BEFORE THE 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 Managamaire Road, Pahiatua.

REPORT TO THE COMMISSIONER

MR ROB VAN VOORTHUYSEN

SECTION 42A REPORT OF ANDREW DAVID BASHORD – PLANNING

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9 AUGUST 2023

A. INTRODUCTION

Qualifications and Experience

1. My full name is Andrew David Bashford.

2. I hold a degree in resource and environmental planning and a diploma in business studies from Massey University. I am a full member of the New Zealand Planning Institute and an associate member of the New Zealand Institute of Forestry.

3. I have 20 years post graduate experience in planning and have worked across compliance, policy and consenting projects. Between August 2015 and June 2018, I was the Team Leader – Consents at Manawatū-Whanganui Regional Council (Horizons). Prior to that I was a senior planner at Good Earth Matters Consulting and a senior planner at the Palmerston North City Council.

4. Since June 2018 I have been self-employed in my own planning consultancy, Evergreen Consulting Ltd, providing planning services to various councils and private clients for strategic planning, policy development and consenting projects. I also have interests in the forestry industry, being an owner and director of companies that provide forest management and harvesting services to various clients throughout the lower North Island. These forestry interests do not give rise to any actual or perceived conflicts of interest in relation to this application.

5. The Tararua District Council has engaged me to provide planning advice in respect of the assessment of resource consent application 202.2022.136.1, made by Energy Bay Ltd to establish and operate a solar farm at 410 Mangamaire Road, Pahiatua.

6. I visited the site 2 November 2022. I also frequently drive through Mangamaire and am reasonably familiar with the site and surrounding area.

7. I have read and agree to comply with the Code of Conduct for Expert Witnesses as contained in the Environment Court's Consolidated Practice Note (2023). My qualifications are set out above. I confirm that the issues addressed in this brief of evidence are 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.

Introduction and Background

8. Planz Consultants Ltd has made an application, on behalf of Energy Bay Ltd (the applicant), for resource consent to Tararua District Council (TDC) for the establishment and operation a solar farm at 410 Mangamaire Road, Pahiatua.

9. The application was formally received by TDC on 3 October 2022. Further information was requested on 3 November 2022, which was replied to on 20 February 2023. The application was notified on a limited basis to surrounding landowners and occupiers on 1 May 2023. The submission period closed on 29 May 2023 and seven submissions were received, with one in support and 6 opposed.

10. Some of the submissions raised glint and glare as a concern. Whilst the applicant has provided a technical assessment on glint and glare, it does appear to have limited receivers in the assessment as provided. As such TDC attempted to engage an expert to review this aspect further. This proved to be difficult with a limited number of experts available in New Zealand, and those contacted already conflicted for various reasons. As such, additional information was requested from the applicant on 15 June 2023 to provide a more detailed assessment of glint and glare effects on the submitter's properties. On 21 June 2023, TDC received a request from the applicant to suspend the processing of the application under RMA section 91A to allow time to carry out the additional glint and glare assessments and to consult with submitters. This suspension has remained in place until the release of this report. At the time of writing this report, the further information has not yet been made available.

11. During the notification period, Transpower made contact TDC with some concerns about the application and its assets. Transpower owns and operates the Mangamaire Substation and has transmission lines running along Mangamaire Road past the proposed solar farm site. The applicant was made aware of Transpower's concerns and has agreed to a set of conditions proposed by Transpower. This issue is canvassed further later in this report.

12. The statutory timeframes up to the point of notification have been extended by 48 working days (with the applicant's agreement) so that the processing of the consent application is currently within the statutory requirements set by the Resource Management Act 1991. A decision made under s37 is attached as Appendix B.

B. STRUCTURE OF EVIDENCE

13. My report is structured as follows:

A. Introduction and Background (previous section);

B. Structure of evidence (this section);

C. Description of the site and surrounding area;

D. Description of the proposed activities;

E. Assessment of consents required;

F. A summary of the notification process and submissions received;

G. A review of the actual and potential environmental effects;

H. An assessment under the relevant planning/policy framework;

I. RMA Part 2 assessment; and

J. Conclusions and recommendations.

C. THE SITE AND SURROUNDING AREA

14. The application site is located at 410 Mangamaire Road, Pahiatua. The application site and surrounds are described in Section 2 of the applications, with the description considered to be accurate.

15. In summary, site is located on either side of Mangamaire Road near its intersection with Tutaekara Road, approximately 8km south of Pahiatua. Historically the land has been utilised as a dairy farm. The solar farm is proposed to be established over six titles of land which comprise approximately 114ha of

land while the “development area” is approximately 86.93 in area. The site is shown in context to surrounding towns below in Figure 1.

16. As described above, the site is split into sites A and B. Site A is located on the western side of Mangamaire Road and comprises of 48.86ha and is spread over 3 separate land titles. This site is predominantly covered in pasture with scattered trees (many now removed). The site envelops a 1.2ha parcel of land occupied with by a single-storey farmhouse also owned by the landowners of the site. Overhead powerlines (Designation 220) follow the road corridor and the rail corridor (Designation 201) runs along the north-western boundary of the site. A potential wetland is located adjacent to the solar farm site immediately to the north of Site A, which appears to be a remnant from a diverted stream.

Figure 1: *Site Location and Surrounding Area*

17. Site B is located on the south-eastern side of Mangamaire Road. This site is 38.62ha in area and spread over 3 titles. The site is bound by Tutaekara Road and Mangamaire Road. At its southern boundary is a private drive that provides access to an existing quarry at the southernmost corner of the site. Like Site A, Site B is primarily pasture, with a few scattered trees. The Mangatainoka River also lies to the east, adjacent to Site B, as does State Highway 2.

The existing environment and permitted baseline.

18. The existing environment is described in the site description above and within the application. As stated, the site and surrounding area is rural in nature with sheep and beef and dairy farming being the predominate land use. The area does contain industrial elements with the railway adjacent to Site A and the Mangamaire substation located nearby.

19. In terms of the permitted baseline the applicant notes that shelterbelt planting is a permitted activity under the District Plan and that this is considered to be of relevance when considering the effects of the proposal on landscape, natural character and visual amenity values. I agree with this assessment and note that the flax and deer fencing proposed around the perimeter of the site could be considered under the permitted baseline.

20. In terms of the main solar panel structures, inverters and other equipment required, and construction effects, I consider that there is no permitted baseline to apply.

D. THE PROPOSED ACTIVITY

21. Section 3 of the application outlines what the applicant is wanting to achieve. In summary, the applicant seeks to establish and operate a solar farm located at 410 Mangamaire Road, Pahiatua. The proposed solar farm is split across two sites which are on opposite sides of Mangamaire Road. The application refers to these sites as Site A and Site B respectively and these areas are shown below in Figures 2 and 3.

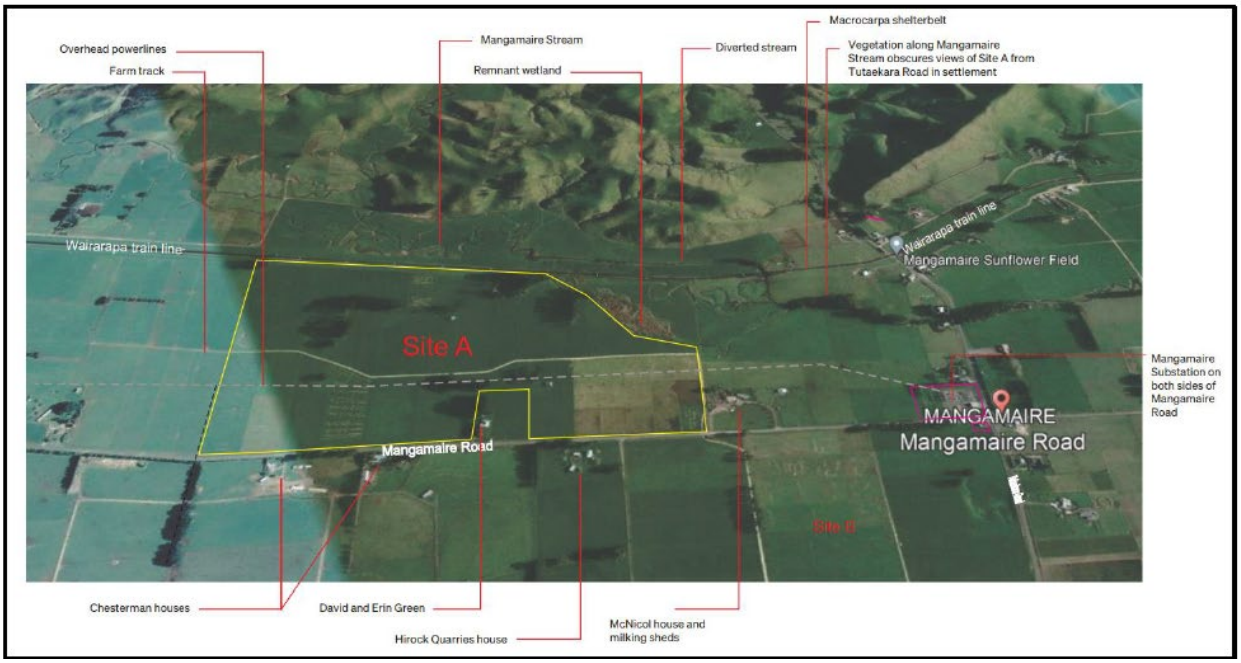

Figure 2: *Site A (taken from Figure 1 in the application)*

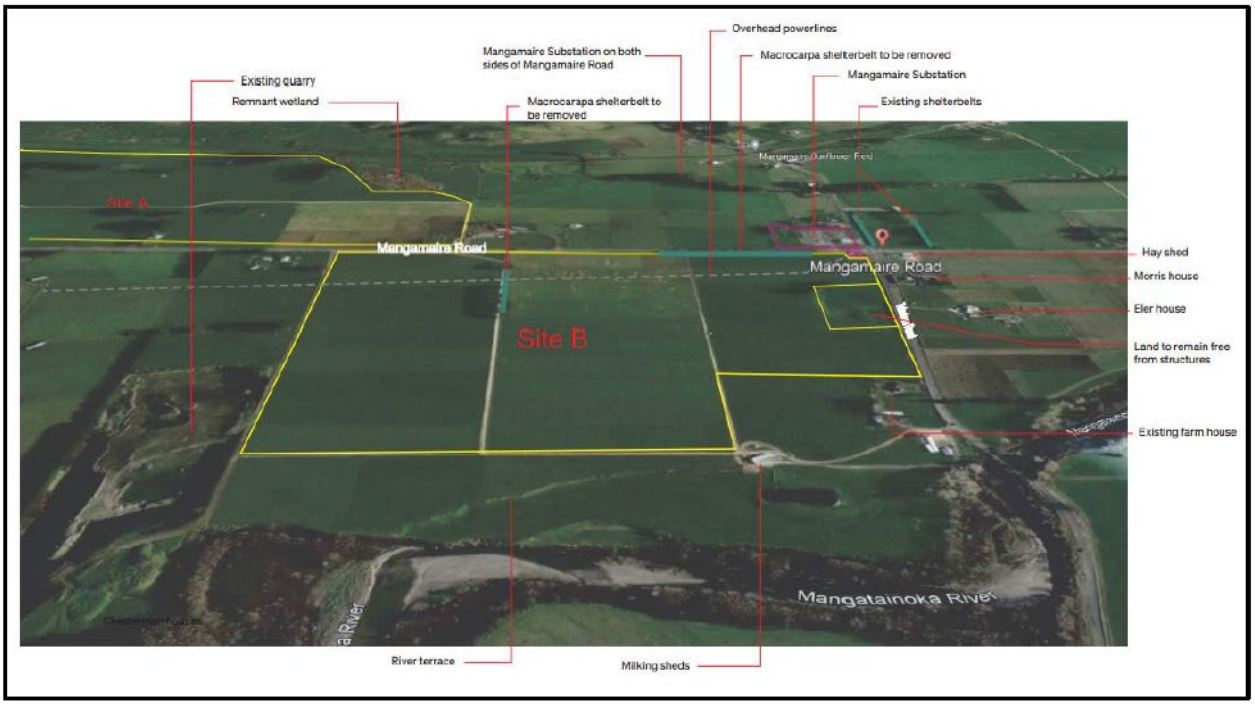

Figure 3: *Site B (taken from Figure 2 in the application)*

22. The applicant provides the following description of the site layout:

"The proposed activity comprises approximately 88,500 solar panels spread across approximately 885 bases which are split between Sites A and B. In Site A to accommodate the existing power lines and farm tracks, the solar panels are

broken into 7 clusters ranging in *size from 1.1ha to 12.4ha with the solar farm being spread over a 32.5ha total area. Site B is spread over 26.82ha and is broken into 5 clusters ranging in size from 0.5ha to 15.2ha. […] Each solar table consists of and measures 52 solar panels long by 2 solar panels wide (totally 104 solar panels per solar table). The dimensions of each solar table is approximately 60m long by 4.9m wide."* Figure 4 below shows an example of how the proposed solar panels will look.

Figure 4: *Example images of the proposed solar farm (taken from appendix 2 of the application).*

23. The proposed site layout is shown in Figure 5 below.

24. In addition to the solar panels the AEE states there will be eleven (11) inverters located across Sites A and B. Each inverter is approximately 2.8m long, 1.6m wide and 2.3m high and are white / off white in colour. The applicant anticipates that the inverters will comply with the noise requirement set out in the District Plan.

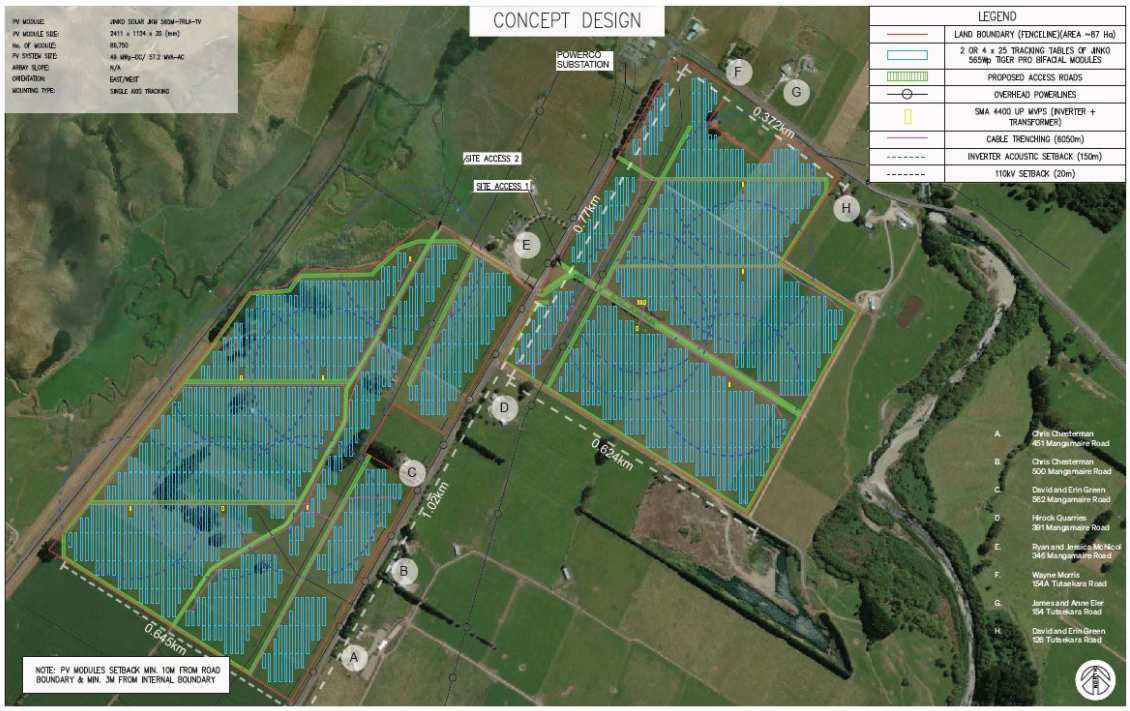

Figure 5: *Proposed site layout showing solar panel locations (taken from Figure 3 of the application)*

25. To facilitate the construction of the solar farm the AEE anticipates that approximately 20,700m^3 of earthworks will be required. This includes earthworks associated with access tracks, cable trenching, creation of bases for the inverters and recontouring of the site.

26. The applicant has undertaken a landscape assessment and as a result has proposed a landscape treatment plan as shown in Figure 6 below. The applicant proposes to plant a staged, two row, landscape buffer around parts of the site. The planting will take place along Mangamaire and Tutaekara Roads where the solar farm directly fronts those roads, and between Site B and the property located at 391 Mangamaire Road. In addition, the site will be surrounded with a deer style fencing arrangement. A small identifying sign is also proposed, although no details of the signage have been provided at this stage.

27. Access to the site will be via existing vehicle crossings which are not proposed to be upgraded. The applicant notes that once construction has finished, movement to and from the site will be limited and infrequent.

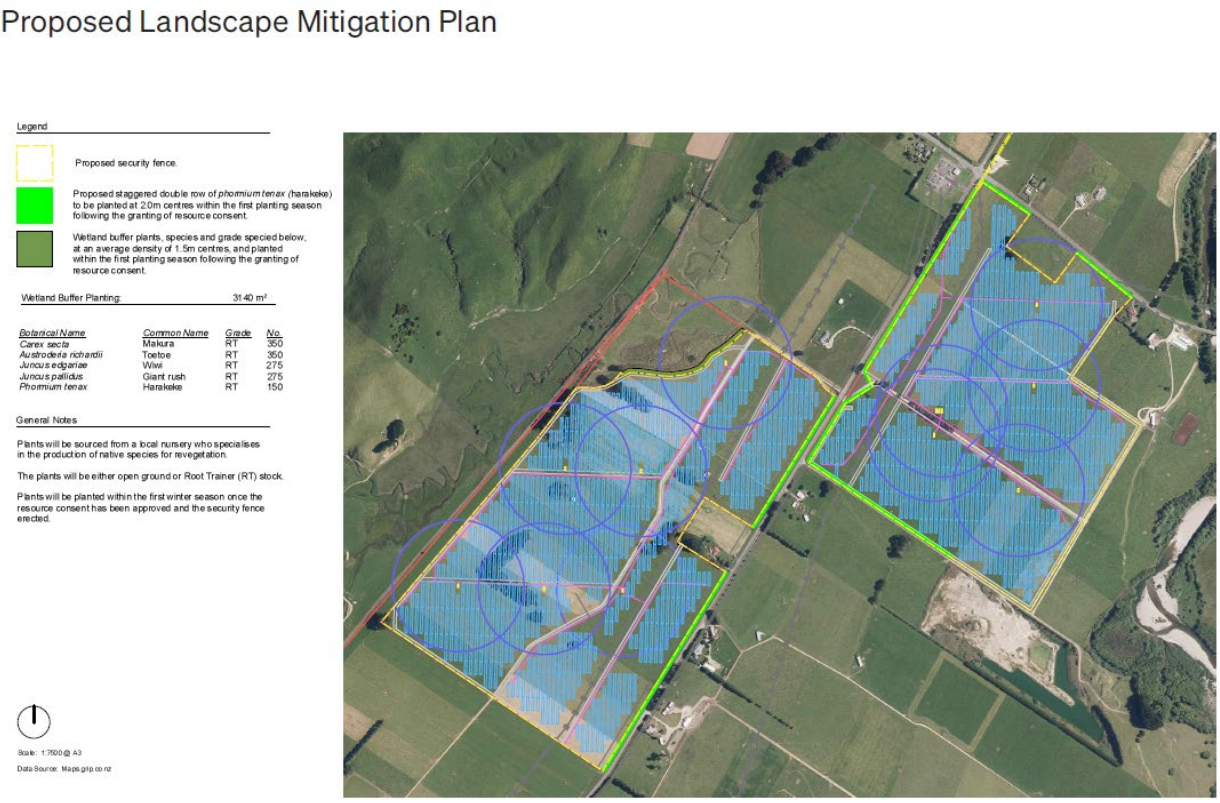

***Figure 6**: Proposed landscape mitigation plan (taken from Appendix 2 of the Application)*

28. Once operational, the applicant intends to graze stock beneath and between the solar panels and inverters. The AEE anticipates that the solar farm will generate approximately 72.69 GWh in its first year which based off an average annual usage of 7,000kwh/NZ home equates to 10,384 homes. The electricity will be fed into the existing substation at Mangamaire.

E. CONSENTS REQUIRED

29. The applicant has set out the reasons for consent in section 4 of its application. Section 4.1 – 4.4 of the application includes an assessment against the Tararua District Plan. I largely agree with the assessment, and I agree with the applicant's conclusion that the application is a Discretionary Activity under the Tararua District Plan.

30. In summary resource consent is required under the following:

A. Rules 4.1.6.1 and 5.3.7.2 – Renewable Electricity Generation Facilities – Discretionary Activity. The proposal is unable to meet standard 5.3.7.2 as the it is a new activity.

B. Rule 5.1.5.3 – Earthworks – Discretionary Activity. The proposal is unable to meet standard 5.1.5.2(b) as the earthworks will exceed 1,000m^3.

C. Rule 5.4.7.3 – Glare and artificial lighting – Discretionary Activity. The proposal is unable to meet standard 5.4.7.2 as the solar panels will result in up to 15 minutes of glare per day at Mangamaire Road between October to March each year.

31. Resource consent is also required from Manawatu-Whanganui Regional Council for the disturbance of land greater than 2500m^2 in any one year. The applicant has advised that it will apply for this upon successfully gaining consent for the solar farm. Given the activity is a controlled activity, and therefore must be granted, I consider it acceptable for the applicant to apply for this consent at a later date.

32. Resource consent requirements under the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) is also canvassed in section 5 of the application. The applicant notes that the proposed solar farm site is not a HAIL site, but the connection point to the nearby Mangamaire substation would be on a HAIL site. However, the applicant has determined that due to the low volumes of soil disturbance no consent is triggered. I agree with this assessment.

Overall Activity Status

33. The proposed activity is a discretionary activity under the Tararua District Plan.

F. NOTIFICATION AND SUBMISSIONS

34. The application was notified on a limited basis to the owners and occupiers of surrounding properties on 1 May 2023. The submission period closed on 29 May 2023 and seven submissions were received, with one in support and 6 opposed.

A copy of the notification report is available on TDCs website at https://www.tararuadc.govt.nz/__data/assets/pdf_file/0019/115336/5-Mangamaire-Solar-Farm-Notification-Recommendation-Application-to-establish-a-solar-farm-by-Energy-Bay-Ltd.pdf

35. A summary of the submissions is included in **Table 1** below:

Table 1: Summary of Submissions

No.	Submitter	Affected Property	Heard	Support/ Oppose
1	Abbe Hoare	17 Fouhys Road	No	Support
2	Amy Blackwell	192 Tutaekara Road,	Yes	Oppose
3	HiRock Limited, c/- Josua Grobler	Quarry at 391 Mangamaire Road	No	Oppose
4	Patricia, Terrence, and John Moore	Doughertys Road Lots 1 & 2 DP 67352 and Sections 63A, 65, & 66 Block XIV Mangahao	Yes	Oppose
5	Ken and Steph Norman	Doughertys Road Lot 2 DP 67352	Yes	Oppose
6a	Stewart Smith - joint submission	126 Tutaekara Road	Yes	Oppose
6b	Karen Smith - joint submission	126 Tutaekara Road	Yes	Oppose
7	Wayne Morris	154A Tutaekara Road	-	-

To give context to the submitters concerns, Figure 7 below shows the general location of the properties they refer to in their submission.

Figure 7: *Property location of each submitter.*

36. The submissions raise concerns regarding noise, glare and landscape (visual) effects. A neighbouring quarry has also raised reverse sensitivity effects. These matters are addressed below in Section G of this report and, where applicable, in the reports of the technical experts which are appended to this report.

Summary Of Submissions

37. I have read all of the submissions and undertaken an analysis which is shown in **Table 2** below and identify the key issues and points raised by submitters.

38. It is noted that some submitters have raised effects on property values as a concern. It is not appropriate for effects on land values to be considered as an additional effect of the proposal. To do so runs the risk of double weighing the effect on the environment, as property values are simply a reflection of the actual effects on the property. This concept is explored in paragraphs 229 to 264 (with specific reference at paragraphs 254 and 255) of Environment Court decision Foot v Wellington City Council (W73/98), 2 September 1998 (attached as Appendix C).

Table 2: Summary of issues raised and outcome sought:

Issue / points raised	Raised by submitter
Noise	2, 4, 6a/6b, 7
Effects on land value	4, 5, 6a/6b, 7
Landscape (visual effects)	4, 5, 6a/6b, 7
Glare	2, 4, 5
Construction effects including noise, traffic, dust and power cuts	6a/6b, 7
Time it takes for mitigations (shelterbelt) to establish and be effective	2, 7
Rats and stoats living in the proposed shelter belt	4, 7
Effects of reverse sensitivity (dust) from neighbouring quarry	3

Outcome sought	Raised by submitter
Support the solar farm	1
Seek that the proposal is declined/ rejected	4, 5, 6a/6b,
Require further information and discussion before proposal is approved	2, 3, 7

G. EFFECTS ON THE ENVIRONMENT

39. The proposed activities may result in actual or potential adverse on the environment in several different ways. Actual and potential effects may include construction and operational noise, construction traffic, effects on landscape and visual amenity values, and glint and glare. The submitters have identified concerns with potential effects as outlined in **Table 2** above.

40. To inform my assessment, the following experts have been engaged to review the application:

- Mr Shannon Bray, Landscape Architect, Wayfinder
- Mr Stephen Chiles, Acoustic Consultant, Chiles Consulting

41. Comments from the above experts have been incorporated into my effects assessment below. Messrs Bray and Chiles reports are attached as Appendices D and E respectively.

42. Further information has also been requested from the Applicant in respect of glint and glare. It is expected that this information will be provided in the Applicant's evidence to the hearing panel.

Landscape and visual amenity

43. As part of its application, the applicant has provided an assessment of landscape effects by Rough Milne Mitchell Ltd. This has been reviewed by Shannon Bray of Wayfinder, on behalf of Tararua District Council. Mr Bray notes his disagreement with assertions made regarding permitted baseline effects, particularly regarding the likening of the solar farm to large glasshouses, which is a permitted activity within the District Plan. I agree that the permitted baseline argument is weak, especially when considering that the Mangamaire valley has no notable glasshouses, and I have not relied on any such permitted baseline in my assessment.

44. In terms of the landscape itself the applicant notes the area has high overall rural character values, contributed to by associated values of openness, expansiveness, lack of built form, natural character and legibility, and describes the site as part of a much larger "working landscape". Mr Bray agrees with this assessment.

45. Mr Bray separates the effects into two distinct categories being landscape effects and visual effects. Mr Bray describes visual effects as a subset of landscape effects and therefore he has a preference of considering landscape effects first.

46. Mr Bray describes landscape effects as a change in the character or value of a landscape. Mr Bray goes on to detail that visual effects are related to the way in which people view or visually experience the landscape and if the change becomes a dominating aspect of the landscape.

47. With regards to landscape effects Mr Bray notes that the applicant finds the absorption capacity of the landscape to be low – meaning that any changes are noticeable and difficult to mitigate. Mr Bray agrees with that assessment. In terms of the addition of the solar farm to the landscape Mr Bray notes that while the farm itself appears to be large, it sits within a very expansive landscape, located in an area that is not heavily populated or widely traversed. The low height of the panels means that it is only likely to be visible from the road corridors and properties opposite or immediately adjacent, noting that in time (4-5 years) the panels will not be easily visible once the perimeter planting has established. Mr Bray is of the opinion that, for the casual traveller, this represents a small portion of a wider journey across the landscape that takes in other productive rural land uses and outward views.

48. Mr Bray has noted that the solar farm will result in a change to the landscape character of the locality, and likely change the way local people associate themselves with the area. Mr Bray has expressed the opinion that the effects may be more than minor. I agree with Mr Bray that the effects will be more than minor until the proposed mitigation planting is established at which point the effects would reduce as the solar farm become more screened from view and less dominant in the landscape.

49. With regards to visual effects, it is noted from the application that the proposal will be highly visible from Tutaekara and Mangamaire Roads within 300 metres of the proposed site. It confirms that from both roads the site will be prominent as a viewer passes by, particularly along the section of Mangamaire Road where the farm will be on both sides of the road.

50. Mr Bray notes that the key points raised by the application is that the solar farm will reduce longer views across the rural landscape, there will be some “yellow glare” for short periods of time (in the evenings), and that generally the visual catchment is restricted locally. Mr Bray agrees with the applicant’s assessment in this regard but also points out that while the length of time and extent of farm that are visible are both relatively low, for local people who travel the surrounding roads regularly the solar farm is likely to become somewhat of a localised landmark. Mr Bray is of the opinion that in the early stages of its development, it

will likely draw specific attention away from other aspects in the landscape that might have ordinarily been the viewer's focus.

51. To mitigate this change, the applicant intends to establish a flax shelterbelt along the road boundaries. While this establishes, Mr Bray of the opinion that visual effects will be moderate, particularly along Mangamaire Road, reducing to low-moderate once established. I note Mr Bray's conclusion is qualified by the fact that, except for local residents, people generally move through this locality and the effect is only in a localised area affecting persons residing in that area.

52. Submitters 4, 5, 6a/6b and 7 have all raised landscape and visual effects as a concern. The properties referred to by submitters 4 and 5 are located to the west of the solar farm site while 6a/6b and 7 are to the north.

53. Both submitters 4 and 5 state that they have future plans to build dwellings on land that overlooks the Mangamaire valley and solar farm site. They state that the solar farm would be invasive and would effectively ruin their plans to build. Both submitters also have concerns about glint and glare. From my visit to the site, I noted that the land to the west of the solar farm site gently rises from Dougherty's Road before rising steeply into hill country. Generally speaking, it is likely that the solar farm will be visible in the view from dwellings if they were constructed on this land. However, without knowing exactly where any such dwelling was to be located or its orientation it is difficult to assess an exact level of effect. Although it would be a permitted activity to construct a dwelling on the land, at this stage no dwellings exist and no building consent applications for dwellings have been lodged with TDC and the land is farmland. Given this, if the solar farm proceeds, any future dwelling can be designed to take the solar farm and its visual effects into account.

54. Submitters 6a and 6b have raised a similar concern as submitters 4 and 5 in that they own a piece of vacant land with intentions to on sell for residential purposes, should the need arise. The submitters have a concern that the solar farm could affect the lands saleability due to in close proximity to and facing the solar farm site. The subject land is approximately 4.2 hectares in area and is effectively a 'lifestyle block' and is directly opposite Site B of the solar farm. Any dwelling constructed on the land will likely face Tutaekara Road and the solar farm site. I

note that the applicant has proposed landscaping along Tutaekara Road in this locality that will screen the solar farm from the site. As set out above, any visual effect will be more significant until the landscaping screening matures and reaches sufficient height. However, no dwelling has been applied for as yet, and depending on timing the screening could well be matured before the site is used for residential purposes.

55. Submitter 7 has raised concerns about the existing mature trees on the solar farm site, the use of flax for screening and the length of time between the planting of the landscape screening and its maturity. The existing trees on the solar farm sites are not protected under the District Plan and could be removed at any time as permitted activities. During my site visit I noted that some trees had already been removed and others were in the process of being removed. Mr Bray has noted that the use of flax as perimeter screening would be appropriate and fits in with the existing environment where flax along road margins is not uncommon.

56. I agree with the submitter that a five year wait for the perimeter planting to provide full screening is a long time to wait. It is noted that the applicant has offered a condition to require the landscaping to be established (planted) prior to the construction of the solar farm. I agree with the imposition of such a condition. It will allow for partial visual mitigation to be in place from the start of the project and before the solar farm is operational.

57. Several submitters have also suggested that flax will be a breeding ground for rats. I am unsure as to the accuracy of this but recommend a condition to the effect that the applicant produces a pest management plan to control any vermin or pests around the solar farm site.

Noise

58. The application includes an acoustic report prepared by Marshall Day, which recognises the key operational noise source is the inverters. Marshall Day also note that transformers and tracker motors will also generate noise but to a lesser degree than the inverters.

59. Mr Stephen Chiles of Chiles Consulting has reviewed the acoustic report on behalf of TDC. Mr Chiles notes that the predictions show compliance with daytime

and night-time permitted activity standards (55 dB and 45 dB respectively) at all neighbouring dwellings with the solar farm operating without any attenuation or mitigations.

60. Mr Chiles comments that while MDA includes cautious assumptions, there remains inherent uncertainty associated with the prediction, particularly in relation to the assumed source levels in Table 3 (Table 3 being a table which shows the predicted noise levels from each device which may emit noise). In addition, Mr Chiles notes that MDA has applied a 5dB penalty for special audible characteristics (tonality), whereas under NZS 6802 this could be 6dB, increasing calculated levels by 1dB.

61. Mr Chiles has also commented on construction activity, traffic noise and vibration. With regards to traffic Mr Chiles notes that the applicant intends to comply with the District Plan noise limits. Mr Chiles does not raise any concerns with this.

62. With regards to vibration, Mr Chiles notes that this has not been addressed. However, based on his experience he is not expecting that the solar farm will result in any adverse effects and will be negligible beyond the site boundary.

63. With regards to construction noise, the sound criteria set out in NZS 6803: 1999 Acoustics - Construction Noise is applicable. The MDA report identifies that construction noise limits may be exceeded at some nearby dwellings depending on the construction techniques used. However, the applicant has confirmed that it will comply with the construction noise standards and expects a condition to specify this.

64. With regards to effects on any individual, the applicant has shown that the noise expected to be generated from the solar farm to be within the noise limits of the District Plan at all sensitive receivers. This has been reviewed by Mr Stephen Chiles who largely agrees with the applicant's assessment.

65. With regards to construction noise, it is noted that the applicant has not applied for a resource consent to exceed the construction noise limit. This issue was clarified with the applicant, and it has confirmed that it will comply with the construction noise limits and expects the limit to be set as a condition of consent.

66. Concerns about noise has been raised in submissions 2, 4, 6a/6b, and 7. Based on the information supplied, and the recommended conditions of consent I am satisfied that this matter can be mitigated to the extent it is less than minor.

Safe and Efficient Operation of the Roading Network

67. In terms of the local roading environment the applicant's AEE reports that Tutaekara Road is a connector road, that crosses the valley with a traffic count of 1415vpd. The applicant's AEE notes it provides an important link for the residents within Mangahao River valley and the Marima Domain to SH2 and linking to Pahiatua. Mangamaire Road is a minor road, with the AEE noting a traffic count of 114vpd, that runs parallel with the valley and SH2. During my site visit I noted that both roads are sealed and have long straight sections of road affording good sightlines. Access to the site is from existing formed accessways to Mangamaire Road which is a low traffic volume environment.

68. The applicant has assessed traffic in so far as the noise it will potentially generate, as discussed above. I am comfortable that it will be able to manage the traffic to comply with the District Plan noise limits. It is also noted that the earthworks on site will be cut and fill neutral. The volume of construction traffic has not been assessed or defined by the applicant; however, it can be expected that solar farm components will be trucked in, and contractors will travel to and from the site during construction. Given the road layout and low traffic volumes, the roading network is expected to cope with this traffic with little effect on the safe operation of the network.

69. In the longer term, post construction, I agree with the applicant that the site is unlikely to generate a large volume of traffic. This has been raised also in the submissions of 6a/6b and 7.

70. Overall, with the sightlines available and low traffic environment in which the site will be accessed, combined with the fact that the construction is temporary, I consider that effects on the roading network and surrounding neighbours can be mitigated to the extent that they are less than minor.

Reverse Sensitivity

71. It is noted that there is a quarry adjacent to Site B on the property at 391 Mangamaire Road, Pahiatua. The further information request asked that the applicant consider any reverse sensitivity effects that may arise, such as dust emissions landing on the solar panels.

72. The applicant advised that this is not of concern and that the solar panels are regularly maintained to mitigate dust annoyances.

73. However, the owner of the quarry has submitted and raised that they are concerned with the potential reverse sensitivity effects. The submitter has requested that there be open discussions on the matter.

74. I anticipate the applicant will have further information or update about what discussions have been had with the submitter and any outcomes or proposed conditions of consent to address this matter.

Glint and Glare

75. The applicant has provided a glint and glare report with their application written by Vector Powersmart. This report concludes that Site A will not result in any glint and glare effects.

76. For Site B a green and/or yellow glare will occur at Mangamaire Road (between 6pm to 8pm, October to the start of March, for less than 15 minutes per day for a total of 1,448 minutes annually). Site B will also generate glare for up to 2 minutes annually at Tutaekara Road. Two further observation points were also modelled, both on Mangamaire Road opposite Site A. These were observed to have glint and glare effects of up to 2 minutes annually each. Given the low traffic volume on Mangamaire Road and the very low length of time of glint or glare I consider effects on the roading network to be minor.

77. As discussed above, glint and glare from solar panels can have effects on neighbouring properties. In this instance submitters 2, 4 and 5 have raised concerns about glare. As stated above, the applicant's assessment does not include receivers other than in the immediate vicinity of the solar farm site. Further information has been requested from the applicant specifically to

determine effects on submitters dwellings. It is expected that his information will be provided in the applicants hearing evidence.

Natural Hazards

78. In its application, the applicant advises:

"A small part of both Sites A and B of the solar farm are located within an identified flooding overlay. Although difficult to tell when comparing the site plans to the flooding maps it appears as though the solar tables and other associated infrastructure will fall outside of the areas prone to flooding. For Site A, the flooding overlay appears to be concentrated around the area that has been identified as a potential wetland. A setback is proposed to this area along with further wetland appropriate planting to act as a buffer. For Site B, the land where the solar tables are to be established is a river terrace approximately 4-5m above the Mangatainoka River and the development will be setback approximately 180-200m from the riverbed itself."

79. The earthworks required to establish the development will not result in changes to the land contour ensuring that flood risk will not be spread onto other people, property and infrastructure in the surrounding area. The site will also retain its pasture cover and/or be planted in crops ensuring that soil permeability is retained."

80. I agree with this assessment and note that the feedback from Horizons Regional Council indicates that flooding is largely confined to the bed of the Mangatainoka River. As such, I do not consider that the development will exacerbate or worsen any flooding.

81. With regards to other natural hazards such as earthquakes and liquefaction, I note that the proposed activity will not result in any habitable buildings, nor will it create or exacerbate the likelihood of an earthquake occurring.

82. Overall, I agree with the applicant's assessment and do not consider that the development will cause or worsen any risk from natural hazards.

Cultural

83. It is noted that no sites of significance are listed in the District Plan within or adjacent to the site.

84. Rangitāne o Tamaki nui-ā-Rua advised TDC, when the application was initially received, that while they had been consulted with, not all its recommendations regarding planting of the wetland on the west of the site and conditions regarding archaeological discoveries had been incorporated by the applicant. Despite being served notice of the application, Rangitane did not submit.

85. The applicant has also provided correspondence of consultation undertaken with James Kendrick on behalf of Ngati Kahungunu prior to lodgement. The email provided shows that Mr Kendrick conditionally supports the solar farm application through to the next stage. However, it is expressed that Mr Kendrick would like to see further involvement in the project. Ngati Kahungunu were informed of the application being received by TDC on 28 September 2022. No further correspondence was provided.

86. Given the feedback from Rangitane in regard to potential archaeological sites I have recommended conditions relating to accidental discovery.

87. With respect to the wetland area, the applicant has excluded that area from the solar farm site and provided a ten-metre buffer around it. This is in accordance with the requirements of the National Environmental Standards for Freshwater. The applicant has stated that it will revegetate the wetland edge using locally wetland buffer species. If the applicant wishes to work with Rangitane on this further, it can do so outside of this consenting process. In any case, a condition is recommended that the wetland buffer be planted in accordance with the Proposed Landscape Mitigation Plan.

Other Matters

88. As mentioned above Transpower have made contact with TDC in respect of the proposal and potential effects on its own infrastructure, specifically the 110kV transmission lines that run along the Mangamaire Road corridor. Several discussions have taken place between the applicant and Transpower with a set

of conditions proposed by Transpower being adopted by the applicant. The conditions are included in Appendix A.

Conclusions

89. Based on my assessment above I am confident that the potential or actual effects can be mitigated to levels where they can be considered to be minor overall. It is acknowledged that there may be a period of time where the landscape screening does not offer full screening, but it is expected that the flax will provide partial screening within one or two years. With appropriate conditions of consent it is considered that adverse effects can be managed to acceptable levels.

H. PLANNING / POLICY FRAMEWORK

90. Section 104(1) (b) requires the consent authority to have regard to any relevant provisions of national environmental standards, national policy statements, the New Zealand coastal policy statement, regional policy statements and relevant district plan or regional plan. The applicant has provided brief assessments of the Regional Policy Statement, Regional Plan and the District Plan it its applications.

91. The following sections outline the applicability of the above statutory documents and makes assessments against those documents as necessary.

National Environmental Standards

92. The following National Environmental Standards are currently in force.

- National Environmental Standards for Plantation Forestry 2017
- National Environmental Standards for Air Quality 2004
- National Environmental Standard for Sources of Drinking Water 2007
- National Environmental Standards for Telecommunications Facilities 2016
- National Environmental Standards for Electricity Transmission Activities 2009
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011
- National Environmental Standards for Freshwater 2020

- National Environmental Standard for Marine Aquaculture 2020
- National Environmental Standard for Storing Tyres Outdoors 2021

93. The applicant has identified the following two National Environmental Standards as being relevant to the processing of this application.

    i. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NESCS)

    ii. National Environmental Standards for Freshwater 2020 (NESF)

94. I agree with the applicant and do not consider any of the other national environmental standards to be applicable.

95. With regards to the NESCS, the applicant advises the site is not known to be a HAIL site. The applicant has identified that electrical and electronic works, power generation and transmission is a HAIL activity and as such any works (e.g. Earthworks) associated with laying cables within the substation site will be subject to the regulations. However, the applicant states that it will be within the permitted threshold allowed under the regulations. I accept this and consider this standard is not applicable.

96. The NESF is relevant insofar as disturbance occurs next to the identified wetlands. Within section 6 the applicant has assessed the relevant regulations and consider it is able to comply, and no consent is required. I accept this and consider this standard is not applicable.

National Policy Statements

97. The following National Policy Standards are currently in force.

- National Policy Statement for Highly Productive Land 2022
- National Policy Statement on Freshwater Management 2023
- National Policy Statement on Urban Development 2020
- National Policy Statement on Renewable Electricity Generation 2011
- New Zealand Coastal Policy Statement 2010
- National Policy Statement on Electricity Transmission 2008

98. The applicant has identified the following policies as relevant to the application.

A. National Policy Statement on Renewable Electricity Generation 2011 (NPSREG)

B. National Policy Statement on Electricity Transmission 2008 (NPSET)

C. National Policy Statement for Highly Productive Land 2022 (NPSHPL)

99. I agree with this assessment and canvas them below in turn.

100. The NPSREG was introduced in 2011. I agree with the applicant, in section 11.2 of its AEE, that it has a significant role in promoting renewable electric generation. I also agree that it provides strong directional support for the establishment of new renewable electricity generation activity where the resource is available and the connection to existing infrastructure, especially the national grid within policy C1. In addition, Policy A1 requires decision makers to recognise the benefits of renewable energy while Policy B1 requires decision makers to have regard to targets relating to renewable energy generation.

101. In this instance, it is clear the location meets Policy C1 being next to an existing substation. I have also reflected on the applicant's assertion that the solar farm will be able to generate power for approximately 10,384 homes. I agree that this assists with the government targets relating to renewable energy generation and the consequential reduction in greenhouse gases.

102. With regards to the NPSET the applicant notes "*The National Policy Statement on Electricity Transmission sets out the objective and policies for managing the electricity transmission network. It gives guidance across New Zealand for the management and future planning of the national grid. The proposed solar farm will connect to the national grid so that electricity generated at the site can effectively be distributed".*

103. In addition to this I note that Policies 10 and 11 seek to manage the adverse effects of third parties on the transmission network. As stated, Transpower and the applicant have agreed on a set of conditions that will manage any effects on the transmission network.

104. Lastly is consideration of the National Policy Statement for Highly Productive Land. The NPSHPL came into force in 2022. I consider it is relevant as the land

on which the proposal is located is predominantly LUC Class 2, meeting the interim definition of highly productive land.

105. The NPSHPL requires councils to avoid inappropriate use or development of highly productive land that is not land based primary production (Policy 8 and Clause 3.9(1)). A use or development is considered inappropriate unless one of the matters contained in Clause 3.9(2) applies to the use or development and the matters under Clause 3.9(3) are applied. The matters in Clause 3.9(2) include whether the use is associated with specified infrastructure and there is a functional or operational need for the use to be on highly productive land. Specified Infrastructure includes infrastructure that is recognised as regionally or nationally significant in a National Policy Statement or regional policy statement or regional plan. The need to develop, operate, maintain and upgrade renewable energy generation activities throughout New Zealand is recognised as a matter of national significance in the NPS for Renewable Electricity Generation. Likewise, renewable electricity generation is recognised in the Manawatu-Whanganui Regional Policy Statement as having regional significance. I am satisfied that the proposal meets the definition of 'specified infrastructure' under the NPSHPL.

106. The functional or operational need for the solar farm to be on highly productive land in this instance is its locality adjacent to a substation that feeds the National Grid. Whist this is not essential and a new transmission line could be constructed, the location does mean a transmission solution is not require, meaning the solar farm has more chance of actually being constructed. In my opinion this provides a functional and operational need for the solar farm to have success.

107. In addition to the above TDC must take measures to ensure that any use or development on highly productive land minimises or mitigates any actual loss or potential cumulative loss of the availability and productive capacity of highly productive land in their district; and avoids if possible, or otherwise mitigates, any actual or potential reverse sensitivity effects on land-based primary production activities from the use or development.

108. In this instance I consider that there will not be any loss of productive land. While the land will be used for an alternative use, the land will still be available for rural

productive purposes. The applicant states that it will be able to run sheep alongside the solar farm to graze grass that will be maintained under the panels.

109. Overall, I consider that the solar farm meets the requirements under Clause 9.3 of the NPSHPL and that he NPSHPL does not prevent the granting of the application.

Horizons One Plan

110. The Horizons One Plan contains the Regional Policy Statement (RPS) in Part 1 and the Regional Plan in Part 2. Part 3 contains a series of schedules specifying things such as surface water management zones and water quality targets.

111. As no consents are being applied for under the Regional Plan the assessment below focuses on the RPS provisions.

Regional Policy Statement

112. Although not identified within the application I consider there are several sections of the RPS which are relevant to the applications. In particular, Chapter 2 (Te Ao Maori) and Chapter 3 (Infrastructure, Energy, Waste, Hazardous Substances and Contaminated Land) of the RPS.

113. Chapter 2 contains provisions relating to Te Ao Maori, with Objective 2-1 stating:

    a) *To have regard to the mauri of natural and physical resources to enable hapu and iwi to provide for their social, economic and cultural wellbeing.*

    b) *Kaitiakitanga must be given particular regard and the relationship of hapu and iwi with their ancestural lands, water, site, wahi tapu and other taonga (including wahi tupuna) must also be recognised and provided for through resource management processes.*

114. There are a number of supporting polices to this objective, although most of them place obligations on the Horizons, rather than on applicants through a resource consent application process. Policy 2-1(i) encourages direct consultation with iwi and hapu to identify actual and potential adverse effects. Policy 2-2(a) sets out that wahi tapu, wahi tupuna and other sites of significance to Maori identified in

the regional or district plans, as historic reserves, as Maori reserves, recorded on the New Zealand Archaeological Association site recording scheme or registered under the Historic Places Act must be protected. Policy 2-2(c) seeks that potential damage to sites of significance to Maori not identified under (a) above must be minimised by Horizons facilitating the compilation of databases by hapu and iwi to record locations which need to remain confidential.

115. In this instance there are no recorded sites of significance within the District Plan nor on the Archaeological Association site recording scheme or registered under the Historic Places Act.

116. It is noted that the applicant has been undertaking active consultation and in its AEE the applicant advises it has met with representatives of both Rangitāne o Tamaki nui-ā-Rua and Ngāti Kahungunu ki Tāmaki-nui-a-Rua at the site. During consultation it was identified that the site is located within an area of significance to Maori but does not itself contain any known sites of significance such as waahi tapu and other taonga. The solar farm is proposed to be setback from an area which may be a remnant wetland and is approximately 180-200m at its closest from the Mangatainoka River.

117. Rangitāne o Tamaki nui-ā-Rua were notified as part of the limited notification process and no submission was received.

118. In conclusion, I consider that the applicant has undertaken appropriate consultation in line with the objectives and policies of Chapter 2 of the RPS.

119. Chapter 3 of the RPS deals with infrastructure and waste. I consider that Objective 3-1 and the supporting Policy 3-1. Objective 3-1 and Policy 3-1 relate to infrastructure and other physical resources of regional or national importance. Specifically, Policy 3-1(a)(i) facilities for the generation of more than 1 MW of electricity and its supporting infrastructure where the electricity generated is supplied to the electricity distribution and transmission networks.

120. Policy 3-1 further guides The Regional Council and Territorial Authorities must, in relation to the establishment, operation, maintenance, or upgrading of infrastructure and other physical resources of regional or national importance, listed in (a) and (b), have regard to the benefits derived from those activities. I

consider that this activity is creating infrastructure of regional or national importance and as such I have considered its benefits as part of my assessment.

121. Policy 3-3 provides guidance on managing any adverse effects that may arise from the establishment and operation of any infrastructure and other physical resources of regional or national importance. Clause (b) relates to the establishment of the infrastructure and seeks to allow minor adverse effects that arise.

122. Clause (c)(ii) and (iii) relates to the establishment of the infrastructure and consideration of matters such as the need for the chosen location and any other alternative locations. In this instance, while this policy has not been specifically canvassed, the applicant has detailed "*The site is located within an optimal geographical location given the solar farm can connect into the existing electricity infrastructure minimising the need to establish further transmission line infrastructure or substations. The site is also located within an area which has suitable sunshine hours and is also located within a confined visual catchment."* I accept these are reasonable justifications for the location.

123. Clause (c)(iv) also looks at considerations for more than minor adverse effects. In this instance I do not consider there to be any more than minor adverse effects, so this clause is not applicable.

124. In addition to Chapters 2 and 3, Chapter 4 of the RPS relates to land, and the avoidance and mitigation of erosion and sedimentation. The applicant has noted that consent will eventually be required, for land disturbance, at the time of construction. However, I am of the opinion that given the consent is a controlled activity, application can be made at the time of construction and no further consideration needs to be given at this stage.

Tararua District Plan

125. The District Plan has several sections that contain objectives and policies that are relevant to the applications. The applicant has detailed these in section 10.1 of its report. I agree with the assessment and do not consider there are any further sections of the plan which require evaluation.

126. Section 2.3 relates to rural land use management and includes Objective 2.3.2.1 *"to achieve sustainable rural land use and efficient use of resources".* This is supported by a series of policies relating to retaining the productive capabilities of the land and avoiding irreversible loss of the productive capability of the Class 1 and 2 land. The applicant has asserted that the productive capability of the land will be retained through the grazing of grass underneath the panels. Examples have been provided, although they are predominantly from Australia.

127. I agree with the applicant that the solar farm will not result in any of the other adverse effects that the policy seeks to avoid including land instability, contamination discharge or land subsidence.

128. Objective 2.3.3.1 seeks to maintain the vitality and character of the District's rural areas. Supporting policies (b) and (c) are considered relevant to this application.

129. Policy (b) seeks to enable activities which are compatible with the rural area and require a rural location. The applicant has asserted that there is a relatively small visual catchment area which allows compatibility. While I agree the catchment is small, I do note that the effects are likely to be at a scale which is more than minor for local residents until such time that the shelter belt is established.

130. Objective 2.3.4.1 seeks to ensure a high level of environmental quality and amenity throughout the rural areas of the district. The supporting policies seek to avoid, remedy or mitigate adverse effects, maintain and/or enhance the character and amenity and reduce conflict between incompatible activities in the rural area. Objective 2.6.2.1 and the supporting policy are similarly worded and for brevity will be considered here also.

131. As discussed above the applicant has proposed mitigations for visual effects by way of shelter belt planting. As noted above this will take time to establish there will be a level of effect, and potential incompatibility in the meantime. However, the planting will result in an effective mitigation in the long term.

Section 2.5.2 focuses on natural hazards with Objective 2.5.2.1 seeking to reduce the risks imposed by, and the effects of, natural hazards on the people, property and infrastructure of the Tararua District. Supporting policy (b) seeks to reduce the risk of natural hazards through development patterns and mitigation

measures. As discussed above the applicant has advised *"A small part of both Sites A and B of the solar farm are located within an identified flooding overlay. Although difficult to tell when comparing the site plans to the flooding maps it appears as though the solar tables and other associated infrastructure will fall outside of the areas prone to flooding. For Site A, the flooding overlay appears to be concentrated around the area that has been identified as a potential wetland. A setback is proposed to this area along with further wetland appropriate planting to act as a buffer. For Site B, the land where the solar tables are to be established is a river terrace approximately 4-5m above the Mangatainoka River and the development will be setback approximately 180-200m from the riverbed itself."*

132. On this basis I consider the risk is avoided and the proposal is consistent with this objective and policy.

133. Section 2.8.2 focuses on infrastructure with Objective 2.8.2.1 and the supporting policies seeking to maintain and develop infrastructure while avoiding, remedying or mitigating adverse effects. If particular relevant is policy (c) which states "To encourage the co-siting of network utility equipment where practicable". Objective 2.8.4.1 focus on renewable electricity generation with the supporting policies seeking to recognise the local, national and regional benefits and to remedy, mitigate, or avoid, where possible, the actual and potential adverse effects, noting that renewable energy infrastructure can result in effects relating to amenity values, landscape ecology, noise and traffic, and may therefore be inappropriate in some locations.

134. As discussed above the applicant is seeking to establish the site in this location due to the presence of the substation, solar hours, and flat site. The applicant has proposed mitigations for visual effects by way of shelter belt planting. However, as this will take time to establish there will be an adverse effect in the meantime. However, the planting will result in an effective mitigation in the long term.

135. This also needs to be balance with the benefits derived being power generation which will feed into the local system. The applicant has advised it is enough power to power approximately 10,384 homes[1] which is considerable.

136. Lastly is Objective 2.10.3.1 which seeks to provide and recognise Maori values with supporting policy (a) recognising specifically the connection with land, water, sites, waahi tapu and other taonga.

137. The applicant states that it has met with respective iwi and agreed to setbacks from the wetland on the site. In addition, I have recommended that an archaeological discovery protocol condition is imposed. I consider the proposal is consistent with this objective and policy set.

138. In summary the visual effect remains the main effect in contention. While this location is suitable due to the locality of the substation there are likely to be visual effects on the surrounding neighbours until such time that the shelter belt is established. I am of the opinion that other effects such as noise, cultural effects, construction effects and reverse sensitivity can be overcome through agreement or conditions. Overall, I consider the proposal is not inconsistent with the objectives and policies of the Tararua District Plan.

Conclusion

139. Overall, I consider that with the imposition of the recommended conditions the proposed activities are consistent with the policy framework of the NPSFM, Regional Policy Statement, Regional Plan and the District Plan where relevant.

I. PART 2 ASSESSMENT

Davidson Approach

140. Part 2 of the Resource Management Act 1991 outlines the purpose and principles of the Act. Following the 'Davidson' decision (RJ Davidson Family Trust v

[1] See section 11.2 of the AEE

Marlborough District Council [2018] NZCA 316) the Court identified there is the ability to recourse to Part 2 when it is appropriate to do so. In this case, recourse to Part 2 is not required as it is not considered there is any illegality, uncertainty or incompleteness in the relevant parts of the Tararua District Plan or Horizons One Plan. In my view, recourse to Part 2 would not provide any further guidance to the decision maker for this consent.

141. The applicant has examines Part 2 of the RMA at section 8.1 of the applicant and has also concluded that a full assessment under Part 2 would not provide anything further. It has briefly assessed sections 6 to 8 of the RMA and I adopt that assessment for the purposes of this report. For ease, the assessment states:

"*There are no section 6 matters relevant to this application.*

Section 7(b), (c), (f) and (j) are considered relevant to the proposal. The proposal is considered to be an appropriate use within the Rural Zone and is therefore considered to be an efficient [1] R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316. Energy Bay Limited September 2022 Establish and operate a solar farm Assessment of Environmental Effects - 28 - use of natural and physical resources in that it both enables the generation of electricity and the continued use of the land for farming activity, does not compromise amenity values or the quality of the environment and provides benefits in terms of the development and use of renewable energy.

With respect to section 8, both Rangitāne o Tamaki nui-ā-Rua and Ngāti Kahungunu ki Tāmakinui-a-Rua have advised that the site is located within an area of significance to Maori, however the site itself does not contain any known sites of significance."

J. CONCLUSION AND RECOMMENDATIONS

142. As set out above the effects of the proposed solar farm can largely be mitigated to a level where they can be considered minor. The exception to this is in relation to the visual and landscape effects where the adverse effects will likely be more

noticeable in the short term, until the boundary vegetative screening matures and reaches full height.

143. Outstanding matters that still exist are the extend and severity of any glint and glare on the neighbouring properties and whether reverse sensitivity effects on the neighbouring quarry can be overcome. I expect that the applicant will cover these matters off in its evidence and I can comment on that at the hearing if required. At this stage I expect that these matters will be able to be resolved.

144. In my opinion, the proposed activities are consistent with the relevant provisions of the planning documents that are applicable, including the various National Environmental Standards, National Policy Statements, the Regional Policy Statement and the Tararua District Plan. I see no impediments to the granting of the application through the policy framework.

145. The applicant has agreed to a suite of conditions that aim to protect the Transpower transmission lines that run along Mangamaire Road. I have recommended that these conditions be imposed on any consent that is granted.

146. On the assumption that the matters identified in Paragraph 143 above can be resolved, and subject to the recommended conditions (**Appendix A**), I recommend that the resource consent application be granted to Energy Bay Limited.

Andrew Bashford
Consultant Planner on behalf of Tararua District Council

9 August 2023

Appendices

Appendix A – Draft Proposed Conditions

Appendix B – Section 37 time extension report

Appendix C – Foot v Wellington City Council (W73/98)

Appendix D – S42A Report – Landscape

Appendix E – S42A report – Noise