites) or archaeological sites. Further, there are no recorded such historic heritage or archaeological sites located within close proximity to the subject site.

7.2.2 Given that there are no recorded historic heritage or archaeological sites within or adjacent to the site, no specific heritage approvals are required. Nor are any specific historic heritage or archaeological management plans required to be prepared for managing the proposal. The proposal does include adherence to all accidental discovery protocol for discovery of unrecorded archaeological sites, as required under the Heritage New Zealand Pouhere Taonga Act regulations and in accordance with the New Zealand Archaeological Association's best practice guidance.

7.2.3 As there are no known historic heritage features or archaeological sites recorded within the site, and the proposal will be undertaken in accordance with accidental discovery protocol, it is considered that the proposal will result in negligible historic heritage effects.

### 7.3 Landscape, Visual Amenity, and Rural Character

7.3.1 The proposal does represent a change to the visual appearance of the subject site, given that it will introduce an agrivoltaic development to a site that has in recent times been utilised solely for agricultural purposes. As a result of this, a Landscape Assessment for the proposal has been undertaken by Mansergh Graham Landscape Architects (Appendix 7). The following assessment of landscape and visual amenity effects summarises the findings of this Assessment by Mansergh Graham Landscape Architects.

7.3.2 There will be minimal soil disturbance to the site, with the tracking tables being pole driven into place, and limited areas of hardstand being established. Therefore, existing water courses within the site (channelised) will not be altered. The natural wetland areas identified within the site are proposed to be excluded from the development area. These wetlands will be fenced off, with the proposed development setback 10m from these wetland areas. Overall, the proposed development will have no effect outside of the site and very low adverse effect with regards to the remnant natural character values of the wetlands, the Taratahi water race / Waikoukou Stream, and their margins within the site.

7.3.3 The character of the surrounding landscape is predominantly rural with an influence from the utility and function of the electrical infrastructure network and the presence of the existing

substation in the vicinity. The addition of an agrivoltaic development will shift the balance towards a landscape with a stronger emphasis on electrical generation. However, the site will still retain its rural essence, due to the retention of agricultural land use.

7.3.4 The location of the proposal adjacent to the existing industrial zone (located on the northern side of SH2) and the existing substation will allow it to integrate successfully with the existing surrounding land use patterns and will reinforce and consolidate the existing compact form of Waingawa industrial area. The proposed location of the agrivoltaic development adjacent to the existing Waingawa industrial zone will serve to mitigate broader effects on rural character. It will consolidate growth alongside an already established area, ensuring that other rural regions remain undisturbed. While acknowledging that the character of the site will transform, it is important to note that this is not indicative of rural sprawl.

7.3.5 Due primarily to the relative scale of the development in relation to the wider context of the surrounding rural environment combined with the limited number of locations from where the full extent of the change will be experienced, the adverse effects of the proposal on amenity values associated with the wider existing landscape character will be low-moderate.

7.3.6 The site is not identified as being located within or near to any Outstanding Natural Features of Landscapes ("ONFL"), Significant Natural Areas ("SNA"), Significant Amenity Landscapes ("SAL") or areas of High or Very High Natural character ("HNC"/"VHNC"). The closest Outstanding Landscapes (OL) are the Tararua Forest Park (approximately 12km to the north of the site) and the Maungaraki Ridge (approximately 17km to the southeast of the site). The closest SAL is the Maungaraki Range. The closest SNAs are the Waingawa wetland and the Tararua Range (both of which are to the north), the Tenair wetland (to the southeast) and the Lowes Bush wetland, to the southwest. The features will not be physically affected by the proposed agrivoltaic development.

7.3.7 Due to a combination of existing vegetation within and surrounding the site, intervening topography, and the development within the Industrial Zone to the north, there are relatively few locations surrounding the site, where direct views of the agrivoltaic development site can be obtained.

7.3.8 When viewing the site from State Highway 2 (SH2), the rural landscape is characterized by flat, low-lying terrain typical of the Masterton Basin and the Waingawa River valley, featuring open pasture, shelter rows, hedgerows, clusters of specimen trees, remnant wetland bush stands,

transmission lines, and post and wire fencing. The Maungaraki Range serves as a backdrop to the site when viewed from this public area.

7.3.9 Existing visual amenity values are derived from fleeting views (between gaps in vegetation) across the rural landscape to the Maungaraki Range in the distance to the south. Because these viewer locations are at a similar elevation to the proposed development site, most of the development will be out of sight. Screening from the existing shelter row/ hedge planting along this stretch of SH2, the large Ballance Agri-Nutrients store and rural planting patterns within the surrounding landscape will further restrict views of the proposed agrivoltaic development from this public area.

7.3.10 While a small part of the proposed development will be able to be seen from along the state highway, it will not be prominent and will be experienced within the context of the visually complex surrounding landscape patterns. As it is not possible to stop easily along this stretch of SH2 due to the intensive highway infrastructure and the speed environment, the visual effects from this public area are assessed as transitory, with the viewing audience likely to be less sensitive to any change in the characteristics of the site.

7.3.11 The proposed development will also be visible for motorists and residents along Cornwall Road and Hughes Line, to the east, southeast, and south of the site. These roads afford views of the flat low-lying topography of the Masterton Basin and alluvial plains associated with the Waingawa River. The landscape features that characterise the surrounding landscape include open pasture, transmission lines and pylons, agricultural features and vegetation within the site, and occasional stands of native bush. The substation at the corner of Cornwall Road and Hughes Line and an agricultural contractor's buildings break the skyline ridge and form focal points in the views from Cornwall Road and Hughes Line. The Tararua Range Forest Park provides a dramatic backdrop to the north and northwest, contributing to the existing visual amenity values from these roads.

7.3.12 The absence of planting along the eastern and southern boundaries of the site will allow clear views of the proposed BESS, substation, switchyard, solar PV tables, and perimeter track. The BESS units, large metal containers with exterior venting fans and ventilation, will closely resemble shipping containers and will be arranged in blocks of parallel rows, aligned with the road. At the end of each row of BESS units an inverter unit will be visible, housed in a small (by comparison) electrical cabinet.

7.3.13 The PV table structures will allow some views through and beneath the pasture within the site and continued grazing. In comparison, the BESS and substation area will appear more built-up (taller, larger structures on a large gravel pad) and more industrial than the photovoltaic panels, resulting in a slightly greater effect on landscape character and associated visual amenity, particularly when viewed from Cornwall Road. The BESS, substation, switchyard, and associated buildings obstruct immediate views to the west.

7.3.14 Due to the relative elevation of the viewer on Hughes Line (being at a similar elevation to the site), most of the development will be screened behind the PV tables in the foreground, with opportunities to look further into the site limited to along the rows between the PV tables. The closest PV tables will obscure the pastoral foothills of the Tararua Ranges. The main spine of the ranges and skyline will remain visible above the development.

7.3.15 Overall, existing landscape character and visual amenity values will change more noticeably from Cornwall Road due to the proximity of the BESS and substation area. However, these effects will be transitory, as viewers (motorists, pedestrians etc) will have passed other industrial and agricultural features before encountering the agrivoltaic development, reducing adverse effects. Views for motorists from Cornwall Road and Hughes Line are at higher speeds and a more oblique angle, reducing viewer sensitivity to change. At the intersection of Cornwall Road and Hughes Line, the agrivoltaic development becomes slightly more visually prominent as motorists slow down, but adverse effects are still fleeting.

7.3.16 Screen planting is required to mitigate the effects associated with the more visually prominent BESS / substation development on motorists of Cornwall Road. The proposed mitigation planting along Cornwall Road will screen views of the proposed development from Cornwall Road, except for the taller components of the BESS (the substation switchyard), which will remain visible. The proposed planting will create a more highly contained and compartmentalised character along these roads, and it will reduce the effect of the development on the existing rural outlook. Once the mitigation planting becomes established adverse effects from the public locations along the road will reduce to very low and very low to low from these locations.

7.3.17 Residents and road users along Perrys and East Taratahi Roads, to the south and southwest of the application site respectively, are elevated from the site. From these locations, more extensive views are afforded over the site due to the slight elevation. Visual amenity values are derived from views across the rural landscape towards the dramatic, rugged peaks of the

Tararua Range Forest Park in the backdrop which provides the focus of these vistas, drawing attention to the skyline.

7.3.18 Due to elevation enabling overlooking, the proposed development (including parts of the internal access roads, and internal equipment (i.e. inverters)) may be visible from these locations. However, the extensive intervening vegetation, and dwellings/ farm buildings within the surrounding rural landscape will restrict views of the proposal to relatively narrow viewshafts from these locations. In addition, views of the site from these locations will be more difficult to discern due to the separation distance (approximately 750m – 1.5km). As such, the adverse effects on existing rural character and visual amenity values from these locations will likely be very low. Mitigation planting is therefore not required to mitigate the adverse effects on motorists from these viewer locations.

7.3.19 Overall, it is considered that the proposal, including the proposed mitigation measures, will result in landscape and rural character effects that are, no more than minor.

### 7.4 Glint and Glare Effects

7.4.1 As the proposal seeks to establish a number of PV panels, which are formed of glass, there is a potential for glint (the fleeting flash seen from fast-moving receivers) and glare (the more enduring brightness seen from a slow-moving or static receiver) effects. The Landscape Assessment (Appendix 7) includes an assessment of the potential glint and glare effects for adjacent properties and users of the adjacent road network. The following section summarises the findings of the Landscape Assessment.

7.4.2 The proposed photovoltaic panels are designed to maximise the amount of light that is received by the photovoltaic cells within the panel. The use of an anti-reflective coating means that any reflected light will be diffuse, rather than specular, reducing the effects of any glare that occurs on the receiver, with approximately only 4% of the sun's rays reflected off the surface of the panel.

7.4.3 The analysis indicates that glare will not be experienced at any of the fixed observer locations. Without mitigation, up to 6 minutes of yellow glare per annum may be experienced from along a short section of Hughes Line in late April and mid-August. No other roads or the railway line will be affected. Through communication with the manufacturer of the PV tracking tables, it has been confirmed that the software for these mechanisms can be set to avoid the angle of the PV modules for the affected period of the day, each affected day. Therefore, it is proposed

to mitigate the glare through altering the angles of the PV tables during the offending time periods through programming of the tracking software.

7.4.4 Additional glint and glare modelling was undertaken to analyse the potential for glint and glare effects on the approach paths for the nearby Hood Aerodrome (Appendix 8). This analysis did find that the PV modules in the south-eastern section of the proposed development would result in glint and glare effects on planes utilising Approach Path 6 for a limited period of time, approximately 55 minutes, each day. Applying the same mitigation measure of manipulating the PV tracking table software to avoid the offending angles at the appropriate time each day is sufficient to ensure that the glint and glare effect on passing planes is within the acceptable levels under the modelling, which is based on American Aviation standards (as New Zealand's Civil Aviation Authority currently doesn't have similar standards in place).

7.4.5 Overall, through application of the proposed mitigation measures to manipulate the tracking of the panels to avoid specific positions, it is considered that the proposal will result in less than minor glint and glare effects.

**7.5 Reverse Sensitivity Effects**

7.5.1 Reverse sensitivity is the potential for the introduction of a new activity to an environment to be affected by existing, lawfully established activities within the receiving environment. If not properly considered or managed, this reverse sensitivity can impact on the operation of those existing activities.

7.5.2 With regards to agrivoltaic developments, there is limited potential for reverse sensitivity to occur, with the greatest risk being activities that would shade the PV modules access to sunlight, and activities that would generate dust which could then accumulate on the modules, thus impacting on their efficiency to generate solar energy.

7.5.3 In this instance, the proposal is setback from all site boundaries by at least 10m, which mitigates the potential for adjacent properties to be developed in a manner that would screen sunlight access to the proposed PV modules. For the northern, eastern, and southern site boundaries, this is further mitigated by the additional separation from adjacent properties by the width of the roads along the boundaries (SH2, Cornwall Road, and Hughes Line, respectively).

7.5.4 We then turn our minds to the potential for existing activities within the receiving environment to generate dust that could accumulate on the PV modules. It is considered that the regular

maintenance regime for the development will ensure that this is not a source of reverse sensitivity for this proposal.

7.5.5 Overall, it is considered that the proposed agrivoltaic development will result in less than minor, at most, reverse sensitivity effects.

### 7.6 Land Use Capability Effects

7.6.1 Part of the subject site is identified as highly productive land. As such, there is potential for the proposal to adversely affect the productive capacity of the land. In relation to this effect, AgFirst has prepared an Assessment Against the NPS-HPL (Productive Capacity Assessment, PCA) (Appendix 9), which is summarised below.

7.6.2 The proposal will not negatively impact the land's soil type or properties. The PCA indicates there will be improvements to soil properties of the land due to reduced soil compaction by removing cattle from the site, and a reduction in nutrient leaching by grazing sheep as opposed to cattle.

7.6.3 Throughout the duration of the proposal, there will be some reduction in the ability to change land use. For example, cattle farming or maize cropping will not be possible throughout the duration of the panels being in place. The proposal will enable a dual land use opportunity, which could also be expanded to other applications such as beekeeping.

7.6.4 Compared to the current use of the subject site, the proposed development will generate some degree of temporary shading, which has been assumed to have some impact on the amount of solar radiation on pasture and thus a reduction in pasture production. However, the shading offered will also increase moisture retention and provision of shade and shelter for stock (sheep). This will help to offset this reduction in pasture growth.

7.6.5 Once the proposed development has been decommissioned at the end of the operational period, and the land reinstated and remediated, there will be no ongoing or residual impact on the productive capacity of the land with the ability to utilise the land to full productivity and versatility.

7.6.6 Overall, it is considered that the proposed agrivoltaic development will have a less than minor, effect on the productive capacity of the site.

### 7.7 Acoustic Effects

7.7.1 As agrivoltaic developments rely on sunlight for renewable energy generation of glass panels,

it is considered to be one of the quietest forms of renewable energy generation available. However, there are a number of components, namely the BESS units, inverters, switchyard, and the substation, which do generate noise. As such, an Acoustic Assessment has been prepared by Styles Group (Appendix 10). This Assessment is summarised below.

7.7.2 The BESS area has been located to achieve ample separation distances from existing dwellings. The acoustic modelling undertaken by Styles Group demonstrates that the acoustic emissions from the proposed development will readily comply with the ODP noise limits at all existing notional boundaries.

7.7.3 For the majority of time, the noise from the operation of the solar farm will not be audible at all existing notional boundaries. There may be occasions when electro-mechanical plant noise will be audible. These occasions are likely to be when meteorological conditions are calm, and when power generation is at or near peak in sunny conditions, or the BESS is discharging to the grid at a high rate.

7.7.4 The acoustic modelling demonstrates that the noise levels received at the sites in the Industrial Zone will be low. The noise levels from the Site are unlikely to be audible above noise from SH2 during the daytime.

7.7.5 The acoustic modelling did not identify any need to establish acoustic mitigation as part of the proposal.

7.7.6 Overall, it is considered that the proposal will result in less than minor acoustic effects.

**7.8 Construction Effects**

7.8.1 The construction of the proposed development has the potential to generate a number of effects that are distinctly different to those anticipated while the proposal is operational. These include noise, transport, and ecological effects. The following summarises the assessments relevant to each of these matters.

7.8.2 The construction noise levels are only expected to exceed the noise limits when piling activities are undertaken within 45m of the dwellings. The construction noise levels are expected to comply with the noise limits at other occupied buildings and dwellings. The acoustic assessment did not identify any potentially affected parties relating to vibration effects given the proposed construction activities and separation distances to the receivers (including the closest receivers).

7.8.3 During the peak construction period, staff vehicle arrivals and departures in the peak morning and evening hours would be expected along Cornwall Road, through the SH2/Cornwall Road roundabout, and along the SH2 route to either the north (to/from Masterton) or to the south (Carterton or further south). While this additional traffic movement total would be notable in terms of comparison with the current modest hourly volumes carried by Cornwall Road, the additional traffic volumes remain well within the available traffic carrying capacity of such a rural, two-way, two-lane sealed road.

7.8.4 In terms of the connection from Cornwall Road onto SH2, the recently completed formation of a high-standard, single circulating roundabout is anticipated to be readily capable of accommodating these additional modest volumes without adverse effect on either safety or capacity of the intersection. Inspection of the Cornwall Road route and the SH2/Cornwall roundabout confirms there is suitable and safe capacity for turns into and out of Cornwall Road via the roundabout to ensure the on-going safety of this junction without adverse effect on other use of the SH2 corridor. Once vehicles from the site reach SH2, with its much higher design standard and carrying capacity, the generated volumes will have an almost negligible effect.

7.8.5 The number and intensity of additional trucks (no more than a 10 per hour at peak construction times) on the surrounding road network during the construction period are considered negligible in terms of network capacity especially along the SH2 route to the north and south of the Cornwall Road roundabout.

7.8.6 Physical works associated with installing the PV tracking tables and access tracks has the potential to result in fine sediment mobilisation and runoff into the Taratahi water race / Waikoukou Stream and wetlands. All works will be carried out in accordance with an Erosion and Sediment Control Plan (ESCP) prepared in accordance with best practice guidelines. With the implementation of the sediment controls and treatment of stormwater prior to discharge, the potential effects of earthworks on water quality in the receiving environment during construction will be avoided.

7.8.7 Stream works associated with the construction of culverts has the potential to result in the temporary loss of aquatic habitat and injury/mortality to fish and, if incorrectly installed, prevent fish passage. Potential effects on native fish will be managed by preparing and implementing a Native Freshwater Fish Relocation Plan (NFFRP) prior to any stream works for

the construction of culverts. The plan will be prepared by a suitably qualified and experienced ecologist.

7.8.8 Overall, taking into consideration the potential noise, transport, and ecological effects associated with the construction phase of the proposal, as well as the proposed mitigation measures, it is considered that this phase will result in less than minor effects on the environment.

### 7.9 Transportation Effects

7.9.1 Once operational, the site will have a permanent access onto the public road network. Staff will regularly access the site for security and maintenance purposes. As such, consideration must be given to the potential transportation effects of the proposal. A Transportation Assessment is included as Appendix 11, and the below provides a summary of this assessment.

7.9.2 It has been assessed that the site will generate no more than six individual traffic movements to or from the site on any given day once operational. Therefore, there would be no discernible external effect on the effectiveness or efficiency of the surrounding road network.

7.9.3 The location of the permanent site access, roughly halfway along the site's frontage onto Cornwall Road, is located at least 200m from the entrance to the nearby Masterton substation and the agricultural contractor's yard that is sited immediately behind the substation. This avoids the potential for there to be conflict between vehicles entering and exiting these commercial premises.

7.9.4 The permanent site entrance will also have at least 750m clear sight lines in both directions to the nearest road intersections, between Cornwall Road and SH2 to the north, and Cornwall Road and Hughes Line to the south. This will ensure that all vehicles entering and exiting the site can clearly see all coming traffic to ensure safe ingress and egress from the site.

7.9.5 Overall, the proposal is anticipated to result in less than minor transportation effects.

### 7.10 Contamination Effects

7.10.1 The subject site is identified on both the District and Regional Council maps as being previously subjected to an activity on the HAIL, in particular HAIL activities A.16, A.10, A.17, G.5 and E.1. This is confirmed through a review of the GWRC's Selected Land Use Register record for the subject site. These are associated with the use of the western side of the site for effluent disposal from the former AFFCO fellmongery that was located on the opposite side of SH2 from

the subject site, as noted within Subsection 4.8 above. Therefore, a Preliminary Site Investigation (PSI) was undertaken (Appendix 15), which is summarised below.

7.10.2 This was confirmed by the PSI, which identified the following contaminants likely to be found during soil testing to be undertaken as part of the pending DSI:

- From fellmongery activity:
  - Metals;
  - Hydrocarbons;
  - Sulfides;
  - Acids and bleaching agents;
  - Cyanides;
  - Formaldehyde;
  - Pentachlorophenol;
  - Dioxins;
  - Nitrates; and
- From existing structures:
  - Asbestos; and
- From potential horticultural land use:
  - Organochlorine pesticides.

7.10.3 A DSI will be completed prior to construction. This was agreed to in-principal by the GWRC as part of the pre-application initial discussion regarding the proposal (Appendix 6). The DSI may find that remediation of the subject site is required as part of the proposal. Therefore, it is anticipated that conditions of consent requiring the relevant testing and reporting to District and Regional Councils associated with the DSI, and potentially regarding the preparation and reporting for a Remediation Action Plan (RAP), will be imposed.

7.10.4 This is an appropriate strategy to address the contamination in this instance, based on the scale and nature of the soil disturbance proposed, and the nature of the proposed development. The earthworks proposed to enable the development will be superficial nature, with only surface scraping to be undertaken over a small percentage of the subject site. This limits the pathway links between the contaminants and sensitive receptors.

7.10.5 The proposed development, once established, will offer limited opportunities for sensitive receptors to be put at risk of impact from the contaminants. There will be few staff working

on-site, and there will be little need to undertake soil disturbing activities as part of their daily operations. Further, the proposal does not include any at-risk receptors, including horticultural activities for human consumption, residential occupation, or operation of childcare facilities.

7.10.6 Further site investigations will be completed prior to the commencement of construction to identify contaminants present on site. Once contaminants are identified, appropriate management plans will be developed for the management of soil disturbance and disposal in accordance with industry guidance. On this basis, contaminated soils within the subject site can be managed to the extent where the actual and potential effects will be no more than minor.

### 7.11 Ecological Effects

7.11.1 As has been mentioned previously within this report, the subject site includes a number of ecological features, including the Taratahi water race / Waikoukou Stream (which is considered a river under relevant planning provisions), several natural inland wetlands, several areas of potential herpetofauna habitat, and a large number of trees that could be roosting sites for indigenous long-tailed bats. The Ecological Assessment (Appendix 12) assesses each of these ecological features, and the potential for the proposal to adversely affect them. The following provides a summary of the Ecological Assessment.

#### 7.11.a Vegetation

7.11.2 Construction of the proposed development will result in the removal of scattered exotic trees. In addition, existing mature vegetation comprising shelterbelts / hedgerows around particularly the northern site perimeter would be trimmed to a height of approximately 2m. The willow woodlot located in the southern portion of the site will be excluded from the proposed development.

7.11.3 Vegetation within the site was assessed as having low ecological value in and of itself, but as being of very high ecological value in terms of its potential to provide habitat for indigenous species, particularly herpetofauna and long-tailed bats, and, to a lesser extent, avifauna.

#### 7.11.b Avifauna

7.11.4 The project will result in the removal and trimming of a number of exotic trees that have potential to provide nesting habitat for common native and exotic bird species typically found in the rural environment. While the majority of birds within the site are expected to be common species of no conservation interest, vegetation clearance or trimming (particularly of

mature trees) can adversely affect native species when completed over the breeding season (September to February, inclusive).

7.11.5 EcoLogical Solutions recommends that vegetation clearance occur within autumn to winter so as to not adversely affect the breeding season. If vegetation clearance occurs during the breeding season, other mitigation techniques such as avoiding trees containing nests until chicks have fledged should be implemented to minimise effects. Implementation of either of these mitigation measures will result in effects on avifauna that are assessed as low.

**7.11.c Herpetefauna**

7.11.6 Part of the proposed access track in the northern portion of the development area intersects with potentially suitable lizard habitat. Utilising an existing farm track through this area of habitat would avoid effects on the habitat or individual lizards.

7.11.7 With regards to PV module installation, the stonefield in the northern portion of the development area and the large boulder pile in the southwestern portion could both be affected. The design of the proposal does not currently include detail regarding specific pile locations for the solar platforms. EcoLogical Solutions recommends the avoidance of these areas of habitat is to avoid effects on the habitat or individual lizards. Doing so would also avoid any adverse impacts of excessively shading areas of potentially suitable lizard habitat.

7.11.8 Overall, the construction and operation of the proposed development is determined likely to have a low magnitude of effect and a low overall effect on herpetofauna and potentially suitable habitat. Beyond recommending avoidance of these areas as outlined above, mitigation measures are not proposed.

**7.11.d Long-Tailed Bats**

7.11.9 Long-tailed bats are edge foragers, typically feeding along the edges and above canopies of trees rather than within a forest's interior. They also use vegetation for commuting between roosting and foraging sites. This increases the potential that loss of vegetation along these routes to fragment and isolate bat communities.

7.11.10 Because roost trees are likely uncommon and utilised to fulfil specialised requirements, felling such trees (even when bats are absent) could have a disproportionately adverse effect on the local bat population. If the number of suitable roosts and their surrounding habitat is reduced, bats are forced to use roosts that are less optimal for their needs. This means they will use

more energy to survive, adversely impacting on survival and reproductive rates. In this way, roost removal creates a higher risk of local extinction.

7.11.11 Vegetation clearance has the potential to cause injury, potentially even mortality to long-tailed bats if they are roosting in a tree when the clearance or trimming occurs. Due to their threatened – nationally critical status, the presence of long-tailed bats at the site would elevate the value of the bat habitats there to very high value. Proximity to other locations of anticipated and/or known bat habitat mean it is likely that bats may use this area but is currently unknown as site-specific bat monitoring has not yet been completed.

7.11.12 Prior to the commencement of works, initial bat monitoring is proposed to be completed to determine if long-tailed bats are present at the Site. The outcome of the monitoring will determine mitigation or avoidance required to protect the habitat. Given the proximity of the subject site to known areas of bat habitation, it is considered likely by EcoLogical Solutions that bats will be discovered.

7.11.13 A Bat Management Plan ('BMP') prepared by a suitably qualified and experienced ecologist is required prior to undertaking works on-site due to the above high likelihood of discovering and removing bat roosting sites as part of the proposal. The BMP will also likely require a Wildlife Act Authority from the DoC. The post mitigation effect is somewhat uncertain without knowledge regarding whether or not any active bat roosts will be affected by the proposed activity. As such, a conservative level of effect has been applied (i.e., moderate).

7.11.14 A BMP will outline bat management measures, including restricting the timing of vegetation clearance to warmer months when bats can be expected to be active, providing for additional survey to reduce the risk of bat presence immediately prior to clearance, and contingency actions required in the event that bats are detected.

**7.11.e Wetlands**

7.11.15 Wetlands W2 and W3 were assessed as natural inland wetlands. Encroachment of the proposed works (e.g., solar panels and vehicle tracks) within areas of these wetlands include:

- W2 (total area approximately 1,532m$^2$):
    - Shading (area affected approximately 130m$^2$ / 8.49% of total wetland W2 area); and
    - Vehicle track (area affected approximately 275m$^2$/ 18% of total wetland W2 area);
    - Resulting in a total area affected of approximately 405$^{m2}$ / 26.4% of total wetland W2 area.

- It is noted that only a portion of the vehicle track width (approximately 4m of 10m total width) is earmarked for development of track, the balance is for security fencing and, for some of the length around the wetland, mitigation planting.

- W3 (collectively, a total area of approximately 3,067m$^2$):
  - A small portion outside woodlot for vehicle track (area affected approximately 27m$^2$ / 0.8% of total wetland W3 area).

7.11.16 Although the wetland values are very low, effects due to the development on these wetlands, particularly any loss of wetland extent or ecological values, including complete or partial drying need to be avoided. It is considered that the proposal will not encroach into these wetlands, nor alter the drainage patterns or volumes into these wetlands.

7.11.17 Overall, it is considered that, through implementation of the recommendations from EcoLogical Solutions outlined above and included within the Proposed Conditions of Consent (Appendix 21), the ecological effects associated with this proposal will be no more than minor.

### 7.12 Positive Effects

7.12.1 It is considered that the proposal will result in the following positive effects:

- It will provide a renewable energy source, assisting New Zealand with achieving its climate change emissions targets under national legislation and under relevant international agreements. This will include generating enough electricity to supply approximately 35,000 homes per year and saving approximately 130,000 tonnes of $CO_2$ per year through providing electricity from a renewable source as opposed to fossil fuels.
- It will provide employment opportunities for the local community during the construction phase, as well as, to a lesser scale, during the operational phase of the project.
- It will enable productive use of much of the land occupied by the proposal, through pastoral grazing of sheep, which in turn will provide additional positive economic outcomes for the landowner and contribute towards the viability of the local rural economy; and
- The inclusion of the BESS component of the proposal will support the disconnect between peak renewable energy generation with peak demand on the electricity network.

### 7.13 Effects Summary

7.13.1 As outlined above, it is considered that the proposal will result in historic heritage effects that are anticipated to be negligible; glint and glare, reverse sensitivity, productive capacity, acoustic, construction, transportation, and contamination effects that are less than minor; and landscape and ecological effects that are no more than minor. While the scale of cultural effects is still being determined by the relevant iwi and post-Treaty settlement groups, none of them have identified any matters of concern that would indicate that cultural effects are more than minor. Overall, it is considered that the proposal will result in no more than minor effects.

## 8.0 SECTIONS 95-95E – NOTIFICATION STATUS OF APPLICATION

8.0.1 Sections 95 to 95E of the RMA pertain to the notification status of the application by each of the relevant authorities. This is based on the scale and nature of the effects on the environment, on relevant statutory parties and customary rights holders, and, following identification of potentially affected persons, on affected persons. The following subsections provide an assessment of this proposal regarding the appropriate process for this application to be undertaken by CartertonDistrict and Greater Wellington Regional Councils.

### 8.1 Section 95A – Public Notification of Consent Applications

8.1.1 Assessment of the proposal against the following four steps must be followed to determine if an application must be publicly notified:

#### 8.1.a Step 1 – Mandatory Public Notification in Certain Circumstances

8.1.2 The Applicant does not request that this application be publicly notified. As the Applicant has not requested that the application be publicly notified, consideration of the proposal against the remaining three steps of S95A for public notification, as well as the four steps of S95B for limited notification, must be considered.

#### 8.1.b Step 2 – Public Notification Precluded in Certain Circumstances

8.1.3 The activities for which this application is for are not subject to any rule or environmental standard that precludes public notification. The proposal is not for a controlled activity only, nor a boundary activity only. Therefore, in this instance, public notification of this application is not precluded, and consideration of the application under Step 3 must be undertaken.

#### 8.1.c Step 3 – Public Notification Required in Certain Circumstances

8.1.4 The activities for which this application is for are not subject to any rule or environmental standard that requires public notification. As outlined above in Section 7.0 of this report, and summarised below, it is considered that this proposal will not have adverse effects on the environment that are more than minor, and therefore the application must be considered in relation to Step 4 below.

#### 8.1.d Step 4 – Public Notification in Special Circumstances

8.1.5 The proposal is not considered to be subject to special circumstances that warrant the application to be publicly notified. As outlined within this Report and the supporting

assessments (Appendices 7 to 14), the effects associated with the proposal are no more than minor beyond the extent of those properties immediately adjoining and adjacent to the site.

8.1.6 The proposal is consistent with the outcomes sought under all relevant local, regional, and national standards, objectives, and policies, and will assist with the country achieving its carbon emission reduction targets for managing climate change. Further, the proposed development is not sought to indefinitely occupy the subject site, with a 40-year lease period that includes construction and subsequent decommissioning of the agrivoltaic development.

8.1.7 Therefore, it is considered that this application should notbe subject to public notification.

### 8.2 Section 95B – Limited Notification of Consent Applications

8.2.1 Assessment of the proposal against the following four steps must be followed to determine if an application must be limited notified:

#### 8.2.a Step 1 – Mandatory Public Notification in Certain Circumstances

8.2.2 As outlined within the Tangata Whenua Consultation Summary (Appendix 4), there are not any customary rights groups identified as having the subject site within or near their rohe. The Tangata Whenua Consultation Summary identifies that there are two statutory acknowledgments on or immediately adjacent to the site. As such, there are affected groups or persons that must be notified under this Step, and consultation with the relevant groups for the two statutory acknowledgements has commenced, as outlined in the Tangata Whenua Consultation Summary.

#### 8.2.b Step 2 – Limited Notification Precluded in Certain Circumstances

8.2.3 The activities for which this application is for are not subject to any rule or environmental standard that precludes limited notification. The proposal is not for a controlled activity only. Therefore, in this instance, limited notification of this application is not precluded, and consideration of the application under Step 3 must be undertaken.

#### 8.2.c Step 3 – Certain Other Affected Persons

8.2.4 The proposal is not for a boundary activity, therefore that aspect of this Step is not relevant to this application. An assessment of potentially affected persons in accordance with Section 95E, below. It was found that the landowner of 3920 State Highway 2 is an affected person to the proposal. Written affected persons approval has not been obtained from this party, as outlined

in the Consultation Summary in Appendix 5. Therefore, we request that the application be limited notified to those affected persons from whom written approval has not been obtained.

8.2.5 It is noted that written approval has been obtained from ten other surrounding landowners and occupiers, as noted in the Consultation Summary and listed below:

- The landowner of 61 East Taratahi Road;
- The landowners of 558 Hughes Lines;
- The landowner of 24 Norfolk Road;
- The landowner of 11 Norfolk Road;
- The landowner of 45 Waingawa Road;
- One of the two lessees of 49 Waingawa Road;
- The landowner of 11 Norman Avenue and 1 Pakihi Road;
- The landowner of 7 Pakihi Road; and
- The landowner of 11 Pakihi Road.

**8.2.d Step 4 – Further Notification in Special Circumstances**

8.2.6 Consideration of the proposal against this step is not necessary, as limited notification of the proposal is being sought in relation to the landowner of 3920 State Highway 2.

**8.3 Section 95D – Determination of Scale of Effects**

8.3.1 As outlined above in Section 7.0, it is considered that, overall, the proposal will result in no more than minor adverse effects on the environment. That assessment disregarded any effects on persons who own or occupy the subject site and any adjacent land (as such effects are otherwise considered below under Section 95E). Effects on all persons who have provided written approval, as contained within Appendix 5, have also been disregarded for the purposes of this assessment.

8.3.2 The determination of scale of effects also needs to exclude any adverse effects associated with permitted activities under any rule of a relevant plan or a national environmental standard, i.e., the permitted baseline. For the purposes of determining what those effects that are to also be disregarded, the below permitted baseline assessment is provided.

**8.4 Section 95E – Affected Persons Assessment**

8.4.1 As part of the determination as to whether limited notification of the application is required,

an assessment must be undertaken as to whether there are any persons upon whom the proposal will be subject to minor or more than minor adverse effects from the proposal. As part of assessing the potential effects on adjacent landowners to determine if they are suitably affected by the proposal, the following matters must be disregarded:

- Any effects on a person that are permitted under a rule or national environmental standard;
- If the activity is a controlled or restricted discretionary activity, disregard any effects that aren't associated with the matters of control / discretion outlined under those rules or national environmental standards; and
- Disregard any statutory acknowledgement as outlined in Schedule 11 of the RMA.

8.4.2 With regards to the outlined matters of exclusion, it is noted that, from the permitted baseline assessment provided below, in relation to potentially affected persons, there is no permitted baseline relevant to this proposal.

8.4.3 The proposal does not require consent for a controlled or restricted discretionary activity, and therefore there are no matters to be disregarded relating to activity status for affected persons assessment applicable to this application.

8.4.4 Of the statutory acknowledgements outlined within Schedule 11 of the RMA, there are no listed statutory acknowledgements relevant to this site.

8.4.5 Taking into account the above matters to be disregarded for affected persons assessment for this proposal, the properties shown below in Table 5 and Figure 18 represent all properties adjoining and adjacent to the site that are considered in the following is an assessment of effects on potentially affected persons.

***Table 5:*** *Surrounding Properties to Subject Site Details*

| # | Address | RT Ref. | Legal Owners |
|---|---|---|---|
| 1 | 3920 SH2 | WNE4/576 | C H Emerson |
| 2 | 3831 SH2 | 1038832 | Lifestyle Developments Wellington Ltd |
| 3 | 61 East Taratahi Rd | WN202/236 | L J Christian; D J Laing; W J Potts |
| 4 | 271 Perrys Rd | WN47A/859 | R B Lowes; D B Lowes |
| 5 | | WN27D/66 | |
| 6 | 510 Hughes Line | 1092640 | Wainawa River Estates Ltd |
| 7 | | WN135/144 | |
| 8 | 532 Hughes Line | 370929 | E H Hendrikse; L M G Hendrikse |
| 9 | 542 Hughes Line | 370927 | N J Goodin; R B Terry |
| 10 | 558 Hughes Line | 370928 | C A Playford; M Playford |
| 11 | 580 Hughes Line | WN31C/731 | Wapanui Investments Ltd |
| 12 | 113 Cornwall Rd | WN42B/757 | Transpower NZ Ltd |

| | | | |
|---|---|---|---|
| 17 | 113 Cornwall Rd | WN34D/635 | |
| 13 | 573 Hughes Line | WN42B/756 | C J Duncan; K M Fraser |
| 14 | 577 Hughes Line | WN56B/58 | Gawith Trustees Ltd; E M Kendall; F A Kendall |
| 15 | 581 Hughes Line | WN56B/60 | A J Tulloch; M C Weeks |
| 16 | 109 Cornwall Rd | WN56B/59 | |
| 18 | 99 Cornwall Rd | WN42D/409 | J M Tulloch; A J Tulloch |
| 19 | 51 Cornwall Rd | 104927 | |
| 20 | 4022 SH2 | 104926 | Ballance Agri-Nutrients Ltd |
| 21 | 24 Norfolk Rd | WN41A/499 | Juken New Zealand Ltd |
| 22 | 11 Norfolk Rd | WN16D/1424 | Burling Transport Ltd |
| 23 | 3979 SH2 | WN202/47 | M W McEwen |
| 24 | N/A | WN118/2 | M F Hammond; Woodhouse Trustees Ltd |
| 25 | 45 Waingawa Rd | 1025407 | Storage 0800787822 Ltd |
| 26 | 49 Waingawa Rd | 1025406 | AKA Trustees Ltd; C J McAuley; D H McAuley |
| 27 | 11 Norman Ave | 133620 | Hedge Investments Ltd |
| 28 | 1 Pakihi Rd | 389287 | |
| 29 | 3 Pakihi Rd | 389288 | Oloski Ltd |
| 30 | 5 Pakihi Rd | 389289 | NF Investments Ltd |
| 31 | 7 Pakihi Rd | 389290 | Chunkys Contracting Ltd |
| 32 | 9 Pakihi Rd | 389291 | EF-P Holdings Ltd |
| 33 | 11A Pakihi Rd | 997902 | Arb Group Ltd. |
| 34 | 11 Pakihi Rd | 997901 | Wren & Dove Ltd |

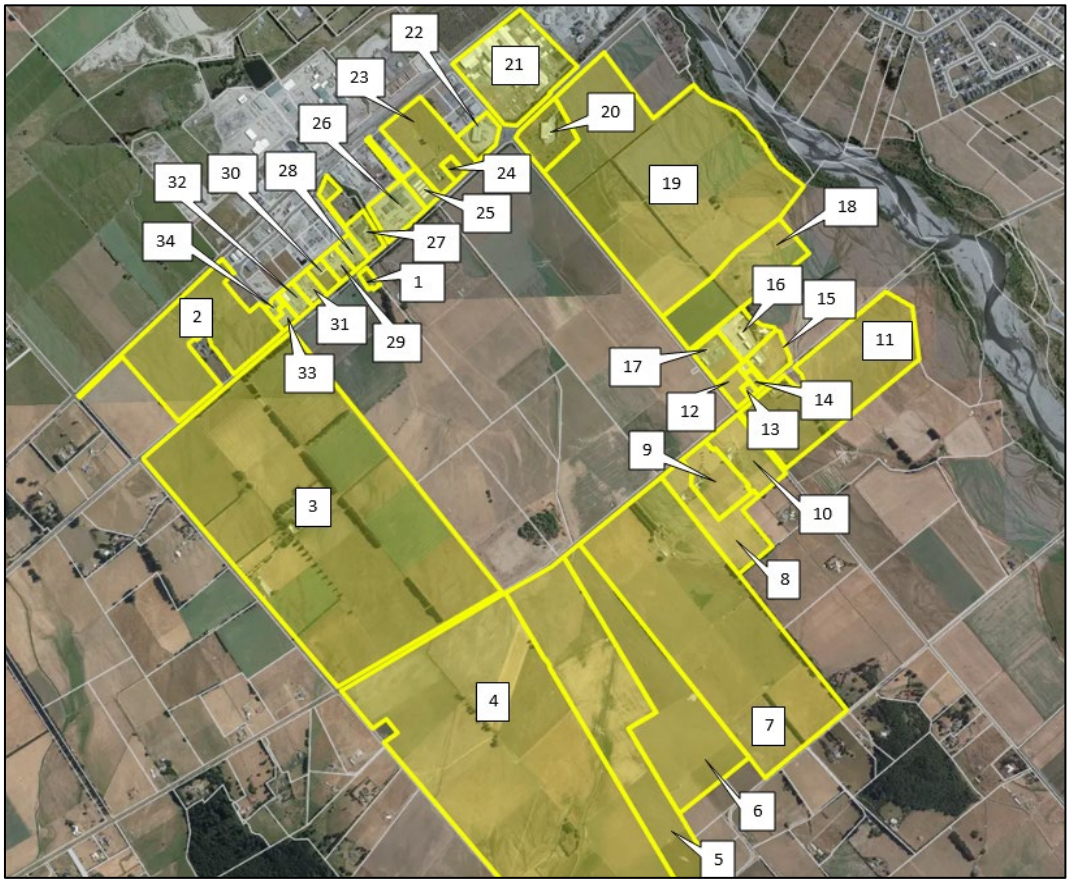


***Figure 18:*** *Surrounding properties (yellow lines) (annotated GRIP map, accessed 05/10/2023).*

**8.4.a Construction Effects**

8.4.6 Beyond the construction effects on the wider environment and public discussed above in Subsection 7.8, there is the potential for there to be differing scale and/or nature of such effects on those properties surrounding the subject site. These relate to the similar sources identified in that earlier assessment – acoustic, transportation, and sediment and erosion from earthworks.

***Acoustic Construction Effects***

8.4.7 With regards to acoustic effects, the Acoustic Assessment (Appendix 9) states that there is no requirement to consider acoustic effects on owners or occupiers of those properties located within the adjacent Industrial Zone. This means that there is no need to consider construction noise effects on any parties associated with properties numbered 2 and 21-34 from Table 2, above.

8.4.8 The Acoustic Assessment also notes that all dwellings greater than 45m from the development site will receive noise levels compliant with relevant construction noise standards under the District Plan. Therefore, it is considered that properties numbered 3-20 within Table 2 will achieve construction noise effects that are compliant with the maximum permitted noise emissions for construction activities under the ODP.

8.4.9 With regards to dwellings that are located within 45m of the proposed construction activities, there are two dwellings affected:

- 3920 SH2, which is identified as property number 2 within Table 2; and
- 3954A SH2, which is an existing dwelling within the subject site that is excluded from the development area.

8.4.10 With regards to 3920 SH2, written approval which includes noting that there will be temporary and intermittent exceedances of construction noise effects when works are in close proximity to the dwelling has not been provided by the landowner, who is also the only occupier, of this property. Styles Group have recommended that the Applicant prepare and implement a Construction Noise Management Plan (CNMP). The CNMP will be used to outline the mitigation methods that must be adopted when works are in proximity to this receiver to enable compliance with the construction noise standards. Mitigation methods may include use of alternative piling methods (i.e. auger, screw or bored piling), use of screening or completing the works when the building is not occupied. It is considered that this is an appropriate

measure to avoid and mitigate construction noise effects on this party. A condition to this effect is included within the Proposed Conditions of Consent (Appendix 21).

8.4.11 With regards to the dwelling located at 3954A SH2, the landowner (also the landowner of the subject site) has advised that this dwelling is currently vacant. Further, the landowner has provided a written approval regarding temporary and intermittent exceedances of construction noise effects when works are in close proximity to the dwelling. As affected party approval has been obtained from this landowner that clearly indicates the potential for this infringement, consideration of the effects associated with it on this party is not required to be undertaken.

***Transportation Construction Effects***

8.4.12 With regards to transportation effects associated with the construction phase of the proposal, it is noted within the Transportation Assessment (Appendix 11) that vehicle movements are anticipated to come from either Masterton or Carterton along SH2, onto Cornwall Road, and then into the site via the temporary site entrance. The temporary site entrance is proposed to be in the same location as the permanent site entrance once the development is operational.

8.4.13 As no vehicle movements are anticipated along East Taratahi Road or Hughes Line, the properties numbered 3-10 on Table 2 are not considered further with regards to construction transportation effects. Within SH2, that assessment considers that the construction traffic will not result in a discernible increase in vehicular traffic from that currently occurring. Therefore, it is considered that properties numbered 1, 2, and 20-34 on Table 2 will receive transportation construction effects that are negligible and are not considered further.

8.4.14 Landowners and occupiers of properties numbered 11-19 on Table 2 are likely to utilise Cornwall Road as part of their daily lives, and therefore may potentially be affected by construction vehicle movements for the proposal. Despite being a much smaller formed width and lower hierarchy than SH2, Transportation Assessment considers that Cornwall Road has ample capacity to accommodate the additional vehicle movements associated with the construction phase of the proposal. Therefore, it is considered that these parties will receive transportation construction effects that are less than minor. No parties are assessed as being adversely affected by transportation effects during the construction phase of the proposal.

***Earthworks Construction Effects***

8.4.15 With regards to effects associated with earthworks during the construction of the proposal,

the Engineering Report (Appendix 13) outlines ESC measure. Compliance with these ESC measures will reduce the potential impact on the environment through the mitigation of dust and sediment generated during earthwork sand the sediment, erosion, or dust effects on parties adjacent to the development area will be negligible.

***Construction Effects Overall***

8.4.16 Overall, it is considered that only the landowner and occupier of 3920 SH2 is anticipated to receive minor construction effects from the proposal and is therefore an affected party.

**8.4.b Landscape, Visual Amenity, Rural Character, and Glint and Glare Effects**

8.4.17 The landscape, visual amenity, rural character and glint and glare effects are assessed in the Landscape Assessment (Appendix 7) to be more acutely felt by those parties located surrounding the site than the wider public.

***Properties within the Waingawa Industrial Area***

8.4.18 The Landscape Assessment indicates properties located on the opposite side of SH2 will receive less than minor landscape, visual amenity, rural character, and glint and glare effects. This is due to the combination of the road width for SH2, existing screening, and industrial nature of those properties. Therefore, landscape, visual amenity, rural character, and glint and glare effects is not considered in greater detail for all parties associated with properties numbered 21-34 in Table 2, above.

***4022 State Highway 2***

8.4.19 With regards to 4022 SH2 (property numbered 20 on Table 2), it is noted that this site is currently utilised for a rural industrial activity, which is not sensitive to adverse landscape, visual amenity, or rural character effects.

***51 and 99 Cornwall Road***

8.4.20 Both 51 and 99 Cornwall Road (properties numbered 18-19 on Table 2) are currently rural properties with no existing dwellings on either property. As such, there are no sensitive receivers for the potential landscape, visual amenity, rural character, and glint and glare effects from the proposal. There is a potential for at least one dwelling to be constructed on each property under both the ODP and the PDP in the future, which would be sensitive to such effects.

8.4.21 Such future dwellings would have a direct view of the BESS and substation, making any adverse effects from the development on landscape and visual amenity more noticeable compared to existing homes to the southeast and south. There is potential for a moderate effect, depending on how close the future dwelling is to the BESS. However, mitigation planting is proposed between this part of the development and Cornwall Road. This mitigation planting would reduce these effects to a very low to low level, while preserving views of the Tararua Range. This would result in less than minor landscape, visual amenity, rural character, and glint and glare effects for all parties associated with these properties, including any future dwellings.

***573, 577 and 580 Hughes Line***

8.4.22 Site investigation and desktop analysis indicates that views of the development will be partially screened from the main living areas for the dwellings at 573 and 577 Cornwall Road (properties numbered 13 and 14, respectively, on Table 2) by surrounding planting and utility buildings.

8.4.23 From 573 Hughes Line, the existing shelter belts, a water tank, a utility shed, and a close-boarded post and rail fence located along the western property boundary will partially screen the application site from view. Where visible between these features, the site will be partially screened by, and seen within the context of the existing substation on Cornwall Road.

8.4.24 It is proposed to establish mitigation planting from just north of the BESS and substation area south to the intersection with Hughes Line, and from the intersection west along Hughes Line to roughly halfway along the site's frontage onto Hughes Line frontage. Mitigated, the PV tables will be substantially screened. Views of the upper parts of the Tararua Range will be maintained, aiding in maintaining existing visual amenity values experienced from this property. While this planting will result in the reduction of open spatial character observed within the vista, it will reduce the effect of the development on the existing rural outlook.

8.4.25 The proposal will reduce open spatial character within the site and may obscure parts of the base of the Tararua Range from view when the PV tables are at maximum tilt. This will adversely affect existing visual amenity values associated with the rural outlook and the backdrop of the ranges experienced from this property.

8.4.26 While a narrow view shaft towards the agrivoltaic development will be afforded from within the western part of the property at 580 Hughes Line (property numbered 11 on Table 2), views from the dwelling and the main outdoor living area will be substantially screened (minimising the likelihood of potential adverse effects).

8.4.27 Temporary adverse effects on landscape character and visual amenity values from the properties are likely to range between no effect to low to moderate effects. No effect is anticipated for 577 Hughes Line due to extensive intervening screen planting and buildings. Very low adverse effect for 580 Hughes Line is anticipated due to views of the proposal afforded from within western part of property, but that are not likely from dwelling or main outdoor living area. There are low-moderate adverse effects anticipated for 573 Hughes Line as a result of the narrow view shaft to the northwest afforded from the outdoor living court of this property. Temporary effects from 573 Hughes Line will be reduced to low with the establishment of the mitigation screen planting.

***510 to 558 Hughes Line***

8.4.28 The proposed agrivoltaic development will be experienced within views to the north and northwest, from these properties (properties numbered 7 to 10 on Table 2). Because the dwellings (and associated outdoor living areas) within these properties are oriented north/ northwest (towards the site), the proposed development is more likely to be experienced within these resident's main outlook.

8.4.29 There is a greater degree of intervening vegetation surrounding the properties at 558 and 510 Hughes Line when compared to 542 and 532 Hughes Line, which have limited intervening vegetation. The mature shelter row along the northern boundary of 558 Hughes Line will likely screen views of the proposal to the north (with only a narrow view shaft to the northwest likely seen).

8.4.30 The change that will be experienced from these properties will be similar to the public view described in Subsection 7.3, above. The difference is that views from these dwellings are setback from the road approximately 100-200m. As a result, the proposed development will be seen lower in the landscape and will be less visually prominent than when seen from the road. Due to the viewing angle and setback, more of the Tararua Range is likely visible form these dwellings than from the road.

8.4.31 While slightly less prominent due to setbacks from the road, the effects of the development on existing visual amenity values experienced by these residents will be higher than the public views. From these properties, the development will be experienced within a limited existing energy infrastructure context of the existing substation will be seen in the distance, partially screened by the proposed PV tables and intervening vegetation in the foreground. The

proposal will therefore be seen to introduce a new development type (agrivoltaic) within the site.

8.4.32 Like from the road, the proposed solar PV tables will obscure views of the open pastoral land within the application site and the base of the Tararua Range from these properties. The reduced rural outlook within the view and the partial obstruction of the Tararua Range will adversely affect visual amenity values. It should be noted that views of the surrounding rural landscape to the east, southwest and south will be retained from these properties as well as foreground views to the north and northwest when viewed within each of these properties.

8.4.33 Mitigation planting is proposed from the south-eastern corner of the site (at the intersection between Cornwall Road and Hughes Line) west towards the centre of the site frontage along Hughes Line. The mitigation planting will be maintained between 2-3m high. The proposed mitigation planting will screen most of the PV tables from view from each of these properties, with only the top of the PV panels likely visible when the tables are at maximum tilt and the mitigation hedge planting is at minimum height. The proposed height of this planting will ensure that views to the Tararua Ranges above this planting are retained, aiding in in preserving existing visual amenity values experienced from these properties.

8.4.34 Temporary adverse effects associated with the proposed development from these properties are likely to be moderate from 558 and 510 Hughes Line, as a result of a greater degree of existing screen planting. Temporary adverse effects from the proposal will be moderate-high from 542 and 532 Hughes Line, due to less existing intervening planting. These temporary effects will reduce to low (less than minor) for 558, 510, 542 and 532 Hughes Line, with the establishment of the mitigation screen planting.

***518 and 534 Perrys Road and 353 Hughes Line***

8.4.35 From most of these properties, a combination of intervening planting and buildings (dwellings, barns/utility buildings) will likely restrict views of the proposed development. There appears to be less/limited screening between the cluster of dwellings at 518 and 534 Perrys Road and 353 Hughes Line and the application site. The following paragraphs assess likely effects form these properties only.

8.4.36 Like from the public views from the road (Subsection 7.3, above), the proposal will appear subservient within the view from these properties, difficult to distinguish within the visual complexity of the surrounding landscape, due to distance out. The focus of these vistas will more likely be drawn towards the open pastoral rural landscape within the foreground and the

rugged peaks of the Tararua Range skyline, rather than the proposed development, which will form part of the distant backdrop to these views.

8.4.37 Views from these properties will therefore remain predominantly rural in character and views to the Tararua Ranges will not be affected, limiting adverse effects on visual amenity values derived from views across the rural landscape. As such, the adverse effects on existing rural character and visual amenity values from these locations will likely range between very low and low (less than minor), depending on the degree of screening afforded by intervening vegetation and buildings.

8.4.38 It should be noted that visual mitigation planting was not deemed necessary along the western application site boundary, or the western extent of Hughes Line due to the absence of representative permanent residence within the vicinity of those site boundaries.

***3920 State Highway 2***

8.4.39 The property at 3920 SH2 is surrounded by the application site on three sides, to the east, west and south. The existing planting within 3920 SH2 and within the subject site restricts views to the wider rural landscape from the lower storey and garden, allowing only narrow viewshafts to the south, east, and west. Existing views are characterised by a flat pastoral landscape within the application site, dissected by an earth bund (foreground), and rows of tall pine and poplar trees (fore to midground) within the application site. Between the trees, snippets of the Maungaraki Range and Tararua Ranges can be attained, enhancing the amenity of the view.

8.4.40 From the upper storey of the dwelling, wider views of the surrounding rural landscape to the south and west will be attainable. Glimpses of the Waingawa industrial area to the north may be possible. To the east of the dwelling, views into the, now disused, tannery oxidation pond area are attainable. These views are expected to be of lower visual amenity than the views to the west and south due to the more unkempt nature of this part of the application site.

8.4.41 The construction of the agrivoltaic development will result in a shift in the landscape character experienced from this location, introducing a new element which is not currently experienced into the view. The nearest PV modules to the west are to be located within approximately 15m of the property boundary.

8.4.42 The agrivoltaic development's presence will be characterized by the coexistence of solar panels with retained pasture and grazing sheep. This juxtaposition creates a unique character type, where traditional agricultural activities combined with modern energy production will

introduce a new character type that represents a synergy between traditional rural practices and environmentally conscious technologies.

8.4.43 To the west, the proposed gravel permitter track, and the PV tables will likely be visible from the lower storey of the dwelling and the garden. The perimeter access road, which will run between the boundary and the closest PV table, will be slightly wider, but similar in appearance to the existing farm tracks within the site. To the east and southeast, the PV tables and access track will also be visible but will be slightly further away than the PV tables to the west (which are located more immediately alongside the property boundary. Parts of the BESS and substation may also be seen to the southeast (in the distance) above the PV tables.

8.4.44 The trimming of the shelterbelt along SH2 (to the east and west) and of the pines around the yard will open up views to the south from the upper storey of the dwelling. It will enable broader views over the proposed agrivoltaic development, including views of the gravel track around the perimeter of the PV tables, the inverters and internal access roads (within the solar field), through to the BESS and substation area.

8.4.45 The darker colour of the PV panels will visually contrast the lighter tones of the pasture within the site. The geometric form of the solar panels, the BESS, the substation and associated gravel pad, and the perimeter and internal roads will also contrast with the existing natural form of the open pasture and vegetation within the site and surrounding rural landscape. This will draw further attention to the agrivoltaic development and highlight the change in character within the site.

8.4.46 From the upper storey of this residence, the proposed development will have an adverse effect on the open spatial characteristics in the application site by introducing a new feature into the landscape, changing the appearance of the landscape from one predominantly covered in pasture to one predominantly covered in solar panels and associated infrastructure development within the site.

8.4.47 From the lower storey and garden, the previously limited views of the open rural landscape will be largely lost. Views of the wider surrounding rural planting patterns and the Maungaraki Range seen backdropping the site will likely be mostly screened when the PV tables are at full tilt. The Maungaraki Ridgeline will likely still be visible beyond the agrivoltaic development when the PV tables are positioned horizontally (at a 0- degree tilt).

8.4.48 While the proposed development will significantly alter the character of views of the application site from the upper storey of this dwelling, views beyond the site to the wider rural

landscape however will be retained. The rural characteristics of the view experienced from the upper storey of this dwelling will therefore not be lost but the ratio of open space observed within the view will be reduced. Due to the broad nature of the view from the upper storey, which likely includes glimpsed views of the Waingawa industrial area to the north, the proposed development will be seen within the much wider surrounding context, aiding in integrating it with its surrounds.

8.4.49 Planting is proposed to be established along the southwestern boundary of the property, to infill the gaps in the existing curtilage planting already surrounding the dwelling. The adverse effects observed form the garden and lower storey of this dwelling will only be temporary while the proposed mitigation planting becomes established. While the recommended mitigation planting will also obstruct views across the site and wider rural landscape, creating a contained instead of open outlook, it will reduce the effect of the agrivoltaic development on the existing rural outlook.

8.4.50 It will not be possible to mitigate views of the proposed development from the upper storey of this dwelling, due to the elevated nature of the view and the proximity of the dwelling to the boundary. A permanent landscape character change within the application site (rural to agrivoltaic development) will therefore be experienced from the upper storey windows of this dwelling.

8.4.51 However, as assessed above, while the proposed development will change the ratio of built and natural development seen within the view from the upper storey of this dwelling, it will not result in a loss of rural outlook. Views to the wider surrounding rural landscape and the Maungaraki Range / Ridge will be retained.

8.4.52 Temporary adverse effects on existing landscape and visual amenity values associated with the proposed agrivoltaic development from within the garden and the lower storey of this dwelling will therefore be moderate-high, reducing to low-moderate with the establishment of the recommended mitigation screen planting. From the upper storey of this dwelling, adverse effects on existing landscape and visual amenity values will likely remain moderate-high.

***Landscape, Visual Amenity, Rural Character, and Glint and Glare Effects Overall***

8.4.53 Overall, it is considered that only the landowner and occupier of 3920 SH2 is anticipated to receive minor construction effects from the proposal and is therefore an affected party. All other potentially affected parties have adverse landscape and visual effects of the proposal

suitably mitigation as a result of the proposed Landscape Mitigation Planting Plan (Figure 17) so as to result in less than minor effects overall.

**8.4.c Acoustic Effects**

8.4.54 Within the Acoustic Assessment (Appendix 9) it concluded that the operational noise modelling demonstrates that the proposal can comply with the maximum permitted noise levels under both the ODP and PDP. This is when measured and assessed at all existing notional boundaries on adjacent sites. Noise levels from all other operational and site maintenance activities will be managed to comply with the ODP, noise limits.

8.4.55 It is noted within the Acoustic Assessment that there may be compliance issues for future dwellings that could be constructed as a permitted activity within 51 and 99 Cornwall Road, which are numbered 19 and 18, respectively, Table 2. These two properties are separate rural properties with areas of 53 and 10 hectares, respectively, that currently contain no dwellings. The acoustic assessment recommends seeking affected parties' approval from the landowners of each of these properties.

8.4.56 Written approval from these properties has been sought. These written approvals have not been provided by the landowners of these properties. As noted previously, there are currently no sensitive receivers (dwellings) within either of these properties. Further to this, to the Applicant's knowledge, there has been no measures taken to establish dwellings on either property, such as through obtaining building consent.

8.4.57 To consider the potential acoustic effects on either property would necessitate identifying a wholly hypothetical building location. Each of these properties have considerable land area available beyond the modelled extent of the inappropriate noise emissions. As such, it is possible to establish a dwelling on each of these properties that would not be adversely affected by the noise emissions from the proposal, which means that adverse acoustic effects on these properties can be avoided at the time of future development of a dwelling on either property.

8.4.58 Overall, it is considered that the owners and occupiers of all surrounding properties are anticipated to receive less than minor noise effects from the proposal, and therefore there are not considered to be any affected parties due to acoustic effects of the proposal.

### 8.4.d Transportation Effects

8.4.59 With regards to transportation effects once the proposal is operational, it is noted within the Transportation Assessment (Appendix 10) that vehicle movements are anticipated to be very low in frequency. This reflects the minimal need for staffing, largely associated with security and maintenance of the development.

8.4.60 The permanent site entrance is proposed to be in the same location as the temporary site entrance utilised for the construction phase. This site entrance is located at least 200m away from the nearest adjacent property entrance, being those for the contractors yard located at 109 Cornwall Road (numbered 16 on Table 2) and the Transpower substation located at 113 Cornwall Road (numbered 17 on Table 2). This separation distance exceeds the minimum separation for rural vehicle crossings in this speed environment under the ODP. Therefore, it is considered that the proposed siting and use of this permanent vehicle crossing will not adversely affect the landowners or occupiers of either of these properties.

8.4.61 Landowners and occupiers of properties numbered 11-19 on Table 2 are likely to utilise Cornwall Road as part of their daily lives, and therefore may potentially be affected by vehicle movements associated with the operation of the proposed development. There is at least 750m visibility for vehicles utilising the site entrance to enter and exit the site. This gives ample opportunities for both vehicles accessing and egressing the site to see any on-coming traffic and avoid conflict. Therefore, it is considered that these parties will receive transportation construction effects that are less than minor, at worst, and there will be no parties affected by transportation effects during the operational phase of the proposal.

### 8.4.e Affected Persons Assessment Summary

8.4.62 Overall, the landowner of 3920 State Highway 2 is considered to be the only affected person for this proposal, due to the above assessment determining at least minor adverse effects on each of them.

## 8.5 Permitted Baseline

8.5.1 The consideration of permitted baseline is relevant to determination of both the scale of effects (Section 95D) and affected persons (Section 95E). When considering the permitted baseline, a proposal can be broken down into several key aspects– activity, built form, and effects. For this proposal, as there is no permitted activity status for any scale of commercial solar energy generation, there is no permitted baseline applicable to this application.

### 8.6 Notification Summary

**8.6.1** Overall, the proposal will result in effects on the environment that are minor and effects on one adjacent landowner that are minor, and all other landowners and occupiers that are less than minor. The proposal has then also been considered in relation to the steps under Sections 95A-95B of the RMA to determine notification status of the application, and the proposal is therefore sought to be processed on a Limited Notified basis to the landowner of 3920 State Highway 2.

## 9.0 STATUTORY ASSESSMENTS FOR DECISION

9.0.1 There are a number of sections under the RMA that need to be considered when making a decision on any resource consent application. The following provide an assessment against those sections relevant to this proposal.

### 9.1 Section 104 – Consideration of Applications

9.1.1 The following are matters that need to be considered when making a decision on any resource consent application:

### 9.1.a Part 2 – Purpose and Principles of the RMA

9.1.2 Sections 5-8 of the RMA outline the purpose and principles of the Act, i.e., the key outcomes that the RMA seeks to achieve.

***Section 5 - Purpose***

9.1.3 The RMA seeks to promote sustainable use, development and protection of natural and physical resources to ensure that people and communities provide for their social, economic and cultural well-being and for their health and safety. While achieving these outcomes, the RMA also seeks to sustain the potential of natural and physical resources to ensure that they meet the reasonably foreseeable needs of future generations; protecting the life-supporting capacity of our air, water, soil, and ecosystems; and avoiding, remedying or mitigating any adverse effects of activities on the environment.

9.1.4 At its core, the proposal seeks to provide for the growing demand for electricity generation, and also decarbonisation of our existing electricity generation. This achieves provide for the reasonably foreseeable needs of future generations through seeking to reduce the effects of climate change. It will also provide for the social, economic, and cultural well-being of the people and communities through provision of a large scale reliable renewable energy source that is supported by battery energy storage. It will also provide for a number of employment (i.e. economic) opportunities, predominantly during the construction phase of the project.

9.1.5 All actual and potential adverse effects on the environment associated with the proposal are sought to be avoided, remedied, or mitigated. Through providing sheep grazing, a land-based primary production activity, around the PV modules, the proposal will also ensure that the resource of highly productive land that makes up almost half of the site is utilised for the

duration of the proposal. This is further complimented by the limited duration of the proposal, which will see the development fully decommissioned prior to the end of the 40-year lease.

9.1.6 Overall, it is considered that the proposal is consistent with the purpose of the RMA.

***Section 6 – Matters of National Importance***

9.1.7 There are also a number of matters of national importance that have been identified as needing to be recognised when considering the use, development and protection of natural and physical resources. In relation to this proposal, those relevant are:

> *(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*
>
> *(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna; and*
>
> *(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*

9.1.8 While the subject site is not located anywhere near the coastal environment, it does include several natural inland wetlands and what is classified as a river (the Taratahi water race / Waikoukou Stream). The proposal will only locate the access track and security fencing within 10m of any of these freshwater features. It is not proposed to have any of the PV modules or structures associated with the proposal located within 10m of these resources. Further, it is proposed to protect these resources through the implementation of sediment and erosion control measures during construction and adhere to a stormwater management strategy once operational. These will all aim to avoid any adverse effects on freshwater resources.

9.1.9 The development area includes a number of potential habitats for indigenous fauna, predominantly long-tailed bats and several possible species of native skinks and geckos. A variety of proposed mitigation measures are to be implemented to avoid and mitigate adverse effects on indigenous fauna, predominantly during construction.

9.1.10 The Applicant acknowledges those with mana whenua status on the land – Ngāti Kahungunu ki Wairarapa and Rangitāne o Wairarapa, having engaged with both on the proposal. As the proposal is assessed as having no more than minor adverse environmental effects overall, it is considered that these resources, as well as any unrecorded archaeological sites and taonga, are suitably recognised and addressed within the proposal. The Applicant intends to continue

to kōrero with mana whenua and further incorporate means of recognising their relationship with this whenua through the processing of this application and beyond.

9.1.11 Overall, it is considered that the proposal recognises and provides for the matters of national importance relevant to this site and activity.

***Section 7 – Other Matters***

9.1.12 In addition to the matters of national importance, there are also a number of other matters that have been identified as needing to be given particular regard to when considering the use, development and protection of natural and physical resources. In relation to this proposal, those relevant are:

*(a) kaitiakitanga:*

*(aa) the ethic of stewardship:*

*(b) the efficient use and development of natural and physical resources:*

*(c) the maintenance and enhancement of amenity values:*

*(d) intrinsic values of ecosystems:*

*(f) maintenance and enhancement of the quality of the environment:*

*(g) any finite characteristics of natural and physical resources:*

*(i) the effects of climate change:*

*(j) the benefits to be derived from the use and development of renewable energy.*

9.1.13 There is a lot of cross-over between the other matters pertinent to this proposal, and the matters of national importance. For the same reasons outlined in relation to the matters of national importance, it is considered that the proposal suitably has regard to these other matters.

***Section 8 – Te Tiriti o Waitangi***

9.1.14 The final principle of the RMA that needs to be taken into account of when considering the use, development and protection of natural and physical resources is the Treaty of Waitangi / Te Tiriti o Waitangi.

9.1.15 While there is no statutory acknowledgment relevant to this subject site, it is acknowledged that iwi who are mana whenua for this locality have also recently established post-settlement governance entities. As part of the Applicant's consultation with mana whenua, initial discussions have also included conversations regarding these post-settlement entities. Where

appropriate, going forward, the Applicant is agreeable to working with each entity to achieve positive outcomes for iwi.

### 9.1.b Section 104(1)(a) – Actual and Potential Effects

9.1.16 The assessment of environmental effects provided in Section 7.0 is suitable for the purposes of considering the actual and potential effects on the environment of the proposal in accordance with S104(1)(a), and is therefore adopted for this purpose. As outlined in that assessment, it is considered that the proposal will result in no more than minor effects overall.

### 9.1.c Section 104(1)(ab) – Proposed Mitigation Measures

9.1.17 A number of suggested conditions have been offered by the Applicant, as outlined within Appendix 21. These conditions are considered appropriate to ensuring positive effects on the environment are achieved, to offset any adverse effects that may arise as a result of the proposal.

### 9.1.d Section 104(1)(b)(i) – National Environmental Standards

9.1.18 As outlined within Subsection 6.3 above, there are currently national environmental standards operative under the RMA. These have been assessed for relevance and compliance within Appendix 20. As a result of that assessment, it was found that consent will be required under the following NES:

- National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health; and
- National Environmental Standards for Freshwater.

### 9.1.e Section 104(1)(b)(ii) – Other Regulations

9.1.19 While not a regulation that specifically relates to the proposal, it is worth considering the role that the Climate Change Response Act has in considering a proposal to establish a renewable energy generation development. It is considered that, through the proposals two-pronged approach of establishing a large-scale agrivoltaic development and a BESS, the proposal will meaningfully contribute towards New Zealand achieving its climate change targets.

### 9.1.f Section 104(1)(b)(iii) and (iv) – National Policy Statements

9.1.20 There are currently eight national policy statements operative under the RMA, of which the following are considered relevant to the proposal:

- National Policy Statement for Freshwater Management (NPS-FM);

- National Policy Statement for Highly Productive Land (NPS-HPL);
- National Policy Statement for Indigenous Biodiversity (NPS-IB);
- National Policy Statement for Renewable Electricity Generation (NPS-REG); and
- National Policy Statement on Electricity Transmission (NPS-ET).

9.1.21 A detailed assessment of the proposal against the national policy statements has been undertaken within Appendix 18. A summary of the assessments of the proposal in relation to those relevant national policy statements is provided below.

***National Policy Statement for Freshwater Management (NPS-FM)***

9.1.22 The subject site includes several natural inland wetlands as well as a river (the Taratahi water race / Waikoukou Stream). The proposal avoids any works or development within the natural inland wetlands and proposes to establish three new culverts across the river. Further, it includes implementation of sediment and erosion control measures to avoid potential effects during construction, and a stormwater management strategy to avoid potential effects once operational.

9.1.23 Overall, it is considered that the, subject to implementation of appropriate sediment and erosion control measures, offsetting the proposal from all natural waterbodies within the subject site, and implementing appropriate design measures to enable fish passage within the three proposed culverts, the proposal suitably recognises the value of these freshwater resources, and will maintain their current health, values and well-being, and will therefore achieve outcomes consistent with those sought under the NPS-FM.

***National Policy Statement for Highly Productive Land (NPS-HPL)***

9.1.24 Approximately 45.6% of the subject site is comprised of highly productive land, and development of that part of the site is therefore subject to consideration under the NPS-HPL. The proposal seeks to maintain use of the site, particularly within the portion that is classified as highly productive land, for land-based primary production activities (i.e. the grazing of sheep). This will occur around the proposed PV modules and ancillary infrastructure.

9.1.25 Under the NPS-HPL, the proposal is considered specified infrastructure, which is provided for as an exempt activity, subject to consideration of a number of matters, under the NPS-HPL. The proposal is consistent with each of those matters and is therefore considered to be an acceptable exempt activity to occur on highly productive land.

9.1.26 Notwithstanding the proposal being exempt under the NPS-HPL, it is worth noting that the bulk of the development that is not compatible with sheep grazing, around the BESS, substation, and switchyard facilities, is located outside of the area identified as highly productive land. Irrespective, the proposed structures comprise of 0.25% of the overall site area. There are hardstand areas located surrounding the BESS and associated facilities, as well as around the inverters, however these comprise a small part of the overall site area.

9.1.27 The proposal also has a limited duration, with the development to be decommissioned and returned to the prior state, and thus able to fully accommodate land-based primary production activities 40 years following obtaining all relevant council and grid connection approvals.

9.1.28 Therefore, it is considered that the proposal will achieve outcomes that are consistent with those sought under the NPS-HPL.

***National Policy Statement for Indigenous Biodiversity (NPS-IB)***

9.1.29 The subject site has no identified significant natural areas or areas of identified indigenous biodiversity. However, due to the nature of the proposal, an ecological assessment was undertaken, as was consideration of the proposal against the NPS-IB. The subject site was found to have a number of suitable habitats that may be utilised by indigenous fauna, including roost sites for long-tailed bats, habitat for several species of indigenous skinks and geckos, and possible nesting sites for indigenous birds.

9.1.30 The proposal includes a number of mitigation measures, which seek to avoid any potential harm to individual specimens, predominantly during the construction phase of the development. Overall, it was considered that the proposal, through implementation of the mitigation measures, would achieve outcomes that are consistent with those sought under the NPS-IB.

***National Policy Statement for Renewable Electricity Generation (NPS-REG)***

9.1.31 As the proposal is to establish a renewable energy generation development, consideration of the proposal under the NPS-REG is appropriate. The proposal is located in a location that has limited, if any, opportunities for potential reverse sensitivity effects to arise. Further, the seeks to avoid, remedy or mitigate all adverse effects associated with the proposal. Therefore, it is considered that the proposal will be consistent with the outcomes sought under the NPS-REG.

***National Policy Statement for Electricity Transmission (NPS-ET)***

9.1.32 The proposal seeks to establish a short addition to the electricity transmission network to facilitate the connection of the proposed renewable energy generation and BESS development with the National Grid. As such, the proposal requires consideration under the NPS-ET.

9.1.33 The proposal will involve minor works to install the connection to the adjacent Masterton substation underground within the road corridor of Cornwall Road. Due to the limited extent of this addition to the electricity transmission network, and the discrete nature of the proposed addition, it is considered that the proposal will achieve outcomes consistent with those sought under the NPS-ET.

**9.1.g Section 104(1)(b)(v) – Regional Policy Statement**

9.1.34 The Greater Wellington Regional Policy Statement has been considered as part of the Regional Plan Assessment contained within Appendix 17. The assessment found that, overall, the proposal will achieve outcomes that are consistent with those sought under the various provisions of the Regional Policy Statement (RPS).

9.1.35 It is considered that the proposal will result in air quality outcomes that are consistent with those sought under the RPS, predominantly through the implementation of sediment and erosion measures to avoid dust generation during construction.

9.1.36 As outlined within the various specialist reports supporting this application, the proposal will result in environmental effects that can be suitably avoided, remedied, and mitigated to ensure that the environmental, social, and cultural outcomes associated with this energy generation activity are consistent with those anticipated under the RPS while also achieving the benefits for the region that are sought.

9.1.37 The proposal, as is outlined within the various supporting specialist reports, has been designed to avoid where possible, and manage where not, effects on freshwater within the site, including the identified natural inland wetlands and the Taratahi water race / Waikoukou Stream, which, for the purposes of the RPS is considered a river. Overall, it is considered that the proposal will achieve freshwater outcomes that are consistent with those sought under the RPS.

9.1.38 The proposal acknowledges and incorporates the recommendations of the EEA (Appendix 11) with regards to the potential habitat on-site for long-tailed bat and indigenous gecko and skink species. Overall, it is considered that the proposal will result in indigenous ecosystem outcomes that are consistent with those anticipated under the RPS.

9.1.39 As is outlined within the Landscape Assessment (Appendix 7), the subject site is considered to be an appropriate location for this proposal, given its position between a local Transpower substation and the adjacent Waingawa Industrial zone. The proposal has also been found, as outlined within the Land Use Capability Assessment (Appendix 8), that there will not be a long-term impact on the capacity of this rural land to accommodate land based primary production activities.

9.1.40 The subject site will be subject to grazing of sheep around the PV modules for the duration of the development, thus ensuring that the site continues to be utilised for an appropriate land based primary production activity while also accommodating commercial-scale renewable energy generation. Overall, it is considered that the proposal represents an appropriate use of this rural land and is therefore consistent with the outcomes sought under the RPS.

9.1.41 The proposal will not alter the current ability for mana whenua to exercise customary rights and access to ancestral lands, water sites, waahi tapu or other taonga. Consultation with mana whenua in relation to this proposal is ongoing. To-date, neither of the two iwi who have mana whenua status over the site, being Rangitāne o Wairarapa and Ngāti Kahungunu ki Wairarapa, have identified any aspects of the proposal that they have concerns with. To the best of the author's humble ability to comment on, as a pakeha and as someone who does not represent either of the mana whenua or whakapapa back to either mana whenua, it is considered that this proposal will achieve outcomes regarding tangata whenua that are consistent with the RPS.

9.1.42 The proposal is supported by a PSI (Appendix 14) which outline that the proposal will ensure that effects from developing a site that is subject to contaminated soils are suitably managed. This will be further refined once a DSI is completed which will inform the RAP which will provide more detailed management plan for the works. Overall, it is considered that the proposal will achieve outcomes for soil that are consistent with those anticipated under the RPS.

### 9.1.h Section 104(1)(b)(vi) – Relevant District and Regional Plans

9.1.43 For this proposal, the ODP, the PDP, and the NRP are the relevant plans and proposed plans for consideration under Section 104(1)(b)(vi). Each of these plans have been assessed in detail within Appendix 15 (ODP Assessment), Appendix 16 (PDP Assessment), and Appendix 17 (NRP Assessment), and are summarised below:

***District Plan – Operative and Proposed***

9.1.44 The ODP does not specifically provide for renewable energy generation from solar resources, yet there are still relevant controls, objectives and policies regarding effects on adjacent parties and the environment to consider the proposal under. The proposal requires resource consent under a number of rules, with an overall activity status of Discretionary Activity. Overall, it is considered that the proposal will achieve outcomes that will be consistent with those sought under the relevant rules, objectives, and policies of the ODP.

9.1.45 Unlike the ODP, the PDP does specifically provide for renewable energy generation from solar resources, including at the scale proposed. The PDP is still within the early stages of the notification and submissions process, with the initial submission period only closing on 19 December 2023. There are few rules that have immediate legal effect, and the proposal is compliant with all of those.

9.1.46 Were the PDP to have full legal effect in its current form, the proposal would require resource consent as a Discretionary Activity. Overall, it is considered that the proposal will achieve outcomes that will be consistent with those sought under the current wording of the relevant rules, objectives, and policies of the PDP.

9.1.47 There is no difference in outcomes sought between the relevant provisions of the ODP and the PDP for the proposal. The proposal would have the same activity status under each plan. Further, the outcomes sought under the PDP are consistent with those for the ODP. As such, there is no need to undertake a weighting exercise between the two plans.

***Regional Plan***

9.1.48 The proposal requires consent as a Restricted Discretionary Activity under the NRP. The proposal is considered to achieve outcomes that will be consistent with those anticipated under the relevant rules, matters of discretion, objectives, and policies of the NRP.

9.1.49 While Plan Change 1 has been notified, it is noted that none of the proposed changes relate to any rules relevant to this proposal. Therefore, it does not require any further consideration nor weighting exercise in relation to the NRP.

**9.1.i Section S104(c) – Any Other Matters**

9.1.50 It is not considered that there are any other matters to consider for this proposal.

## 9.2 Section 104B – Determination for Discretionary Activities

9.2.1 As the resource consent application is for a Discretionary Activity, the application may be granted or approved. If the application is to be approved, conditions may be imposed under Section 108 of the RMA.

9.2.2 As has been outlined in the preceding sections of this report, it is considered that all potential adverse environmental effects can be suitably avoided, remedied, or mitigated so as to be no more than minor overall. The proposal and supporting assessments include recommendations that form part of the proposal to mitigate effects.

9.2.3 It is considered that the Carterton District Council and Greater Wellington Regional Council each have an appropriate level of information regarding the scale and nature of the proposal, and the scale and nature of any proposed effects associated with the relevant reasons for consent from each authority under the relevant local planning documents and national environmental standards.

9.2.4 Therefore, it is considered appropriate for both Council to approve the relevant resource consents, and impose conditions, including those consistent with the recommendations made within this application and supporting specialist assessments.

## 9.3 Section 108 – Conditions of Consent

9.3.1 The proposal, as outlined in the preceding sections of this report, includes a number of mitigation measures. To ensure that Council can fully consider these mitigation measures when assessing the effects of the proposal, the mitigation measures are captured within the Proposed Conditions of Consent (Appendix 21).

## 10.0 CONCLUSION

10.0.1 This application applies for resource consent from the Carterton District Council and Greater Wellington Regional Council in relation to Masterton Solar and Energy Storage Ltd establishing and operating an agrivoltaic development, including battery energy storage systems, for a total duration of 40 years. The proposed development is sought to be undertaken at the property identified as 3954A State Highway 2, which is comprised of eight separate Records of Title.

10.0.2 The proposal will include establishing a utility-scale 100-megawatt (MW) renewable energy project, supported by BESS that will have a 100 MW / 200-400 megawatt hour (MWH) capacity. This will include erecting solar panels (photovoltaic / PV modules) via pile driving only, inverters, transformers, BESS, a substation, a site office, and establishing a connection to the nearby Masterton Substation. It is proposed to occupy approximately 138ha of the subject site. It is proposed that the resource consent will have a duration of 40 years.

10.0.3 Under the Wairarapa Combined Operative District Plan, which includes Carterton District Council, the following are the reasons for consent applicable to this proposal:

- The construction of buildings not required for primary production or residential purposes over 25m$^2$ gross floor area;
- The establishment of buildings for energy generation facilities over 10m$^2$ gross floor area;
- To undertake an activity on Contaminated Land as listed in Appendix 3.1 of the ODP; and
- To undertake an activity that is not otherwise specified as a controlled or restricted discretionary activity.

10.0.4 Overall, resource consent is required from the Carterton District Council under the Wairarapa Combined Operative District Plan as a **Discretionary Activity**.

10.0.5 There have been three reasons for consent identified following review of the proposal under the Wairarapa Combined Proposed District Plan. None of those reasons for consent have immediate legal effect.

10.0.6 Under the Greater Wellington Regional Council's Natural Resources Plan, the proposal requires resource consent for earthworks over an area greater than 3,000m$^2$ associated with renewable energy generation, which requires resource consent as a **Restricted Discretionary Activity**.

10.0.7 Following a review of the relevant National Environmental Standards, the following reasons for consent are considered to be applicable to this proposal:

- Under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, as application is being sought without provision of a detailed site investigation, resource consent is required from Carterton District Council as a **Discretionary Activity**.
- Under the National Environmental Standards for Freshwater, as the proposal does not comply with the permitted width of a culvert relevant to a river of this size, resource consent is required from Greater Wellington Regional Council as a **Discretionary Activity**.

10.0.8 Overall, the proposal will require resource consent from both the Carterton District Council and Greater Wellington Regional Council as a **Discretionary Activity**, based on the above-listed reasons for consent under the relevant local plans and national environmental standards.

10.0.9 The proposal will result in effects on the environment that are no more than minor overall and is not subject to any relevant requirements for public notification. Therefore, it is considered that the proposal does not require public notification.

10.0.10 With regards to effects on those parties adjoining and adjacent to the subject site, it is considered the landowner of 3920 State Highway 2 is an affected person whom the proposal should be limited notified to.

10.0.11 Following an assessment of the proposal against the relevant legislative provisions, it is considered that the proposal will achieve outcomes that are consistent with the Part 2 Purpose and Principles of the RMA. It was also found that the proposal will achieve outcomes that are consistent with those sought under the relevant National Policy Statements. The proposal is also considered to achieve outcomes that are consistent with those anticipated under the Regional Policy Statement, Natural Resources Plan, the Operative Combined Wairarapa District Plan, and the Proposed Combined Wairarapa District Plan.

10.0.12 Overall, it is considered that both the Carterton District Council and Greater Wellington Regional Council could approve this combined application for a Discretionary Activity, on a non-notified basis. This is as it has been determined within this report that the effects will be no more than minor, through the implementation of a number of recommendations to avoid, remedy, and mitigate adverse effects.