

BEFORE THE TARARUA DISTRICT COUNCIL'S HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the applications by Energy Bay Limited to the Tararua District Council (202.2022.136.1) for resource consents to establish and operate a solar farm at 410 Mangamaire Road, Pahiatua.

**STATEMENT OF EVIDENCE OF RORY MCLEAN LANGBRIDGE FOR
ENERGY BAY LIMITED**

DATED 16 AUGUST 2023

RMM

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Introduction

- 1 My full name is Rory McLean Langbridge. I am a landscape architect with the qualifications of BSc (Victoria University) and Bachelor of Landscape Architecture with Honours (Lincoln University). I have been a Registered Landscape Architect of the New Zealand Institute of Landscape Architects since 2005. I was previously on the executive council of the New Zealand Institute of Landscape Architects (NZILA) and am a past chair of the Nelson Marlborough branch of the NZILA.
- 2 I have over 25 years of experience as a landscape architect, specialising in site planning and detailed landscape design, as well as the preparation of visual impact assessments for both Council and Environment Court hearings.
- 3 I am currently employed as a Senior Landscape Architect with Rough Milne Mitchell, having previously been in private practice as Rory Langbridge Landscape Architect (RLLA) based in Nelson since April 1999.
- 4 I have now assessed the impact of 3 solar farms, including this application, which has given me a reasonable understanding of the issues and challenges arising with the development of solar farms.

Code of Conduct

- 5 Although this is a Council hearing, I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2023. I have complied with the Code of Conduct in preparing this evidence and agree to comply with it while giving evidence.
- 6 Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

Scope of Evidence

- 7 My evidence is presented on behalf of Solar Bay Ltd, the Applicant, in these proceedings.
- 8 In preparing my evidence, I reviewed the following:
 - (a) The evidence of the following experts:
 - (i) Solar Bay – Tararua Glint/Glare Assessment Mangamaire Road, Tararua and attachments
 - (ii) Planning evidence of Catherine Boulton;
 - (b) The relevant parts of the Tararua District Council Operative District Plan.
 - (c) The Council Section 42A Report prepared by Andrew Bashford, with particular reference to the accompanying assessment by Landscape Architect Shannon Bray
- 9 Subject to any points of difference, clarification or addition detailed below, my evidence for this hearing comprises:
 - (i) the Proposal;
 - (ii) the Site;
 - (iii) the existing environment;
 - (iv) The landscape values of the receiving environment

- (v) The assessment of landscape and visual effects;
- (vi) the planning framework;
- (vii) the submissions; and
- (viii) provide a conclusion.

10 An A3 colour Graphic Attachment (**GA**) accompanies and forms part of my evidence. It contains information relevant to the proposed development, and I refer to this throughout my evidence.

The Proposal

11 The applicant proposes to locate an approximately 58-ha solar farm within the 81.78-ha Site, as illustrated on **GA Sheet 3** forming two discrete Sites Anand B as described below. The farm will be located on both sides of Mangamaire Road to the south and south-west of its intersection with Tutaekara Road.

12 The technical aspects of the Proposal are described fully in the application. From a landscape perspective, the relevant matters include the scale of the development, the proximity the Site has to public roads and neighbours, the visibility that the Site from roads and neighbours and the implications of any potential glare that can occur on occupants located within the surrounding landscape.

13 There will be no residential development associated with this development as once established; the Site will be managed remotely.

14 An area adjacent to the sub-station will be designed to accommodate the main switchgear. The exact location of the point of connection is to be determined, but it will be located within the existing sub-station. The solar farm will be connected to the PowerCo substation near to Site. The exact location of this connection within the substation is to be confirmed.

15 As part of the construction of the solar farm, all remnant macrocarpa trees internal to Site A and some of the remnant shelterbelts associated with Site B will be removed to avoid shading of the solar panels. A new security fence will be erected around the boundary of the farms. Due to setback requirements due to overhead electricity wires, Site A will be set back 22m from the western boundary of Mangamaire Road, and Site B will be set 11m back from the southern boundary of Tutaekara Road. New shelterbelts will be planted outside the security fence, as illustrated on **GA Sheet 5**.

16 The Applicant proposes to plant a Cypress or Totara hedge to provide screening for the farms. A clipped cypress hedge will achieve a screen within 2-3 years of planting, while a totara hedge will achieve the required screening within 5 years. The use of clipped hedges as shelterbelts is well established within this locality and contributes to some extent to the existing rural character of the area.

17 The application is spread over two adjacent sites on either side of Mangamaire Road. Existing land use over both sites is highly productive pasture grown for grazing by cattle. (**refer GA Sheets 12 & 13.**)

18 **Site A:** is on the northern side of Mangamaire Road and measures 48.86ha and is spread over 3 separate land titles. The farm site extends approximately 500-600m northwest from Mangamaire Road to the Wairarapa Rail line along its north-western boundary and approximately 900m north-east along Mangamaire Road. The northern extent of Site A ends about 500m south of the Substation site and the Tutaekara Road intersection.

19 The farm site envelopes a dwelling site on Mangamaire Road, which occupies a 1.2-ha site. This Site contains a single-story farmhouse dwelling that the applicant owns. Substantial shelter planting lines the southern boundary of this property.

- 20 Internal to the Site, the flat pastures are interrupted by a scattering of remnant shelterbelts, primarily macrocarpa trees, that remain in various locations and provide both vertical relief and contribute positive rural and natural character value to the Site. A feature of this Site is the views enjoyed of the hills that form an attractive backdrop to the Site forming its western edge. **(GA pgs 19 and 20)**
- 21 Overhead powerlines track north-east south-west parallel to the road and approximately 175m back from the Mangamaire Road boundary.
- 22 **Site B**, is spread over 3 titles, is 38.62ha in size. The Site is south of the intersection of Tutaekara Road, along its northern boundary, and Mangamaire Road, along its western boundary. The Site's southern boundary is an unnamed gravel public road that provides access to the interior of Site B and also provides access to an existing quarry site at the southernmost corner of the Site. A 1.5ha land area central to the Tutaekara Road boundary is excluded from the application site.
- 23 The eastern boundary of the development site is marked by an existing farm track above a minor terrace of the Mangatainoka River and set back approximately 180-200m from the riverbed itself. The riverbed is around 4-5m below the level of the Site.
- 24 Site B is a series of flat paddocks currently grazed by cattle that has been partitioned into a number of reasonably large rectangular paddocks each measuring around 1.5ha.
- 25 Site' Bs vegetation is highly modified due to historic farm practices. Site B mainly lacks any visible trees except for two remnant macrocarpa windbreaks, a 180m line along Mangamaire Road in the north-western corner and about 130m lining an existing farm track central to the Site.
- 26 Above ground powerline enters Site B at the north western corner nearest the Mangamaire Substation and then tracks south, following Mangamaire Road approximately 95m into the Site.

The Existing Environment

- 27 The receiving environment falls within the Wairarapa Bush locality and is located within the Mangatainoka River valley and sits near the intersection of Tutaekara Road and Mangamaire Road.
- 28 The subject sites are located on the historic river flats west of the Mangatainoka River approximately 8km south of Pahiatua. The Mangatainoka River itself is a medium-sized, highly rated and heavily fished river and protected by a conservation order¹.
- 29 Due to the low density of development and the predominance of verdant open pasture, the flat landscape that affords the longer views possible of the hills that enclose the valley, the expanse of sky visible, natural character values and landscape/rural character values are aesthetically high. The prominence of the substation structures within a limited visual catchment, detracts from these values.
- 30 Little local relief makes distant views of the bare grazed hills on either side of the valley a feature of this locality. Other vertical relief is provided by the vegetation associated with the Mangatainoka River and the remnant macrocarpa plantings that remain in the area. Several remnant shelterbelts form part of the receiving environment.
- 31 In this area, the Mangatainoka Valley measures approximately 3-3.5km wide, is oriented roughly northeast-south-west and includes SH2 along its eastern edge. The Mangatainoka River meanders up an incised channel in the middle, and the Wairarapa train line to Pahiatua runs adjacent to the Site along its western

¹ Mangatainoka River – nzfishing.com

edge at the base of an unnamed range of hills that separates the Mangatainoka and Mangahao valleys. The rural land is dominated by pasture, grazing stock, interspersed with established shelter trees and amenity planting around scattered dwellings.

- 32 Tutaekara Road is a busy connector road, that crosses the valley with a traffic count of 1415vpd². It provides an important link for the residents within Mangahoa River valley and the village of Marima to SH2 and linking to Pahiatua. Mangamaire Road is a minor offshoot (114vpd)³ that runs parallel with the valley and SH2.
- 33 The Mangamaire substation, the reason the solar farm is proposed in this location, is prominently located at the intersection of Tutaekara and Mangamaire Roads. **Refer to GA Sheets 18.** High voltage overhead powerlines extend from the substation south through both proposed sites on either side of Mangamaire Road and north towards Pahiatua. Overhead wires also extend southeast from this substation along the southern side of Tutaekara Road.
- 34 Substantial shelterbelts form part of the receiving environment and while generally absent on either of the application sites, to re-establish them in this area would be a permitted activity in this landscape⁴.
- 35 The Wairarapa main rail line to Pahiatua runs along the valley's western edge; however, due to the flatness of the Site and the distance most observers are away from the line, it is not generally visible when not in use.
- 36 There is an active shallow quarry borrow pit set approximately 350m back from Mangamaire Road. A macrocarpa hedge around this excavation limits views of the quarry from the surrounding landscape.

Landscape Values of the Receiving Environment

- 37 The existing landscape and visual amenity values form the baseline, along with the policy provisions, for an assessment of landscape effects. Current practice reinforced by Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, has reordered the Amended Pigeon Bay Criteria into three broad categories of landscape attributes focussing on:

Physical

- 38 "**Physical**⁵ means both the natural and human-derived features and the interaction of natural and human processes over time."⁶ Typical physical factors include geological, ecological, and biological elements within the landscape.
- 39 The receiving environment is a flat, expansive landscape that contributes high overall rural character values to the surrounding landscape with associated values of openness, expansiveness and huge sky, lack of built form, natural character and legibility. Due to the general absence of structures and the flat and

² vehicle count August 2020

³ vehicle count August 2018

⁴ In the TDP, regulations for shelterbelts only relates to the potential shading of state highways that are not present in this location.

⁵ 'Physical' means both natural and human features, whereas 'biophysical' is potentially problematic if it is taken to mean only the natural aspects of the landscape rather than both natural and human features/processes. 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Page 79.

⁶ 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Page 79.

monocultural expanse of the receiving landscape, the absorption capacity⁷ of this landscape for uncharacteristic development is very low.

- 40 The main natural feature of this Site is the Mangatainoka River, an order 5 river with a flooded width of 20-25m. The river environment has high natural character values; however, the vegetation lining the river in this vicinity is heavily modified and is now dominated by invasive willow and other exotic weed species. **(Refer to GA Photograph 11)** The riparian vegetation limits views out from the river's course.
- 41 Some buildings are scattered around this general area, including the Mangamaire Substation and associated electrical infrastructure.
- 42 The Mangamaire Substation is a prominent structure within the local landscape that adversely impacts on current local amenity values. However, the facilities limited visual catchment due to the flatness of the surrounding landscape and the impact of vegetation screening, which means the adverse impact only extends to 3-400m east and south with any visibility north and west largely screened.
- 43 There are 15 dwellings and twenty-three other farm buildings within 500m of the boundary of the two sites, with an additional 9 dwellings located within a kilometre of the site boundaries. Of these, it is considered that 9 of these dwellings 'overlook' the Site. 11 of these houses make up the Mangamaire Settlement.
- 44 Houses that are long-standing in this environment are identifiable by the protective measures that have been undertaken using planting and shelterbelts, to address the wind in this area.
- 45 The vegetation cover over the two sites is highly modified, with no remnant indigenous vegetation visible. Sporadic macrocarpa trees and remnant shelterbelts contribute rural and natural character values to Site A but are noticeably absent within Site B. As a result, the biophysical values of the receiving environment are highly modified. However, the productivity of the soils is high, and the aesthetic values of the Site are high and regionally typical.
- 46 Due to the flatness of the landscape, views of either the main Mangatainoka River or the minor Mangamaire Stream are only possible when immediately adjacent to them.
- 47 Beyond the northern corner of Site A, there is a remnant wetland that appears to have been separated from its source, the Mangamaire Stream, by the construction of Doughertys Road and the Wairarapa Line. The boundary and fence for Site A will run immediately adjacent to this natural feature.

Perceptual

- 48 "**Perceptual** means both sensory experience and interpretation. Sensory appreciation typically occurs simultaneously with interpretation, knowledge, and memory." ⁸ Typical perceptual factors relate to experiential and aesthetic qualities such as naturalness, visual coherence, legibility as well as transient aspects.

⁷ "Visual absorption capacity" is typically defined as the landscape's ability to absorb physical changes without transformation or change to its visual character and qualities. Such a consideration evaluates a landscape based on two groups of factors: The first includes physical changes that are caused by development features such as earthworks, buildings and structures, linear development (pipelines, roads etc.), outdoor recreation facilities and forest plantations, with the second factor concerned with vegetative characteristics of the area, the potential for vegetation renewal and the visual exposure of the area to observers.

⁸ "Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines". Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Page 79.

- 49 The hills on either side that contain the valley, the flat open expanse around the sites, the pasture, the grazing animals and remnant macrocarpa plantings combine to create an attractive, productive, aesthetically high and locally typical, working rural landscape for this area.
- 50 The absence of any distinct relief and/or patterns of vegetation within the landscape lends a high level of legibility to this landscape. The dominance of pasture and the absence of many visual interruptions, creates a monocultural impression. Many of the trees still standing appear to have been historic shelterbelt plantings that have now grown beyond that function due to the lack of ongoing management.
- 51 While development is limited, established dwellings provides an indication of the weather conditions experienced locally. Older houses are typically enveloped by extensive planting to mitigate the impact of wind in this environment, with newer houses showing new plantings that appear to seek the same end.
- 52 The settlement of Mangamaire (estimated to be around 11 houses) is a loose cluster of houses in the vicinity of a large and prominent electricity substation, a feature of this location.
- 53 This working landscape is not unique to this area. It is a relatively generic rural landscape commonly experienced in this part of the Wairarapa Bush locality. Nevertheless, the expansive views across the flat pastures to the surrounding hills conveys a visually coherent outlook that while typical, has high amenity and aesthetic value.
- 54 Transient values are associated with weather systems and light effects, which at times of the day / year emphasise the rolling landforms and distant hills. Deciduous vegetation within the Mangatainoka River provides some seasonal interest; however, due to the incised nature of the river, the effects are not prominent.

Associative

- 55 "**Associative** means the intangible things that influence how places are perceived – such as history, identity, customs, laws, narratives, creation stories, and activities specifically associated with a landscape." ⁹ Typical Associative factors includes cultural (tangata whenua) and historic values as well as shared and recognised attributes such as recreational opportunities.
- 56 No cultural or historic sites of significance within the receiving environment are listed in the District Plan or apparent from site investigations. From discussions with representatives of Ngati Kahungunu, we are advised that while there are wahi tapu in the area, the Proposal will not impact adversely on them.
- 57 The Mangatainoka River is a well-known recreational river well known for its trout fishing. It is unknown whether the stretch of river that runs adjacent to Site B is a location popular with fishers.

Assessment of Visibility and Visual Effects

- 58 "*Visual effects are a subset of landscape effects. They are consequences of change on landscape values as experienced in views. They are one technique to understand landscape effects.*"¹⁰
- 59 The visual assessment has been undertaken from a range of viewpoint locations within the receiving environment, which represent the visual effects that may arise from the proposed solar farms. The viewpoints were chosen from a desk top study and confirmed after site observations in addition to the three

⁹ 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Page 79.

¹⁰ 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Page 79.

public roads are primarily dictated by the location of the existing dwelling located on surrounding properties. Following an RFI from TDC, several additional more remote properties were identified for consideration and finally following submissions, additional 'potential' or 'speculative' sites were included within the assessment.

- 60 The flatness of the surrounding landscape in combination with the vegetation that lines the Mangatainoka River, the hills that line the western boundary, the slight contours that one experiences when travelling on Mangamaire Road towards the sites from the south and remnant shelter belts experienced when travelling towards the Site from the north, means the visual catchment of the Site is limited to the immediate surroundings of the two sites; for 1.4km along Tutaekara Road between the foothills and Mangatainoka River bridge west to east and approximately 2.3km from about 0.7km north of Tutaekara Road to approximately 1.6km south along Mangamaire Road.
- 61 Within this limited area, the two sites are highly visible from both public roads when within 2-300m of a farm site. The new sites will be variously visible from 9 residential dwellings proximate to or overlooking the proposed two sites.
- 62 The two sites and the Proposal will also be seen from the elevated paddocks of the farms to the west of the two sites. As there were no identifiable buildings sites within this area, views from this area were not initially considered, however following an RFI from TDC, an additional assessment was undertaken. Finally, following the receipt of submissions, further properties have been included. In all instances in a rural environment like this, more emphasis is placed on views from dwellings rather than paddocks, this is because they are frequented daily whereas some parts of rural properties are infrequently used. A detailed consideration of the farms visibility from surrounding properties appears later on in this evidence.
- 63 The sites will also be partially visible from some sites within the Mangamaire settlement and Site A and to a lesser extent Site B will be visible from trains using the Wairarapa Line.
- 64 The anticipated impacts of what is proposed on the different locations is considered in detail under the following headings:

Public Roads: Mangamaire and Tutaekara and Doughertys Roads

- 65 The solar farms will be visible to some extent from Tutaekara and Mangamaire and Doughertys Road.
- 66 When travelling west along **Tutaekara Road**, the busiest of the local roads and a popular connector road connecting the Mangahao River valley to the town of Pahiatua. Site B will become visible on crossing the Mangatainoka River bridge, **refer to Viewpoint Location Photographs 1 - 3 and Figures 4 and 6**). Initially the existing farmhouse and the associated activities will provide some screening. However, Site B will be prominent due to its 'rural industrial characteristics and vertical scale in this flat landscape.
- 67 On passing the farmhouse connected to the parent property (**GA Viewpoint 2**), Site B will be immediately adjacent to the road and prominent for a distance of around 380m until the road's intersection with Mangamaire Road. An evergreen Cyprus/totara hedge is proposed as screen planting along the initial 130m of the boundary. Evergreen shelterbelts form a historic component of the Wairarapa landscape as generations of farms have used them to manage the effects of wind. The hedge planting is to be managed in the long term at around 3-4m, with screening up to 2-3m being achieved within 3-5 years.¹¹

¹¹ It is anticipated that a cypress hedge will achieve a height of 3m within a time period of 3-4m while totara would reach a height of 2.0m after 5years.

- 68 Due to the flat nature of the Site and the impact of existing shelter belts, views south from Tutaekara Road do not extend far beyond the southern end of the Site.
- 69 Consideration has also been given to the potential of glint and/or glare causing concerns for drivers. I refer to the Glint and Glare report, where no glare is found to impact either of the two public roads even when not protected by the proposed shelterbelts.¹²
- 70 On approaching and reaching the intersection with Mangamaire Road (**Viewpoint Location Photographs 4, 7, and 8**), the Mangamaire Substation becomes prominent and dominates this landscape and its amenity values.
- 71 On passing the substation, the road passes a scattering of buildings that make up the Mangamaire settlement before entering the hills to the west and losing all views of the subject sites.
- 72 When travelling east on Tutaekara Road, the sites become partially visible at a distance of between 6-700m as one enters the valley, while Site A is partially visible between houses and remnant shelterbelts. (**Viewpoint Location Photographs 5 and 6**). The rural industrial quality of the structures, will be noticeable as locally unusual points of interest, but the structures will not dominate. After 3-5 years the shelterbelt planting along the northern edge of Site A and the native planting in the vicinity of the wetland will screen all views of the solar farm.
- 73 Once the road passes the substation and related infrastructure, views of the solar tables will be possible for a distance of 300m. Due to the shape of the application site, and the fact that the northern corner of Site B will not be used for solar panels, all visible solar tables will be set a minimum of 110m back from the road boundary. Due to the angles of the rows, this view will offer more extended views down the various rows where the pastoral land use will be more visible between and under the rows. The nature of the views will vary as the solar tables move and adjust through the day.
- 74 From Mangamaire Road, both solar farms will be visible at some point as they will be located adjacent to and on both sides of the road. A solar farm will be on either one or the other side of the road for 1.6km and on both sides for 165m, refer to Viewpoint Location Photographs 9 - 12. Site A will first become visible 1.8km south of the intersection with Tutaekara Road.
- 75 Mitigation planting is proposed on both sides of Mangamaire Road in locations beyond the protected corridors, specifically 22m back from the western road boundary and on the eastern boundary. With the planting of cypress/totara trees as proposed, visibility of the sites will gradually diminish over 2-5 years.
- 76 The local landscape and amenity values are aesthetically high but are not regionally unique. The visual catchment of what is proposed is restricted locally, electricity generation currently forms a prominent component within the local landscape and the amenity of the surrounding landscape, while high, is of a working rural landscape.
- 77 The surrounding landscape is flat, visually uniform and generally devoid of any screening vegetation with many of the existing trees internal to Site A needing to be removed to accommodate the layout of the solar farm. This lessens the absorption capacity of this landscape to what is essentially a change of land use.
- 78 Introducing built structures into this landscape will reduce the rural character values of the Site by removing open pasture and introducing a built form and landscape pattern that does not currently exist.

¹² 16/08/2023, 09:16 Existing and 3m mitigation planting - Roads - 2P Site Config

- 79 Due to the structures' height, the surrounding landscape's flatness and their proximity to the road boundaries, the structures and/or the mitigation planting will partly obscure views over a rural outlook, including longer views beyond the sites. It is noted the screening of, or interruption to, long views can occur with shelterbelts as a permitted activity. It is established as a reasonably common feature within the surrounding rural landscape.
- 80 The proposed development will inevitably change the conventional or familiar rural character values of the local area. However, with the setbacks that are now proposed and the rural aspects of the land use, in particular, the retention of the pasture for ongoing grazing and therefore traditional productivity values, will remain visible, maintaining some rural character values. While not a conventional rural land use, the solar farm can be considered a productive land use in the sense of capturing the sun's resource and converting it into power.
- 81 The use of a 1.8m high security fencing around both sites may appear anomalous and tend to reinforce a more industrial character. To mitigate this aspect, it is proposed to use the more traditional deer fencing with 'hot wires' to achieve the desired outcome. The erection of deer fencing in this rural area is a permitted activity, and so is not considered to contribute to the visual effects of the overall development. However, the required signage attached to the fence would not be 'typical', and the proposed mitigation planting will negate the impacts.
- 82 **Doughertys Road** extends approximately 1.4km north from its feeder Pukewhai Road. The road runs parallel along this length with the Wairarapa Rail line.
- 83 Due to the flatness of the surrounding land, Site A has the potential of being visible from this road, however, due to the scale of the landscape I do not consider it to be dominant. The southern boundary of the farm will be screened using shelter planting. At the northern end of Doughertys Road, one approaches the southern boundary of lot A and the solar panels adjacent to the rail line will become increasingly visible. Due to the isolated nature of this view
- 84 The proximity of the public roads to the two farm sites means that the land use change due to the development of the two sites will be prominent and unusual, novel or as described by Mr Bray, 'they will be noticed'. This change will be localised, and many of the qualities of the surrounding landscape, the vastness, the flatness, the containing hills and the dominant rural landuse will remain. Locally the short-term impact will be **moderate-high**, but reducing quickly to **moderate-low** or **low** over t a 2-5 year period until the shelter planting establishes.

Neighbouring Residences:

- 85 14 neighbouring properties are impacted to some degree by the Proposal with an additional 7 located within the Mangamaire Settlement. To date, six owners have provided affected party agreements to the application.
- 86 The officers' report has identified 21 properties that they considered to be potentially impacted on by the application. I will consider each in turn, using the plan references as shown on GA pg 3. From submissions, additional sites have raised concerns about the development and as a result additional assessments have been undertaken below.
- 87 Visual impacts have been undertaken with regard to the following properties Plan references are as per the officers' report;
- | | | |
|--------|-----|--|
| (i) | A | 451 Mangamaire Road |
| (ii) | B | 431 Mangamaire Road |
| (iii) | D | 391 Mangamaire Road |
| (iv) | F | 154A Tutaekara Road, |
| (v) | K | 500 Mangamaire Road |
| (vi) | L | Lot 2 DP 546734 |
| (vii) | M | Lots 2 DP 67352 |
| (viii) | N | 239 Tutaekara Road |
| (ix) | O | Sec 90 Blk:X SD: Mangahao ; |
| (x) | P | 3 Foughys Road |
| (xi) | Q | 187 Tutaekara Road
189 Tutaekara Road
205 Tutaekara Road
209 Tutaekara Road
223 Tutaekara Road
229 Tutaekara Road
Tutaekara Road |
| (xii) | Sch | 192 Tutaekara Road |
| (xiii) | R | Sec 7 BLK XIV SD (Mangahao) |
| (xiv) | S | 126 Tutaekara Road |
| (xv) | T | 226 Tutaekara Road |
| (xvi) | U | Lot 2 DP 564748 |
| (xvii) | V | 465 Doughertys Road, Pahiatua |

(xviii) W 321 Doughertys Road

88 Dealing with them in turn;

B 451 Mangamaire Road – Chesterman House



89 This house is owned by the Chesterman family and used to house workers on their farm. It is noted that the current occupiers of this property have approved the application.

90 The Site is located opposite Site A. Thick screen planting has been established to address the windy conditions along the road boundary, which will restrict all possible westerly views from the house. Due to existing shelterbelt planting, views of Site B will not be possible from this location.

91 Specific testing for 'glint and glare' (OP17) from this location has found that there will be no adverse impacts on this locality from either Site A or Site B. The pink dots indicate the glint and glare testing sites.¹³

92 Due to the screening currently in place, and the additional screening provided by the proposed shelterbelts, the impact of the Proposal on views from the house will be **low**.

¹³ 16/08/2023, 09:09 Tararua Rev5 - SAT - Existing Recep - 2P 3mSB Site Config pg15

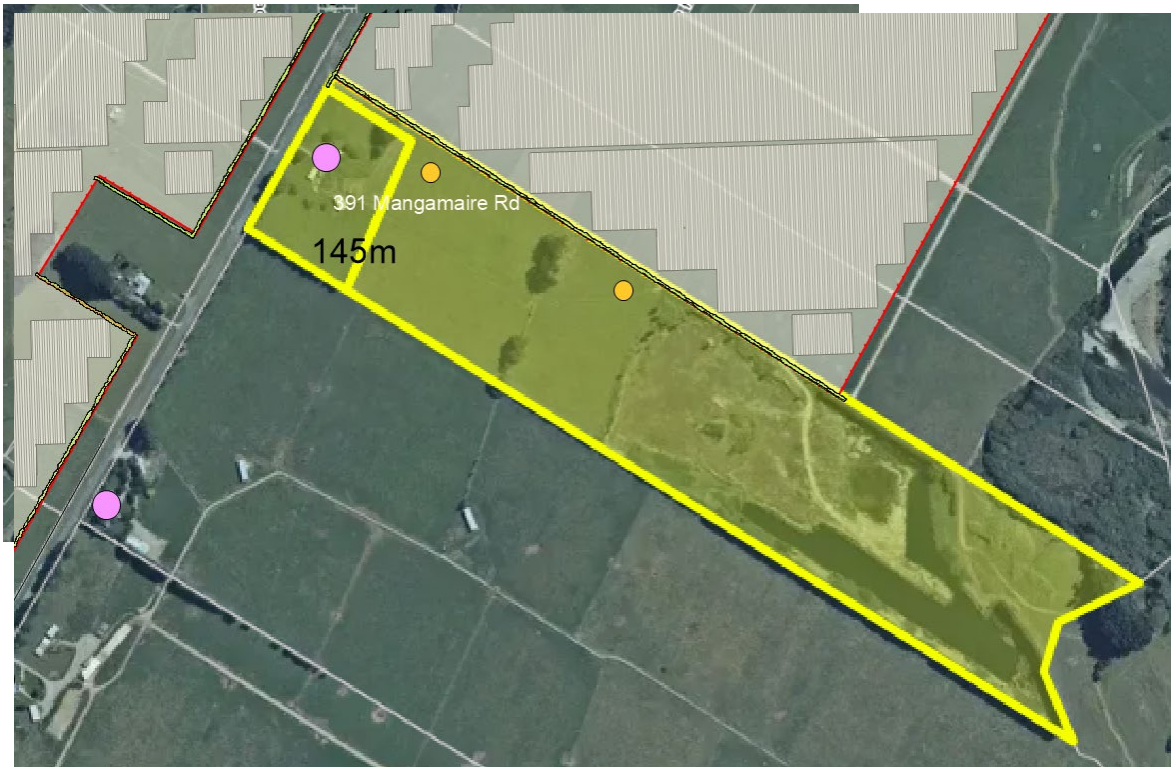
A 431 Mangamaire Road – Taree Farm - Chesterman House



- 93 This house is also owned by the Chesterman family and is located opposite Site A across Mangamaire Road. The house appears to have a well-tended established garden of high amenity along the road boundary. While more detailed and tended than others, this planting will also screen most of the views possible looking west from this location. Due to some gaps in the planting, views of Site A from the house will be possible.
- 94 As the proposed shelterbelts become established over the first 3-5 years, views of the solar tables will gradually diminish to a point when they will not be visible from this property.
- 95 Specific testing for 'glint and glare' from this location (OP16) has found that there will be no adverse impacts on this locality from either Site A or Site B¹⁴.
- 96 The shelterbelts will impact amenity by limiting westerly views and rural character by impacting open space values. Considering that the establishment of shelterbelts in this landscape is a permitted baseline outcome, when comparing the losses with what can be undertaken as of right, the impact from this house will be moderate gradually reducing to low as the shelterbelts establish and views of the new farms diminish.

¹⁴ 16/08/2023, 09:09 Tararua Rev5 - SAT - Existing Recep - 2P 3mSB Site Config pg15

D 391 Mangamaire Road – Hirock Limited



- 97 This house is owned by the adjacent quarry and is used to house workers. Discussions have been had with the tenants who have voiced support for the application.
- 98 The Site is located opposite from Site A and is immediately adjacent to the southern boundary of Site B. Limited vegetation currently exists around this dwelling, which means that views of new structures will be unimpeded until the shelterbelts become established.
- 99 Given the 22m setback of the shelterbelt from the Mangamaire Road and with the screen planting managed at a minimum of 3.0m height, once established, the new structures will be thoroughly screened. That will result in a partial loss of any view to the western hills. However, it is noted that this is a baseline effect in this area.
- 100 The property's northern boundary is shared with Site B. Solar panels extend to near the boundary. With the establishment of a shelter belt along this common boundary all views of the panels will be screened. While shading will occur from the shelterbelt, this is a permitted activity within this rural zone and therefore, the affects are considered part of the permitted baseline.
- 101 Specific testing for 'glint and glare' from this location (OP15) has found no effect on this location from Site A. From Site B, the testing registers the potential for up to 10mins of yellow glare emanating from the southern portion between the hours of 5-7 am over three periods of the year¹⁵. The shelterbelt proposed along the southern boundary of Site B is proposed to address this effect.
- 102 For this reason, I consider the changes anticipated from the Proposal to be **low**.

¹⁵ 16/08/2023, 09:09 Tararua Rev5 - SAT - Existing Recep - 2P 3mSB Site Config pg15.

F 154A Tutaekara Road



- 103 The house at 154A Tutaekara Road is visually separated from Site B by on-site vegetation. The house will not be impacted on by glint or glare stemming from the new structures on Site B.
- 104 The current residents of this property have expressed support for the Proposal. However while they have a familial connection with the owners they are not the registered owners of this property.
- 105 Due to existing onsite vegetation, the development on Site B will be in viewed across Section 7 Block XIV Mangahao SD when leaving or approaching the property only and seen at a distance of 140m.
- 106 The Site is located to the south of this property and so is not in any primary view. The impact of the Proposal on views from the house will be **low**.

K 500 Mangamaire Road



- 107 500 Mangamaire Road is a 2.2ha isolated section surrounded by a rural paddock with views of the hills, a feature towards the northwest. The primary view of the house and its outdoor areas is north towards Site A, as such, the new farm will be prominent within their view approximately 300m away.
- 108 Shelterbelt mitigation planting is proposed along the southern boundary of Site A, which, when established after 3-5 years, will screen any views of the solar panels. While a shelterbelt will impact on the extent of the hills that remain visible, this is a permitted baseline activity within this landscape, and therefore this effect can be discounted.
- 109 Specific testing for 'glint and glare' from this location (OP18) has found that there is no effect on this location from either farm.¹⁶
- 110 Once the screen planting is established, the adverse effects of the development on the rural amenity values of this property will be considered **low**.

¹⁶ 16/08/2023, 09:09 Taranua Rev5 - SAT - Existing Recep - 2P 3mSB Site Config pg15.

L Lot 2 DP 546734

- 111 This property is located immediately to the south of proposed Farm A. The impact of Farm A on this property would be heavily influenced by the intended land use. With regards to any form of **productive use**, any reverse sensitivity effect is not considered to be adverse.
- 112 Regarding amenity from points within the farm, the impact would be similar to that experienced by road users. Initially, the impact will be high in the short term but less as the shelterbelt planting establishes.
- 113 Should the long-term use include residential activity, the effect, if considered adverse, could be mitigated to an extent through the design and location of the house.
- 114 With residential development, it is reasonable to anticipate that planting around the house will be a priority to mitigate the effects of wind in this location.
- 115 Should this occur 3-5 years after the farm's establishment, then the farm's visual impact will be low.
- 116 While specific testing for glare was not undertaken on this Site, due to the similar proximity and relative location this Site has to Site A as 500 Mangamaire Road (OP18), it is assumed the outcomes of the glare testing will be the same.

M Lots 1&2 DP67352 Sec 63A 66 Blk XIV Mangahao – Moores



- 117 This cluster of titles is a working farm with a combined area of 162.7ha. The farm is located west of the application sites, separated from Site A by the Wairarapa Rail line.
- 118 The farm extends from the rail corridor west across the valley floor for half the Site before extending up 80-90m elevation over the hills to Ridge Road South. The cluster comprises 4 sections, and there is no evidence of a building site on any of the sections.
- 119 When on these elevated sites, one would enjoy expansive views of Site A with Site B located into the broader landscape. Due to the scale of the farms, the solar tables will be prominent in the views when looking towards the east.
- 120 As elevated views 1-2km from the sites, the farms will occupy the foreground of a wide and expansive landscape and project a working rural landscape with a particular pattern and aesthetic. The farms would form a prominent subset of this wider landscape. At distances of 1-2km, the industrial detail of the new structures would not be prominent.

SAT Array East potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	183	0
OP: OP 4	302	0
OP: OP 5	357	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	299	0
OP: OP 9	238	0
OP: OP 10	1071	208

Figure 1: Screen shot of test results for OP locations 1-10. OP1, and OP4-10 relate to the Moores property¹⁷

¹⁷ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 11

- 121 In order to gauge the impact of glare on these properties, a number of elevated speculative sites were identified and tested. The results correspond to test locations OP1, 4-10. Figure 1 above shows the results for 11 sites in different places on the Moore property due to glare emanating from Site B.

SAT Array West potential temporary after-image

Component	Green glare (min)	Yellow glare (min)
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tps://www.forgesolar.com/projects/12086/configs/97637/

19/

16/08/2023, 09:02

Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config | ForgeSolar

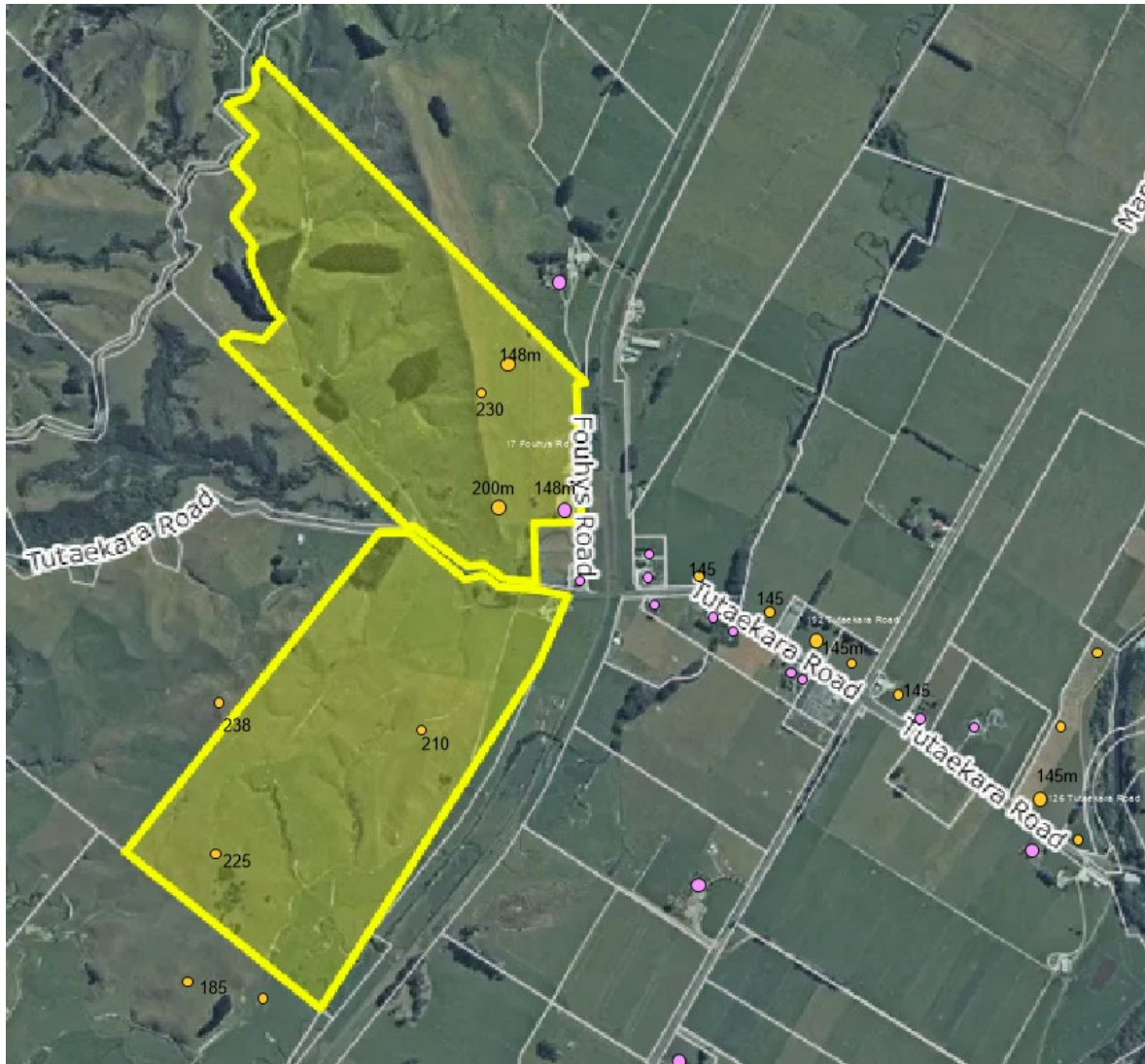
OP: OP 1	0	0
OP: OP 2	21	0
OP: OP 3	0	0
OP: OP 4	646	65
OP: OP 5	932	563
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	1556	0
OP: OP 9	863	1151
OP: OP 10	1630	1821

Figure 2: Screen shot of test results for OP locations 1-10. OP1, and OP4-10 relate to the Moores property¹⁸

- 122 Figure 2 above records the potential glare that could result from Site A on these locations. I will leave a detailed explanation of the implications of these readings to others. The impacts on the identified sites will occur from both sites in the early morning between 5 am and 7.30 am.
- 123 In the absence of glare, the aesthetic of the farms would add pattern and texture to the broader landscape and be a point of interest. The adverse impact of such a view on the broader views enjoyed of the surrounding expansive valley landscape would be **moderate-low**.
- 124 I note the comments made in the Section 42A report and agree with them. Should an elevated development site be considered in the future, the impact of the solar farms can easily be mitigated through the design and location of the new build.

¹⁸ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 19/20

N 17 Fouhys Road (239 Tutaekara Road)



125 It is noted that the owner of these sites is in support of the application.

126 The glint study tested 4 sites within the larger property, OP15 located on the ridge to the north of Tutaekara Road and OP10, 11 and 12 on random elevated locations to the west of Site A.

OP: OP 10	1071	208
OP: OP 11	1082	273
OP: OP 12	1100	209
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	166	0

Figure 2: Screen shot of test results for OP 15 measuring glare from Site B¹⁹

127 Sites OP 10, 11 and 12 all experience a similar impact from Site B, with a maximum of 19-22min of yellow glare experienced between 5 and 7am between the months of October to March, with yellow glare limited to November through to February²⁰.

¹⁹ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 19/20

²⁰ Ibid pg 15 , 16

128 OP10 will be most affected by yellow glare emanating from northern portion of Site A.

OP: OP 10	1630	1821
OP: OP 11	0	0
OP: OP 12	1029	0

Figure 2: Screen shot of test results for OP 15 measuring glare from Site A²¹

129 Anticipated to be a maximum of 43min between 5 and 7am sporadically from October to mid-March. A similar impact will occur on OP12 between 5 and 6am but for a shorter period from mid November to late January.²²

O Foughys Road (Sec90 Blk X SD Mangahao)



130 This property wraps around the back of an existing dwelling.

131 Due to the interference of both the neighbouring building and existing vegetation on the site's southern boundary, views of Site A are only possible from limited points along the Foughys Road boundary.

132 Views from this location towards the subject Site look down Foughys Road, across Tutaeakara Road and along the Wairarapa Rail Line. Site A is over 700m away, and any views of Site B would be blocked by existing vegetation and buildings.

133 The glint study has identified that no glare will impact this location.

134 I consider the impact that the development would have on rural character and/or amenity values enjoyed from this location to be **very low**.

²¹ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 20

²² The time and duration of the glare occasions needs to be confirmed by a revision of the Glint and Glare Report that I have seen and which I reference in this document. pg 23

P 3 Fouhys Road (photo)



- 135 There is an existing dwelling located on this section. View from this location towards the subject site and look across Tutaekara Road and the Wairapa Rail Line.
- 136 Views of both sites are a potential; however there is a reasonable amount of visual interference provided by the existing elements within this landscape that are not impacted by the application.
- 137 Site A is over 650m away, and any views of Site B would be over 700m away.
- 138 The glint study on this location (OP3) has identified that during the months of mid-late May, and mid-August-mid September, 183min of green glare will impact on this location emanating from Site B. No glare will be experienced from Site A.²³
- 139 I consider the development's impact on rural character and amenity values enjoyed from this location to be **very low**.

²³ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 11

O Mangamaire Settlement

140 Glint and glare testing for these sites has returned a zero result for both farms.

- **187-189 Tutaekara Road**



141 This combined property is registered under a single owner and hence the assessment is addressed as a single property. The three sites contain two dwellings.

- **205 Tutaekara Road**



142 All the properties in this cluster are owned by the crown who have not submitted on this application.

143 Site B will not be visible from this location.

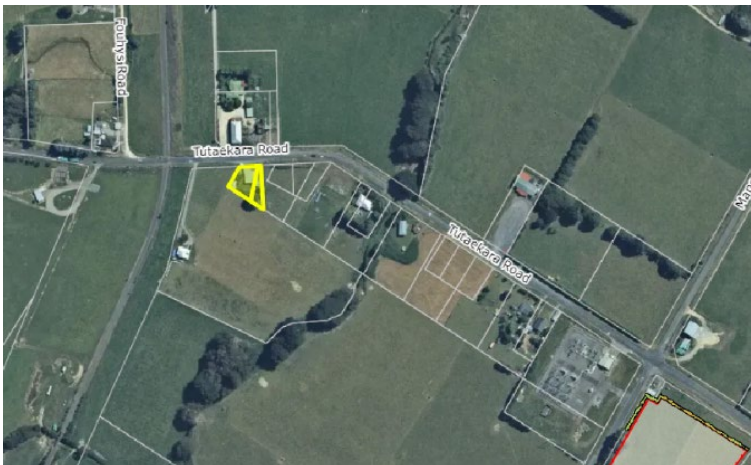
144 With the screening of part of the northern boundary of Site A as proposed, panels, when visible, will be at a distance of over 500m. Given the low amenity values of this location due to the proximity these sites have to the substation, the impact of a distant view of solar panels on the existing amenity values is considered **very low**.

- **209 Tutaekara Road**



- 145 This cluster of properties is registered under the same owners.
- 146 Views of Site B are not possible.
- 147 Existing views of Site A are partially screened by the remnant planting that currently follows the stream bed. With the additional shelterbelt planting proposed in combination with the buffer planting that is proposed near the wetland, when developed, Site A will be substantially screened.
- 148 For the same reasons as set out for 187 and 189 Tutaekara Road, with the screening of part of the northern boundary of Site A as proposed, panels, when visible, will be at a distance of over 500m. The adverse impact due to the partial screening and separation distance, the impact of the development on the amenity of these properties will be **low**.

- **223 Tutaekara Road**



- 149 These two sites are under shared ownership.
- 150 Existing views of Site A are partially screened by the remnant planting that currently follows the stream bed. With the additional shelterbelt planting proposed in combination with the buffer planting that is proposed near the wetland, when developed, Site A will be further screened with only a small portion of the Site un-screened.

- 151 Due to the rural character values of the intervening land and the separation distance of over 500m, I would describe the impacts of the application on these sites to be **low**.

- **229 Tutaekara Road**



- 152 A house has been built in this section.
- 153 From this building site, it is possible to view both sites A – located 540m south of the existing building, and Site B located 500m south east. Both of these view corridors are partially screened by existing vegetation that is not threatened by the application. The views east are interrupted by substantial tree planting along the creek bed. The views south are more open.
- 154 With the mitigation planting proposed, both the buffer planting around the edge of the wetland and the shelterbelt planting to the north of Site A, a narrow portion of the Site will remain exposed.
- 155 This window is approximately 540m away, and the gap is about 80m. The implications of this view on the amenity values of this house site I consider to be **low**.

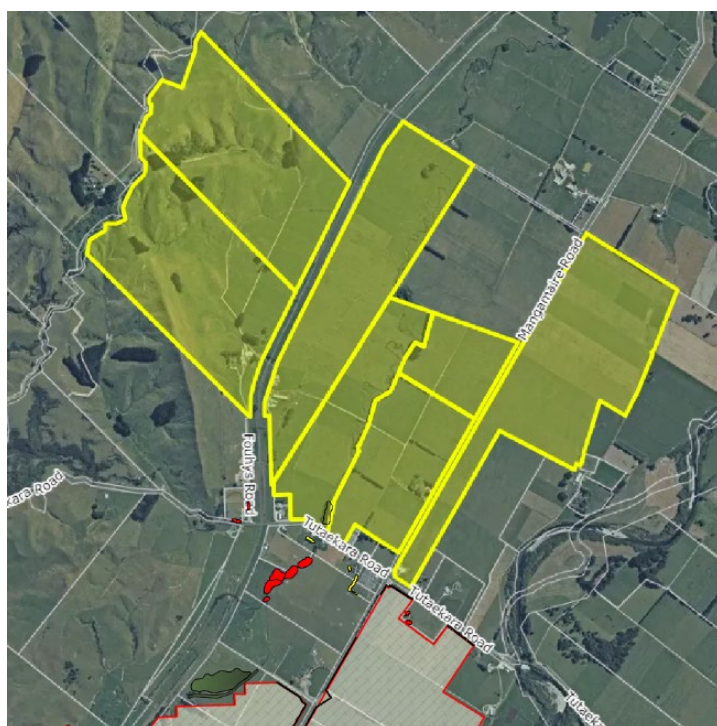
S 126 Tutaekara Road:



- 156 This property is located north of Tutaekara Road. The intervening land is flat and when visible, the eastern portion of Site B will be at a distance of between 60 and 400m.

- 157 The portion of Site B nearest the property will be screened from view by a 3-4m hedge.
- 158 Views of Site B will be visible from points within this property at distances of over 300m when viewing across Part Lot 2 DP 83625, 154 Tutakara Road and Section 7 Block XIV Mangahao SD.
- 159 A number of speculative locations (OP21, 22 and 23) have been tested and these have all returned a zero result for both farms²⁴.
- 160 Should residential development be considered, it is reasonable to anticipate planting to be undertaken around the residence to mitigate the effect of the wind that blows in this area.
- 161 As a consequence of any such planting, the separation distance that exists and the unknown nature of land use within the intervening sections means that the anticipated impact of Site B on this lot would be **very low** after 3-5 years.

T 226 Tutukara Road



- 162 The highlighted cluster of properties falls under a single ownership. The farm spans both the area of flatter land on the historic Mangatainoka River flats before rising at its western end up steep slopes before terminating over the ridge at Ridge Road South.
- 163 Due to the elevation of the ridge, oriented and rising towards the north approximately 60-90m above the height of the farm, it is anticipated that both farms will be visible from points along this ridge. While development on this ridge would be restrictive and complicated, and with a dwelling already located on this title, with the proximity of the road, access to this location is feasible.
- 164 The glint and glare report prepared has tested an elevated location along this ridge (OP 14). It is noted that no glare is anticipated from either farm.

²⁴ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 11&20

- 165 On such an exposed site, planting to mitigate wind is highly likely, with an alternative being to place any building down just off the ridge. Either way, this has the potential to limit the views of the two farms in particular a view looking southeast.
- 166 Depending on the location of any dwelling, the two farms could be up to 1.8km away. In the absence of glare, the farms will be viewed in the context of a wide expanse of pasture and associated planting patterns and will be prominent. The industrial detail of the development would not be apparent.
- 167 Any new dwelling can design to its context, and should the views of the farms be considered unfavourable; they could easily be mitigated through design.
- 168 I consider the impact of the farms on a potential building site located prominently on the elevated ridge line to be **moderate-low** and should measures be taken to address the exposed nature of a building site, as a southeast view, this is likely to be lost in which case the impact of the farms on this area is **low**.

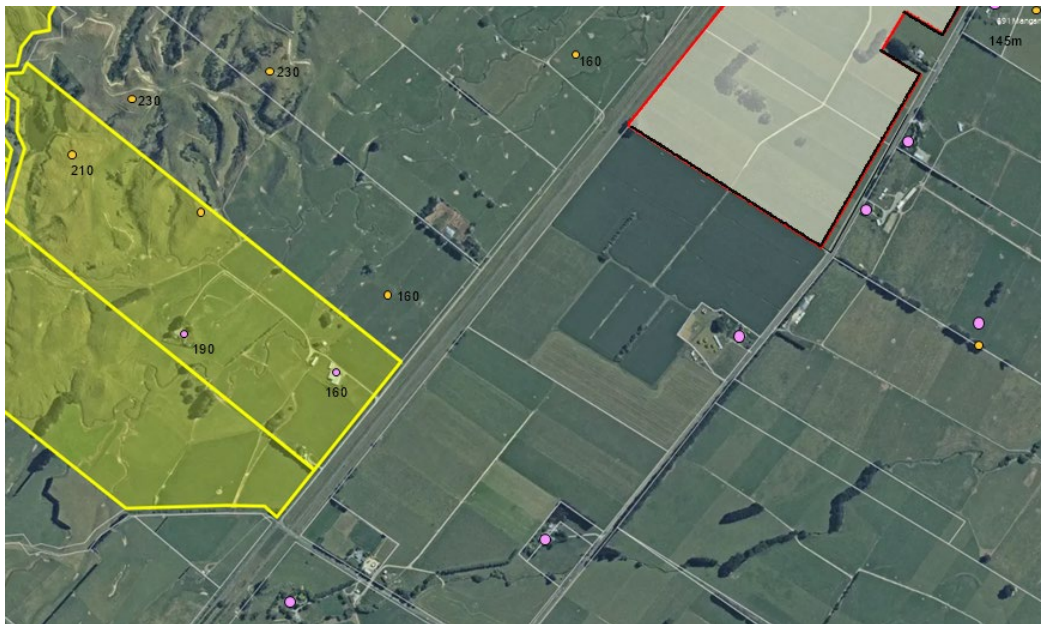
U Lot 2 DP 564748.



- 169 This property is currently without development.
- 170 The property is visually contained on its northeastern and southwestern boundaries by established planting to the northwest and a hedge row separating the Site from Tutaekara Road and screen the Site from the substation located opposite.
- 171 Currently, the Site is fully exposed to Mangamaire Road along its southeastern boundary, devoid of vegetation.
- 172 Views of Site B are currently possible across the intersection of Mangamaire and Tutaekara Roads. The farm buildings located on Lot 1 DP 369469 opposite and the switch station over Tutaekara Road are dominant within this view. (refer to Viewpoint Location Photograph 11)
- 173 The northern corner of Site B, closest to the intersection, will only be occupied when the Site is under construction, housing a variety of containers and small sheds, which will be removed when the project is completed. In the medium term, this corner will be an open paddock.
- 174 When the proposed shelter planting establishes, direct views from this property to the subject site will not be possible. The glint study has identified that no glare will impact this location (OP19).

- 175 I consider the impact of the development of Site B on the amenity and outlook of Lot 2 DP 564748 will be **low**.

V 465 Doughertys Road, Pahiatua.



- 176 There is an existing farmhouse located on 465 Doughertys Road (OP20), and glint and glare testing has found that this Site will not be affected²⁵.
- 177 Views of Site A from the existing dwelling are limited both by distance (at around 1.3-1.5km) and partial screening provided by existing remnant shelterbelts. With the dwelling site elevated above the plains by about 40-50m, the effect of the mitigation planting will be limited, and some extent of Site A will be visible. However, I do not believe it will be prominent. It will form a point of interest (colour and pattern) within a wider rural landscape; however, the visual distance will negate the industrial detail of the structures and panels.
- 178 I consider the visual impact of the farms to be **low**.
- 179 Two elevated sites on this farm, OP2 and OP3, were tested to gauge any effect from the higher points on the farm. It has been shown that OP3 will be impacted by glare emanating from Site B between 6.30 and 7.30 am in late April and from mid-August to mid-September. The duration of the potential glare is anticipated at 3min maximum per day and will comprise equal measures of yellow and green glare.
- 180 Based on the above, I consider the implications of the glare on the potential sites to be **low**.

²⁵ 16/08/2023, 09:02 Tararua Rev5 - SAT - Potential Recep - 2P 3mSB Site Config pg 11&20

W 321 Doughertys Road



- 181 An existing house is located in an elevated location (approx. 60m above the new farms.) Glare testing shows that this Site will not be affected.
- 182 Due to the site's elevation, partial views of Site A will be possible at a distance of 2-3km and while noticeable, the farms will not dominate but form a component of a wider rural landscape. The impact this would have on their amenity values would be **low** and reduced to **very low** as the structures become 'familiar'. When assessed for glare, the results were negative.²⁶
- 183 The **Wairarapa Rail** line runs up the western side of Site A for a distance of 620m before passing the Mangamaire settlement and crossing over Tutaekara Road. Because there is no passenger traffic along this line, the visual impact of the solar farms on users of this rail line is not considered important and so do not give further consideration as part of this assessment.
- 184 The **Mangatainoka River** runs east of Site B in an incised riverbed estimated to be 4-5m below the level of the subject pastures. Mangatainoka River runs east of Site B. The minor terraces and extent of riparian vegetation are evident in the Google image. **(Refer to GA photograph 11)**
- 185 The degree to which this part of the river is used for fishing is unknown. Vegetation lining the banks of the river restrict most views into and out of the river's course. Where gaps exist in this vegetation, offering potential views of the solar structures, the farm is set 170m back from the course of the river. This setback, combined with the depth of the incised river course, will screen the solar structures from users of the river and any impact on amenity or natural character values of the river will be low.

Summary of visual and landscape effects:

- 186 The significance of the visual effect is influenced by the visibility, distance and duration of the view, the scale, nature of the Proposal and its overall visual prominence, and finally, the effect, if any, the Proposal will have on the context in which it is seen. Where glare is present, this will exaggerate the visual effects of the farm in those particular instances.

²⁶ Ibid pg12

- 187 Whether the Proposal is considered appropriate is determined by the visual effects it may have on the receiving environment, and whether the landscape values attributed to this setting are retained or whether, if adversely affected, effects can be satisfactorily avoided, remedied or mitigated.
- 188 In general, landscape values experienced visually include rural scenic outlook (views over rural landscape), the legibility of landforms, the general visual coherence of the expansive paddocks and views of the surrounding hills. It is noted that deer fencing proposed as boundary fencing for the property is a permitted activity and is not explicitly considered as a component of the application.
- 189 The development of a solar farm will introduce a 'rural industrial' component to this landscape however, the essential components of this rural landscape will not be adversely impacted on. While the Proposal will alter the landscape locally, the activity in my opinion remains fundamentally rural. As with other rural activities, scale is an important factor in the economics of any farm and for this reason, a solar farm typically requires a rural location to achieve a workable scale. It can be said that the Proposal represents a rural productive activity for this region that farms or utilises the sun (a natural resource) for the production of electricity.
- 190 While the patterns created by the solar tables are not 'natural' patterns, the patterns created by the solar arrays do represent a way in which people have manipulated a landscape resource to maximise productivity. The solar farm is, as its name suggests, a method of farming a resource. In this instance, the main difference is that the application will introduce an extensive built form to the Site by overlaying over the paddock landscape that currently exists.
- 191 However, the pastoral landcover within the application sites will be retained and grazed and in that sense the Site will retain some consistency with a rural character, in addition to this the setback strips that front the two farms onto the two roads, will retain rural character values both in terms of the grazing required to manage these areas as well as the use and familiarity of the shelterbelt planting.
- 192 It is noted that the solar component of the land use is additional to its primary production through grazing. Sheep grazing and any future primary production potential for the land area affected by the farms remains as the solar farm could be easily removed with no adverse consequences. Soil health and vitality will remain.

The Planning Framework

The Tararua District Council Operative District Plan

- 193 The Site is located within the Rural zone in the Operative Tararua District Plan (DP) The Site is not located within an Outstanding Natural Landscape (**ONL**) and it has not been identified as an ONL or equivalent within the District Plan.²⁷
- 194 A significant issue identified by the plan is achieving an appropriate balance between rural and non-rural activities. The plan also "*acknowledges the benefits of the generation of electricity from renewable resources*" and recognises the potential visual and amenity effects that facilities such as these can have on their environment. This makes such an application a **discretionary activity**.²⁸
- 195 The plan is motivated to ensure that any adverse effects stemming from development can be avoided, remedied, or mitigated, and to this end, establishes objectives and policies against which development proposals can be considered.
- 196 Under **Sustainable and Efficient Rural Landuse**²⁹, the plan sets out a range of objectives and policies, and those relevant to an application of this nature include;

2.3.2.1 Objective: *To achieve sustainable rural land use and efficient use of resources*

2.3.2.2 Policies

(a) *To promote sustainable land management community programs in order to achieve sustainable land use practices which are compatible with the inherent productive capabilities of the land.*

(b) *To avoid, remedy or mitigate significant irreversible losses of the productive capability of the District's Class I and II soils.*

2.3.3.1 Objective *To maintain the vitality and character of the District's rural areas.*

2.3.3.2 (b) *To provide, in rural areas, for activities which require a rural location where their effects are compatible with the surrounding rural area and the environmental results sought for Rural Management Areas.*

2.3.4.1 Objective *To ensure a high level of environmental quality and amenity throughout the rural areas of the District.*

2.3.4.2 Policies

(a) *To ensure that any actual or potential adverse environmental effects of activities are avoided, remedied or mitigated.*

(b) *To maintain and/or enhance the character, level of amenity and environmental quality of the District's rural areas.*

(c) *To reduce the potential for conflict between incompatible activities in rural areas, particularly in the rural-urban fringe, and between existing, lawfully established activities and new subdivision and development.*

- 197 Under **Amenity and Environmental Quality**³⁰ the plan refers to Section 7 of the RMA that requires particular regard to given to "*the maintenance and enhancement of amenity values and the quality of the environment*", which is covered by Objective 2.6.2.1 "*To maintain and/or enhance amenity values and*

²⁷ Tararua District Council – Operative District Plan – Review No 1 – Appendix 3

²⁸ *ibid* Pg 2-14

²⁹ *Ibid* 2.3.2

³⁰ *Ibid* 2.6

environmental quality in the District, for present and future generations" and its related policy "To manage the adverse effects of activities on amenity values by specifying minimum environmental standards for the development and maintenance of such activities."

- 198 Under **Infrastructure**, the plan recognises the importance of renewable electricity generation and recognises the technical and practical constraints that apply to the industry, however, *"it is also in the community's interest that services be provided in an environmentally acceptable manner."*³¹ To assist in this, the plan, through objective 2.8.2.1 and its policies, seek to enable the activities, provided that *"adverse environmental effects are avoided, remedied or mitigate"* and further *"To encourage the co-siting of network utility equipment where practicable"*³² and finally *"To take into account the technical and operational requirements of network utilities and infrastructure in the assessment of resource consent applications for these activities."*³³
- 199 Under **Electricity Generation from Renewable Sources**, the plans objective is to recognise the districts potential for renewable electricity generation³⁴ while at the same time recognizing that they *"have the potential to cause significant adverse effects on the environment, particularly in respect of amenity values, landscape ecology, noise and traffic, and may therefore be inappropriate in some locations."*³⁵ It is for this reason that the activity is considered as a **discretionary activity** and the assessment criteria include matters considering both the benefits and well as the potential adverse effects relating in this instance to amenity values and landscape values.³⁶
- 200 The significance of the effects of an activity will vary depending on the nature of the area and so the District has been divided up into Management Areas on the basis of their existing characteristics and the environmental results sought for the area.
- 201 The application site is located within the **Rural Management Area**, which covers most of the district outside of the urban centers and the plan sets out a range of characteristics that are sought by the plan³⁷. Those relevant to this LVA include:
- (a) *a predominance of rural activities;*
 - (c) *a range of other activities which:*
 - (ii) *are more appropriately located in a rural area than an urban area; and/or*
 - (iii) *provide social, economic, and/or environmental benefits to the District, Region and Nation;*
 - (d) *avoidance of activities that have the potential to give rise to adverse effects which are incompatible with the character of the surrounding rural area or which could adversely affect the ability of rural activities and other lawful land uses to function efficiently and effectively.*
 - (e) *development of buildings and properties which are in keeping with the low density, character and scale of the surrounding rural area.*
 - (f) *maintenance and/or enhancement of the amenity enjoyed by people living within the rural area or in adjoining urban areas.*

³¹ Ibid 2-68

³² Ibid 2.8.2.2a)

³³ Ibid 2.8.2.2e)

³⁴ Ibid 2.8.4.1

³⁵ Ibid 2.8.4.2 b)

³⁶ Ibid 2.8.4.4 a)

³⁷ Ibid 3.2.1 Rural Management Areas

(k) protection of outstanding natural features and landscapes, and significant areas of indigenous natural vegetation and significant habitats of indigenous fauna from inappropriate subdivision, use and development.

- 202 Part 5 of the plan sets out the general development rules that are applicable throughout the district. The application would be considered a discretionary activity under 5.3.7 b) *"The construction, operation and maintenance of renewable electricity generation facilities, ... not otherwise provided for as permitted activities."*
- 203 For a discretionary activity, the assessment criteria other than the purpose and principles of Part II of the RMA relate to the objectives, policies and anticipated environmental results in Part 2, the desired characteristics for the relevant Management Area in Part 3 and the rules and standards as set out in Part 5.
- 204 The relevant landscape criteria for assessment are covered in 5.3.7.4 (d) *"The visual and amenity effects of the facility with regard to the existing character of the area to which the proposal relates, the desired characteristics for the relevant Management Area as set out in Section 3.2 of this Plan, any significant landscapes or natural features identified in this Plan and/or any Regional Policy Statement and/or Regional Plan that applies to the area in which the site of the proposal is located"*
- 205 5.4.7 of the plan is concerned with any glare/lighting associated with a development, with the relevant standard being *"buildings are to be constructed and finished in such a manner as to ensure reflection (glare) from the ... surfaces does not reflect into adjoining properties or adversely affect the vision of motorists on a street or road."* The criteria for assessment are listed in 5.4.7.4 and those relevant to this application include (e) *whether the level of brightness from the surface or lighting is such that it could create a traffic hazard or interfere with the operation of activities on properties outside the Site* and f) *whether the nature of activities on adjoining sites is such that any glare or lighting spill would not be noticeable and would not have a detrimental effect.*
- 206 Landscape screening is not a specified requirement within the Rural Management Area (RMA) however, it is a requirement in an industrial management area when it is located adjacent to or within 20m of a Rural management area. While this does not directly apply to the application, it is recognised that the Proposal has industrial characteristics and is located within the RMA. As such screen planting needs to be 'appropriate' and stipulates *"The purpose of landscape treatment (such as dense planting of trees and/or shrubs or fences) is often to provide a visual barrier in order to reduce the potential or perceived adverse effects of an activity on the amenity of the surrounding area."*³⁸ 5.4.8.2b) stipulates that (b) *In all Management Areas, where an activity detracts in a significant way from the visual amenity of the surrounding area (including exterior storage associated with home occupations, hobbies or other activities), effective screening of the activity from the road and neighbouring properties shall be provided in accordance with the standards for landscape treatment/screening below."*
- 207 When proposed the specified planting needs to be:
- *located in the correct place.*
 - *have sufficient depth to allow the vegetation to grow and provide an effective buffer.*
 - *use plants that are suitable for the particular environment.*
 - *have a maintenance program in place to ensure that plants survive and are replaced if necessary (i.e. should any plants die)*

³⁸ Ibid 5.4.8.1

Summary of the effect on Statutory Requirements;

- 208 As a discretionary activity the Proposal constitutes both a sustainable **and** an efficient rural land use that can easily be removed. The Proposal is the epitome of renewable energy resource and due to the scale of this renewable activity, a rural location is considered essential along with the Site's proximity to an existing power station. As such both the activity and its location can be considered appropriate.
- 209 To mitigate the visual effects of this activity, generous setbacks from roads have been maintained and shelterbelt planting specified which will maintain to a reasonable degree rural character values on these sites. With the ongoing grazing of the paddocks, traditional rural productivity is maintained.
- 210 In my opinion what is proposed does not offend the identified objectives and policies of the plan.

Section 42A report:

- 211 A section 42A report has been prepared by Andrew Bashford with landscape input from Shannon Bray.
- 212 In his Peer Review of Landscape Assessment Report (12 March 2023) the peer review concluded as follows:
*"in my opinion the landscape effects (after full establishment of the flax shelterbelts) will be low-moderate. The farm represents a change in the activity and character of the Site and will certainly be perceived as different and unique. It contains built form that will diminish the pastoral character of the Site. However, it is located in an expansive, generally flat rural landscape that has been highly modified to achieve optimised production. At its core, it is no different to other farming activity, utilising the environmental resource as efficiently as possible, with the exception of the retention of grass under the panels to help retain a pastoral connection. The Proposal also contains some positive landscape outcomes, including the wetland restoration."*³⁹
- 213 I wholly agree with this opinion.
- 214 When considering the effects of individual properties, I note that Mr Bray is in general agreement with the assessments that I have made with the exception of 1 property, 500 Mangamaire Road. My explanation for this is at the time I visited the Site, there was a substantial bank of vegetation along the northern boundary of the property which prevented views of the solar farms. This vegetation has subsequently been removed. With the removal I agree with the impact assessment of Mr Bray that the potential impact would be moderate to moderate high. In response to this assessment we are now proposing to plant a shelterbelt along the southern boundary of Site A which will be managed at a height of 3-4m. After a period of 3-5years, the panels will be screened, and the impact will be **low**.
- 215 A similar situation presents to the lot that wraps around #500. Currently there is no proposed building site to assess, and the proposed shelter belt will address any concerns that these owners may have. In addition, the future location and design of the house can provide further mitigation measures should these be required. I consider the impact to be **low**.

Submitters:

- 216 I have been supplied with a summary of the submissions made with regards this application and note the comments made by Mr Bray.

³⁹ Proposed Mangamaire Road Solar Farm by Energy Bay Ltd Peer Review of Landscape Assessment Report by Rough Milne Mitchell Ltd Peer Review (15 March 2023) pg 7

- 217 A number of submitters have raised concerns with regards glare on potential future building sites and to try and answer those, a number of 'speculative' building site locations have been identified and tested using the appropriate software.
- 218 With regards concerns raise over the use of elevated locations (not yet identified) and their susceptibility to glare, (Submitters 4 & 5), I am in agreement with Mr Bray when he states that with all elevated sites, in the absence of specific development site, should views or glare be considered an issue, and with the temporary nature of the glare in particular, this issue can very easily be addressed within the design of the house.
- 219 Submitter 6 (Stewart Smith) owns Lot 2 DP 564748, any views of Site B will be from the southern boundary of the Site, and I consider the impacts of the application on this Site to be **low**.
- 220 With regards the concerns of using flax plants as a shelterbelt, like Mr Bray, I am not familiar with the concerns raised. However with the issues raised by the electricity lines company, the benefits of the flax plantings with regards height, no longer apply and to comply with the required setbacks we have alternatively opted for the use of managed shelterbelts. Shelterbelts using either Cypress or Totara are now preferred and as far as I am aware do not carry the same concerns with regards the harbouring of rodents.
- 221 Mr Morris has raised concerns about the removal of the existing pines along the Mangamaire Road Site B boundary. Due to the fact that this northern portion of the Site will not now have solar panels in this area, the need to remove these trees no longer exists. They are however old and should they be retained, the retention should be subject to health and safety considerations of the individual trees.
- 222 I agree with the recommendation put forward by Mr Bray regarding the relative location of the security fence and the shelterbelt planting and this is what is proposed.
- 223 Given the anticipated time lag of the various shelterbelts, the screening effect of the shelterbelts will be gradual over a relatively short period of time, possibly as short as two years, to achieve a height at which it becomes effective. Boundary fencing and planting can be undertaken as part of the initial stage of the development which means that as the farm is installed, the shelterbelts are establishing themselves, and the visual effects are increasingly mitigated. I do not consider it critical that they be established in advance.

Attachment:

RORY LANGBRIDGE

A handwritten signature in black ink, appearing to read 'Rory Langbridge', written in a cursive style.

Registered Landscape Architect
16th August 2023