

CENTRAL OTAGO DISTRICT COUNCIL
REPORT OF PLANNING OFFICER

APPLICATION	RC 240065
APPLICANT	HELIOS OTA OP LP
ADDRESS	48 RANFURLY-NASEBY ROAD
LEGAL DESCRIPTION	SECTION 23 BLOCK VI NASEBY SD, SECTIONS 2 AND 33 BLOCK II MANIOTOTO SD, SECTIONS 3, 5, 9 AND 10 BLOCK XIX MANIOTOTO SD, (HELD IN RECORDS OF TITLE OT9C/187 AND OT10B/1337).
ACTIVITY DESCRIPTION	LAND USE CONSENT TO CONSTRUCT, OPERATE AND MAINTAIN A SOLAR FARM IN THE RURAL RESORUCE AREA
ACTIVITY STATUS	DISCRETIONARY

NOTIFICATION AND SUBMISSIONS

- [1] The application was publicly notified. 181 submissions were received in response to the application. A summary of the submissions is attached as Appendix One. I confirm that I have had regard to the contents of all submissions in full when considering the application. Many of the submissions cover similar themes. Where I want to highlight a particular point from a specific submission, this will be cited. However, if I am discussing general themes identified from submissions I have not cited all submissions where those themes are present. Individual submitters will be referenced by their last name, or by their full name initially, and subsequently an acronym of their name, in the case of an organisation.

DESCRIPTION OF ACTIVITY

- [2] The application proposes to construct, commission and operate a grid scale solar farm on land between Ranfurly-Naseby Road and Naseby Back Road, south of the town of Naseby. The applicant intends to lease approximately 665 hectares of land across the application site for their development.
- [3] Section 3.1 of the assessment of effects provided in support of the application describes the operational components of the application. With the exception of the description of the battery storage system, I adopt this description of the application. To summarise, the operational parts of the proposed solar farm include some 550,810 2.4m wide solar panels mounted on tracking arrays that would give the panels a maximum height of approximately 2.8m above ground level, and would change their orientation across each day to track the sun. The panels would be mounted on arrays in rows approximately 6-8m apart. The applicant anticipates that these panels and associated buildings would cover approximately 23.3% of the site (155 hectares) at their maximum site coverage, when the panels are flat. The applicant anticipates that the facility would have a generation capacity of approximately 300MWac (Mega watts of alternating current)
- [4] 73 inverters are proposed to be spread across the internal areas of the site to convert the direct current (DC) current generated by the panels to alternating current (AC), used

in the electricity grid. Each inverter would be installed in a light grey cabinet approximately 2.9m high, 6m long and 2.5m wide.

- [5] A new 33/220kV substation is proposed to collect the power generated from the site and convert it to 220kV for transmission to the Naseby substation and to the wider electricity network via the Roxburgh-Islington A transmission line. This substation would consist of a switchyard, two transformers, capacitors and control facilities over an area of 1.1 hectares. The facility would also have an oil treatment facility to treat stormwater where it may be contaminated by oil, such as from around the transformers.
- [6] A network of underground cables is proposed to link the arrays, inverters and facility substation, then to the Naseby substation. I understand that these would have a capacity of up to 33kV within the site, with the link to the Naseby substation being a 220kV line. Where cables would need to cross the central wetland in the site, the applicant proposes that either direct boring or horizontal directional drilling be used to allow the cable to be laid under the wetland without requiring surface works within the wetland itself.
- [7] The solar panel arrays are proposed to be installed on galvanised steel piles that would be driven into the ground. The inverters are proposed to be located on 600mm tall piles over a compacted soil and stone base. The substation will generally be built on a 150mm aggregate base and 500mm subcourse. Switchyard equipment would have a concrete base, with the transformers being located within bunded foundations.
- [8] Twelve 25,000 litre water tanks are proposed to be located on the site for firefighting water storage.
- [9] The entire facility is proposed to be enclosed in a 2m high deer fence with inwards pointed cameras at various points for security.
- [10] Screen plantings prioritising the use of evergreen species are proposed along the boundaries of the facility. Ecological mitigation, wetland enhancement and supplementary plantings are proposed in different locations around the site.
- [11] The applicant intends that the land under the site would continue to be farmed by the landowner, most likely using the land for grazing sheep.
- [12] The application originally included a large battery energy storage system for storing generated electricity (Either from this site or other generators) for sale at a later time. This facility has subsequently been removed from the application.
- [13] Section 3.2 of the assessment of effects provided in support of the application outlines the proposed construction methodology. This is adopted for the purposes of this assessment. Construction is proposed to be undertaken in stages over a period of 24 months. Construction access to the site is proposed to be from three locations along Ranfurly-Naseby Road, and one access from Ranfurly Back Road.
- [14] Once the facility is operational, the applicant intends that it will not be permanently staffed, with the main visitors to the site being for inspections and maintenance. The facility would be controlled remotely. The applicant also intends that the land under the solar farm would be able to continue being grazed by sheep. At the end of its operational lifespan, the applicant intends to dismantle the facility and remove all parts of the facility from the site, which would be reinstated to its pre-development condition.
- [15] Figure one shows the location of the site and the general layout of the proposed facility.

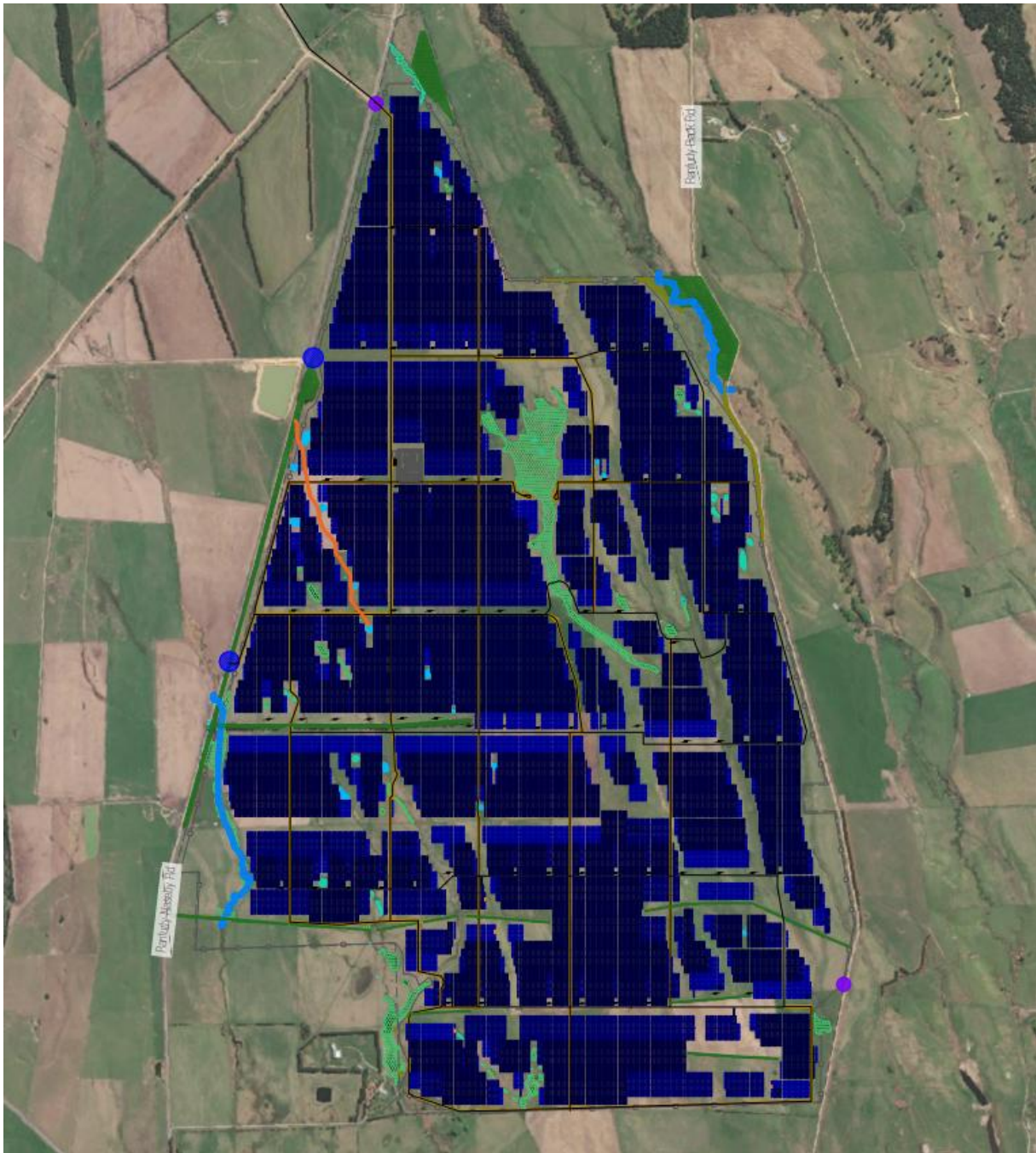


Figure one: Excerpt from the application showing the site and the proposed solar farm (Dark blue) and substation (Grey). Source: Amended Appendix A to the application dated 08 May 2025.

[16] The application is supported by people with the following expertise. In this assessment, I will refer to them by surnames only, unless it is useful to distinguish their expertise or the fact that they have assessed the application on behalf of the applicant.

- Mishka Banhidi, Senior Planner – The Property Group - Planning
- Sue McManaway, Landscape Planner – Boffa Miskell – Landscape
- Nicholas Logan – ITP Renewables – Glint and Glare
- Dr Jaz Morris, Senior Ecologist, Cara-Lisa Schloots, Ecologist and Karin Sievwright, Ecologist – Boffa Miskell – Ecology
- Logan Copland, Senior Transportation Planner – Abley – Transport
- Peter Ibbotson – Marshall Day Acoustics – Noise
- Nicole Rubio – Beca – Hazardous Substances
- Hamish Deinze and Dr Paul Horne – Beca – Fire Risk Mitigation

SITE DESCRIPTION

- [17] The application site consists of three dryland pastoral farming properties with a combined land area of approximately 797 hectares. Both are dominated by predominantly exotic pastures and shelter belts and have a rolling topography, with several ridgelines and shallow valleys running approximately north-south. While made up of multiple distinct properties, this land will be described as “the site” for the purposes of this assessment.
- [18] The site is crossed by several waterways and wetland areas in natural depressions across the site. I understand that these waterways are largely ephemeral, with two main wetlands appearing more permanent. I understand that the site includes a number of scattered native species, with higher concentrations found around the wetlands.

REASONS FOR APPLICATION

Central Otago District Plan

- [19] The subject site is located within the Rural Resource Area of the Central Otago District Plan (the District Plan). There are no other annotations for the site.
- [20] Section 13 of the District Plan creates a standalone code for specified infrastructure activities that overrides resource area or zone provisions unless stated in Section 13. This includes resource area or zone rules, objectives and policies.
- [21] Under Rule 13.7.4.iii of the District Plan, the construction and commissioning¹ of a new power generation facility in the district is a discretionary activity.

National Environmental Standards

- [22] The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESC) came into effect on 1 January 2012. The National Environmental Standard applies to any piece of land on which an activity or industry described in the current edition of the Hazardous Activities and Industries List (HAIL) is being undertaken, has been undertaken or is more likely than not to have been undertaken. Activities on HAIL sites may need to comply with permitted activity conditions specified in the National Environmental Standard and/or might require resource consent.
- [23] As part of my assessment of the application, I have reviewed Council's records for the site and reviewed publicly available historic aerial imagery dating back to 1947² for evidence of activities on the HAIL. This search indicates that the site has been used for pastoral farming since, at least, this time. Council's records indicate that the dwelling on 48 Naseby-Ranfurly Road includes above ground diesel storage associated with a fireplace, and woolshed and yards, which may indicate the presence of a sheep dip. Both of these are located on Section 23 Block II Maniototo SD. The facility is not proposed to be close to either the dwelling, the woolshed, or any other buildings associated with the operation of the farm. In this context, I consider that it is unlikely that any contamination

¹ For the avoidance of doubt, “construction and commissioning” activities includes activities such as site preparation, earthworks, quarrying, concrete batching, plant construction, road construction and widening, traffic generation, reservoir formation, clearance or inundation of vegetation, but specifically excludes investigative activities such as geological sampling and surveys.

² Retrieved 10 June 2025 from Retrolens,
<https://retrolens.co.nz/map/#!/1371960.4250867679/5003626.254722597/1372114.7920539998/5003802.8660593815/2193/20>

from the diesel tank, any potential sheep dip and other potential HAIL activities that can occur around farm buildings (For example, storage of chemicals or fuel) will have spread to the application site to a level where it poses a risk to human health from soil disturbance on the application site. I do not consider the NES-CS to be applicable to the proposal.

[24] There are no other National Environmental Standards relevant to this application.

Overall Status

[25] Under the particular circumstances of this case, I consider it appropriate that the application be considered as a discretionary activity pursuant to sections 104 and 104B of the Resource Management Act 1991 ('the Act').

EFFECTS ASSESSMENT

Written Approvals

[26] No written approvals been provided in support of the application. In accordance with section 104(3)(a)(ii) of the Resource Management Act 1991, no effects on any party have been disregarded.

Permitted Baseline and Receiving Environment

Permitted Baseline

[27] Under section 104(2) of the Resource Management Act 1991, the Council may disregard an adverse effect of an activity on the environment may be disregarded if the plan permits an activity with that effect. That is, an application can be assessed by comparing it to the existing environment and development that could take place on the site as of right, without a resource consent, but excluding development that is fanciful.

[28] The only power generation activities permitted in the district are those associated with the sole use of a domestic activity.³ The proposal is significantly out of scale with what would be required for a domestic activity. I agree with the applicant that there is no relevant permitted baseline to be applied.

Receiving Environment

[29] The existing and reasonably foreseeable receiving environment is made up of:

- The existing environment and associated effects from lawfully established activities;
- Effects from any consents on the subject site (not impacted by proposal) that are likely to be implemented;
- The existing environment as modified by any resource consents granted and likely to be implemented; and
- The environment as likely to be modified by activities permitted in the district plan.

[30] For the subject site, the existing and reasonably foreseeable receiving environment comprises dryland rural pasture, currently used to graze sheep and cattle. Ground cover is predominantly exotic pasture, with an intermittent exotic shelter belt along the site's boundary with the Ranfurly-Naseby Road, and two other shelter belts running east to

³ This is because such domestic power facilities are excluded from the definition of "power generation facility" in Section 18 of the District Plan.

west within the site. Several waterways are present through the site. Some are ephemeral, with others having more regular flows.

- [31] For adjacent land, the existing and reasonably foreseeable receiving environment comprises rural production activities, including several scattered residences. The township of Naseby is located approximately 3.5km to the north-east of the site. Ranfurly is located approximately 4.3km to the south.

Assessment of Effects

- [32] Consideration is required of the relevant assessment matters in the District Plan, along with the matters in any relevant national environmental standard. No regard has been given to any trade competition or any effects of trade competition.

- [33] I consider that the following effects of the proposal are of particular relevance to the panel's consideration of the application. They will be assessed in turn below.

- Visual and landscape effects
- Noise effects
- Ecological effects
- Effects on the productive capacity of the soil
- Road safety effects
- Risks of fire
- Risks to health
- Risks of soil or water contamination
- Cultural effects
- Temporary effects including construction noise, dust, sediment control, traffic and accommodation of workers
- Rural character effects
- Economic effects
- Renewable electricity generation effects

- [34] Other effects raised by submitters included arguments that the facility would both benefit and detract from tourism in the area, effects on property values, and what happens at the end of the facility's life, namely how the panels will be disposed of and the site remediated.

- [35] Considering changes to property values as a result of an activity would duplicate the panel's consideration of the effects of the proposal.⁴ They are evidence that an effect is occurring, but not an effect in themselves. I will not be considering effects on property values as their own effects of the proposal. Instead, they may be used as an indication that an effect is likely to occur.

Visual and Landscape Effects

- [36] The application is supported by expert landscape assessment from Ms McManaway. Ms McManaway supports the proposal and considers that the visual and landscape effects of the proposal will be more than minor in the short term, but reducing to minor levels as proposed native and exotic screen plantings grow up around the facility. Council commissioned Mr Ben Espie, director and landscape planner, from Vivian Espie to undertake a limited peer review of Ms McManaway's assessment. This review considered the adequacy and effectiveness of the proposed mitigation measures. Dr Andrew Wells, senior ecologist from Wildlands, also provided comment on plant growth rates relied on by Ms Mcmanaway.

⁴ *Giles v Christchurch City Council* [2000] ELHNZ 296 at [59].

- [37] I consider it to be beyond reasonable argument that the proposal will significantly change the character of the landscape through converting the current, open, low intensity rural environment by taking what is currently an open, sparsely developed dryland pastoral farm to a solar farm. This is supported by the assessment of Ms McManaway on behalf of the applicant, and the arguments of a large number of submitters. In this context, I have focused this assessment on how the applicant proposes to manage those effects, and the longer term effects of the facility.⁵
- [38] The applicant is proposing to rely on screen plantings to help break up and block views into the solar farm, mitigating its visual effects. Along Ranfurly-Naseby Road, this is proposed to be primarily filling in and expending existing exotic shelter belts with more exotic species. Along Ranfurly Back Road, a mixture of predominantly native species, with some areas of exotics, are proposed. These plantings are all permitted activities in the District Plan. In the expert opinion of Ms McManaway, for the applicant, these plantings will be sufficient to reduce the visual effects of the proposal to minor levels, at most, once the plantings have established. Mr Espie agrees that the mitigation measures will be appropriate. Prior to this, Ms McManaway considers that the facility would have a more than minor effect in the short term, while the new plantings are growing. Submitters have argued that the plantings will not adequately manage the visual effects of the proposal, due to slow growth rates. Relying on the expert assessment of Ms McManaway and Mr Espie, I am satisfied that the visual effects of the proposal can be adequately managed, in the long term, through screening. The outstanding question, then, becomes whether the landscaping will become established within acceptable timeframes to minimise these short term effects.
- [39] The applicant, in reliance on the assessment of Ms McManaway and comments from three unspecified local nursery growers and Habitat Restorations Aotearoa⁶, is confident that the proposed plantings will be sufficiently established in approximately 5 years. They note that irrigation water and protection from wind would be required to achieve this. Plants are intended to be sourced from local nurseries to ensure they are already adapted to the Mānīatoto climate. I do not doubt the submitter's points that growth rates are typically slow in the Mānīatoto. The climate means there is a relatively short growing season compared to other areas of the country. Low natural availability of water can also slow plant growth, as can pest browse. In his peer review of the ecological aspects of the proposal, Dr Wells has confirmed that he considers the applicant's estimations of plant height after five years to be reasonable.
- [40] I consider that water availability and pest browse can be mitigated by irrigation and rabbit protection of new plants. Irrigation over a five year period, and wind protection, are recommended by Ms McManaway. Irrigation has been proposed by the applicant, along with monitoring and maintenance. It is not clear to me whether the other recommendations of Ms McManaway have been adopted by the applicant. I consider that wind and pest protection would be highly beneficial in improving plant survival and growth rates and should be considered as management strategies.
- [41] I accept that there will be a lag time between the screen vegetation being planted and it forming an effective screen of the facility. I also consider it to be unreasonable to require the plantings be established several years before the solar farm can be built. This would require a large financial outlay by a consent holder, and several years of holding costs while screen vegetation grows before they can then undertake their consented activity. Having regard to the assessment of Ms McManaway, the supportive peer review of Mr Espie and the confirmation of Dr Wells that the growth rates put forward by the applicant, I am confident that the facility would be able to be almost fully screened within a five

⁵ For completeness, this is also why Mr Espie was not instructed to undertake a wider review of Ms McManaway's assessment of the landscape effects of the proposal.

⁶ An Otago based ecological restoration contracting company, <https://habitatrestorations.nz/>.

year period. During this time, the visual effects of the facility would gradually lessen, becoming less and less substantial. Based on Ms Mcmanaway's assessment, I would expect the visual effects of the facility to reach minor levels well within the five year window specified. The applicant has proposed to use reasonably fast growing, evergreen species, with the intention being to reach effective screening as fast as possible, and year around. In this context, I consider that the anticipated timeframes for landscaping to establish and form an effective visual screen will be acceptable, in my opinion.

- [42] The area is currently dominated by exotic plantings, particularly the use of conifers for shelterbelts. In this context, while Council currently expresses a preference for new screen plantings prioritise the use of native species, I do not consider that the use of exotic versus native species will result in notable changes to the effects of the proposal on the landscape.
- [43] The plantings will, in themselves, change the character of the landscape by blocking what are currently, largely open views. However, I consider that shelterbelts, particularly conifer shelter belts, and other screen plantings are a common feature of the area's rural landscapes. While far from being ubiquitous, mature shelter belts provide windbreaks and shelter for livestock on other farms in the area. In this context, I do not consider that the establishment of a new shelter belt to screen the facility would, in itself, result in notable adverse visual or landscape effects through breaking up the existing, more open, landscape character.
- [44] Landscape effects can also be associative, forming part of people's sense of place and community. Changes in landscape character can affect those associations people have with their place. Reading the submissions, I can imply strong associative connections between residents in the area and the open, rural, pastoral landscapes of the Mānīatoto. I have no reason to doubt that, for some residents, their sense of place will be shaken by the proposed changes to the landscape that they associate with their chosen home. I also have no reason to doubt that this effect could be greater than assessed by Ms McManaway, because it is a subjective, individualised reaction to effects on a person's sense of place. However, I also consider that these effects would lessen over time as the facility slowly becomes a part of the landscape character of the area and people adapt to its presence. The application is also supported by expert evidence that suggests the overall effect of the proposal will lessen over time. Given this, while I accept that the proposal will likely adversely affect people's association with the landscape, and I do sympathise with those people who feel the proposal will significantly alter the landscape and their relationship with it, I do not consider that this should constitute an unacceptable level of adverse effect.
- [45] Mr Espie notes that there is no proposed minimum height that landscaping would need to be maintained to, other than 3m for some shelter belts. This could result in a scenario where the landscaping was trimmed to such a low height that it no longer served as an effective visual screen. For example, this may occur from a consent holder trying to minimise shading from landscaping and maximise the time they can generate electricity. Having regard to this comment, I consider it appropriate that all existing and proposed screen planting along Ranfurly-Naseby Road all be required to be maintained to a minimum height of 3.0m, in order to ensure they continue to provide an effective screen after they grow.
- [46] The applicant has proposed that more detailed information about landscaping, including exact species, densities, etc., would be provided in a landscape management plan that would need to be certified by Council. Given my conclusions about the likely effects of the proposal in principle, I consider it appropriate that this level of detail could be deferred to a landscape management plan provided at a later date.

- [47] A large number of submitters were concerned that the proposal would not comply with dark sky requirements. The township of Naseby is working towards becoming an accredited dark sky community with DarkSky International. Recently, CODC enacted a change to the District Plan to introduce a new dark sky precinct around Naseby, along with rules related to lighting in a new Light section of the District Plan to support this. The application site is located some 1.6km away from the precinct at its closest point. Several submitters were concerned that moonlight reflecting off the solar panels would create enough light pollution to either jeopardise Naseby's dark sky community accreditation specifically,⁷ or affect visibility of the night sky generally.⁸ Others were more broadly concerned about lighting from the facility generally, including artificial lighting.⁹
- [48] In terms of moonlight reflecting off the proposed solar panels, any reflection of moonlight from the panels would be greatest during and around a full moon, when the moon is already having its greatest effect on the visibility of the night sky. I consider the likely levels of reflected moonlight off the panels highly unlikely to result in any notable change in the illumination of the night sky relative to what is already achieved by the moon itself. The criteria for becoming an accredited dark sky community also do not require any specific night sky illumination levels, but they do need ordinances that manage artificial generation of light.¹⁰ If the panel finds that moonlight reflecting off the panels is a significant concern, I consider that this could be managed through a condition requiring the panels be angled overnight. This would minimise the amount of moonlight being reflected back up into the sky. I note that Mr Logan assessed the daytime glare effects of the facility and recommended the panels be kept at a steeper rest angle overnight to minimise backtracking in the morning and evening. What angle is necessary to mitigate daytime glare will be assessed in more detail when considering glare. However, I consider that keeping the panels at an angle overnight will provide benefits for any nighttime light reflection as well as during the day.
- [49] In terms of the effects of artificial lighting, I agree with the submitters that artificial lighting can have an adverse effect, both on the character of the night sky specifically, and on nighttime amenity values more generally. I also accept that a level of security lighting will be required for the facility, as would a level of operational lighting, for example around the substation, to allow for visibility in the event that workers need to undertake urgent maintenance at night. The district's rural areas are typically largely devoid of artificial light at night, with notable exceptions being lighting around dwellings and farm working areas. Recognising this, the functional needs of the facility, and the concerns raised by submitters, I consider that the effects of artificial lighting can be considered appropriate if lighting meets the following:
- Lighting is oriented so that it does not result in direct emission of light onto adjoining roads or properties
 - Security lighting is fitted and controlled with a motion sensor
 - All outdoor lighting with a light output of 500 lamp lumens or greater must be shielded or tilted so as to not emit any light at or above a horizontal plane measured at the light source
- [50] The above requirements are based off the activity standards in the Light chapter of the District Plan. Given the standards in the Light chapter are intended to support Naseby's

⁷ For example, #042 – Bishop, #055 -Harrison, #082 – Swinbourn and #134 – MacLeod

⁸ For example, #092 – Derbyshire and #104 – Weir

⁹ For example, #078 – Potter, #136 – R Voice and #181 – Farrell

¹⁰ DarkSky International (n.d.) *Apply for Dark Sky Place Certification – International Dark Sky Communities*. Retrieved from <https://darksky.org/what-we-do/international-dark-sky-places/apply/#:~:text=A%20town%2C%20city%2C%20municipality%2C,of%20the%20ideal%20of%20dark>. A full list of the guidelines for Dark Sky Communities can be found at <https://darksky.org/app/uploads/2018/07/IDSC-Guidelines-Jun2018.pdf>.

dark sky community application, I consider that they would be sufficient to manage any concerns about risks to the acceptance of Naseby's application.

- [51] Overall, I consider that the proposal will have substantial short term visual effects. I also concur with the applicant that, over time, these effects will be reduced as landscape plantings grow around the perimeter of the site. In reliance on the expertise of Ms McManaway, I consider that, over the life of the facility, these effects will be adequately managed and the most significant effects minimised to a reasonably practical extent.

Operational Noise Effects

- [52] The primary sources of noise from the operation of the facility include noise from the operation and cooling of inverters across the facility, and the operation and cooling of the transformers in the substation. I understand that transformers, in particular, can emit low frequency hums as they operate that can disturb people and animals. More intermittent noise would be associated with workers visiting the site and undertaking maintenance or repairs. In the context of an operational rural environment, where movement of vehicles to access and manage land is a frequent occurrence, I consider the effects of these intermittent noise sources to be minimal. Instead, I will focus on the continuous operational noises, as these are frequently identified as a concern by submitters, particularly those who live near the site.
- [53] In reliance on the assessment of Mr Ibbotson, the applicant considers that, because the noise limits in Rule 4.7.6E of the District Plan will not be breached, and because noise from the facility will typically be similar to or lower than ambient noise levels, these operational noise effects will be minimal. Mr Healey contends that Mr Ibbotson has underestimated daytime noise levels, arguing that noise from the transformers, in particular, could be 93-95dBA, as opposed to 90dBL_{WA} used by Mr Ibbotson.
- [54] While I note that the standards in Rule 4.7.6E are not directly applicable to this application, for rural areas, noise is typically measured at the receiver.¹¹ The noise at the source can be much higher and still comply. Given the facility is in a rural context, I consider it appropriate to apply the same logic when assessing the effects of noise. Mr Ibbotson has used the same logic, calculating noise levels at notational boundaries of surrounding dwellings. Mr Ibbotson has also applied a 5dBA adjustment to his calculations to take into consideration the tonality of the noise, and has not applied a duration correction. This is in line with NZS 6802:2008. I consider this to be appropriate. At the distances between the substation and noise receptors (It is over 1.5km from the closest dwelling to the substation, at 512 Ranfurly-Naseby Road), I feel it is unlikely that there would be a noticeable difference between 90 and 93 decibels at the source by the time it reaches a receiver. The applicant may wish to provide additional comment from Mr Ibbotson considering what difference in noise effects might be experienced by nearby landowners at 90 versus 93 decibels.
- [55] No specific noise mitigation measures are proposed, other than distance from sources of noise to receivers by locating equipment such as transformers centrally to the site. I note that noise attenuation could be possible, such as enclosing the transformers in buildings or with acoustic fences. Relying on the evidence of Mr Ibbotson, I consider that the noise effects of the proposed facility will not be unreasonable, but may have an effect. I consider that this effect will be sufficiently low due to the distance between noise sources and receptors, without additional attenuation. However, if the panel are of a mind to disagree, I consider that acoustic fencing around the transformer units would be sufficient to reduce noise effects to a less than minor level.

Ecological Effects

¹¹ Rule 4.7.6E.a requires noise limits be met at the notational boundary of a dwelling, rest home or hospital, or at any point in a residential zone or rural settlements resource area.

- [56] Council commissioned Wildlands to undertake a peer review of the ecological assessment prepared by Dr Morris and colleagues. The review was drafted by Dr Andrew Wells, Dr Morgan Tracey-Mines, Dr Vikki Smith and Mr Cameron Thorpe. Between them, Dr Smith has specific expertise in invertebrates, Mr Thorp in herpetology, and Dr Tracey-Mines in vegetation. Given they have not specified exactly who wrote each section of the review, I will refer to them collectively as Wildlands. Similarly, for brevity, I will refer to Dr Jaz Morris, Ms Cara-Lisa Schloots and Ms Karin Siewwright collectively as Boffa Miskell when referring to their assessment.
- [57] Wildlands identify some limitations in Boffa Miskell's assessment. In particular, they consider that the timing of site visits in early winter means that some species that may be visible in the area for parts of the year, including seasonal plants, may not have been recorded, and that no field study of invertebrate species has been undertaken, leading to a lack of information on what invertebrate species are present on the site. They also note that the EIANZ's ecological impact assessment guidelines are non-statutory and under review, meaning any evaluations under these guidelines should be supported by ecological evidence. Outside these, Wildlands consider that Boffa Miskell's assessment has been prepared using accepted standard practice and assessed against relevant criteria.
- [58] In terms of indigenous flora, Boffa Miskell concludes that there will be high impacts across the site due to the need to remove isolated examples of plants with a high ecological value (Such as At Risk – Declining desert broom and porcupine shrub) and which are considered to form an ecologically significant part of the site. In order to offset this, they propose to plant greater numbers of these species into the site's proposed ecological enhancement and landscape screening plantings, with the applicant intending to double the number of plants removed as part of the construction of the facility. They consider that this larger number of plants would compensate for the lag time between the existing plants being removed and the new ones establishing themselves. This would also cluster these new plants into two locations along the eastern edge of the site and one near the western side. This may help with plant reproduction and help encourage better ecosystem function compared to the current environment. Wildlands agrees that areas of the site should be remediated with indigenous species. They also consider that extant examples of species should be retained where possible as mature specimens provide greater ecosystem services than juvenile ones. I understand that the applicant intends to only remove indigenous plants where necessary. Existing plants along external fence lines are proposed to be avoided, for example.¹² In the context of the proposal, I consider this to be reasonable to help reduce the effects of a loss of indigenous vegetation while proposed remediation plantings grow.
- [59] Wildlands notes that no ecological surveys of the site were undertaken during the main growing season and, as such, not all of the native species potentially present on the site may have been identified. I agree that this is a limitation of both Boffa Miskell's assessment, and Wildlands' (Dr Wells visited the site in June). I note that the area proposed to be developed for the solar farm is currently grazed pastoral land. Given this, it is highly modified, and I consider that any other native species present in the pasture would likely be highly compromised in quality by ground disturbance and grazing. Given this, I do not consider this to be a fatal flaw in the applicant's assessment. However, in order to ensure any potential spring annual or other intermittent species is present in the site, I consider it appropriate that a condition be imposed if consent is granted requiring the consent holder undertake a survey of plant species in spring or early summer. If any indigenous annual species are found, then they should be included in the species planted in the offsetting areas unless it is not practical to do so (For example though a lack of seed). Provided this is undertaken, I consider that the effects of the proposal on indigenous flora can be adequately managed.

¹² Mānīatoto Solar Farm Ecological Impact Assessment (18 December 2023) at Paragraph 8.1.1.1.

- [60] In terms of avifauna, Boffa Miskell and Wildlands are typically in agreement on the adequacy of survey work that has been undertaken to date. Wildlands recommends that, if construction works are to be undertaken in the breeding season (September to March) then an additional survey should be undertaken to identify the location of nesting birds, with a 50m setback from any waterways or riparian vegetation containing nesting native birds being applied during the breeding season in order to minimise disturbance to nesting birds. Boffa Miskell considers that, based on the nesting habitats present and a predicted lack of nesting in the solar farm site, effects on nesting birds would likely be very low. In order to manage these residual effects, they recommend a check be undertaken prior to works starting, and a minimum 25m setback (Or greater if recommended by the ecologist undertaking the survey, up to 100m) be placed around any nesting birds. Based on this, I consider it appropriate that surveys be undertaken to identify nesting birds during the breeding season. I agree with Boffa Miskell's position that setbacks should be able to be set by a suitably qualified ecologist, rather than be a one size fits all approach, like that proposed by Wildlands. This allows for consideration to be given to the location of the nest, the species of bird, and the type of work being done around them. I consider that the setback should be set by a suitably qualified and experienced ecologist, but in all circumstances be no less than 25m.
- [61] The application notes that solar farms overseas have resulted in instances where birds have been injured or killed at solar farms. This typically occurred through birds attempting to land on panels, potentially after mistaking them for a lake. The applicant and two submitters¹³ identify that there is limited research on these bird strike risks. DOC confirmed that several migratory bird species traverse the area and expressed an interest in how risks of bird strike will be managed. However, I accept the position of Boffa Miskell that research into this phenomenon has limited research, particularly in the New Zealand context. In order to address this, the applicant has proposed to use existing vegetation and land features to break up the panels into smaller blocks to reduce the uniformity of the solar farm from the air. I note that relatively wide spacing of the panels may also help to reduce the appearance of the facility as a lake. They have also proposed to undertake a more detailed literature review of bird strike prior to the commissioning of the solar farm, to allow them to factor in the most up to date research, to allow them to reappraise the potential effects of bird strike and determine whether ongoing monitoring was required. If ongoing monitoring was found to be required, this could be used to trial further mitigations or solutions, helping to reduce the effects for this facility, and for others by providing opportunities for New Zealand based research.
- [62] Given the uncertainty about potential risks of bird strike, I agree with Wildland's assessment that these effects should, at least, be considered minor in nature. There is an inherent risk that the proposal may result in adverse effects on avifauna that cannot be avoided, remedied or mitigated to acceptable levels, even through the implementation of an Avifauna Collision Risk Monitoring Plan. That said, I accept that the facility would allow opportunities to research the extent of these effects in the New Zealand context, instead of needing to extrapolate from overseas research using different species. This would be difficult to achieve without the construction of solar farms in different parts of New Zealand. Given this, I consider that this risk of bird strike would not be unacceptably high in this case, provided any learnings from the construction and operation of this facility were able to be applied to others in the area and around the country.
- [63] I understand that the applicant has taken up DOC's invitation to collaborate on proposed ecological conditions, including around bird strike. I anticipate that the results of any discussions would be provided prior to the hearing, and could warrant reconsideration of the above assessment.

¹³ #165 – Dunckley, #166 – Director General of Conservation

- [64] In terms of potential effects on lizard species, Wildlands identified that there is potential habitat for indigenous lizards in the vicinity of the shelter belts across the site. This differs from the assessment of Dr Morris and colleagues, who identified no lizard habitat. However, given the shelter belts are proposed to be retained, he concluded that habitat loss would be minimal. I concur with this assessment and consider that effects on any lizards living in the area will be minor, at most.
- [65] Wildlands consider that there has been limited investigation of effects on terrestrial invertebrates. Boffa Miskell's assessment concludes that no areas of indigenous vegetation, other than isolated plants, were present on the site, and the site has been, and would continue to be, grazed. They considered this to be sufficient evidence that indigenous invertebrate communities would not be present in sufficient amounts to warrant specific assessment. Wildlands note that even the isolated indigenous plants can be significant habitats for invertebrates. They consider that minimising the loss of these plants would be important for reducing potential effects on indigenous invertebrates. Wildlands also note that most of the examples of flora that may provide habitat for invertebrates (For example *Carmichaelia*, *Aciphylla* and *Muehlenbeckia* spp.) are located either in the north eastern corner of the site, or along the boundary fence with Ranfurly Back Road. Both areas are proposed to have limited disturbance during construction, minimising the loss of these plants. In this context, I am satisfied with the assessment of Boffa Miskell and consider that effects on indigenous invertebrates can be adequately managed through minimising the loss of extant plants and compensatory plantings.
- [66] In terms of effects on wetlands, Boffa Miskell's ecologists and Wildlands agree on the extent of wetlands present on the site. They disagree on what level of setback would be appropriate to manage the effects of the facility on those wetlands. Boffa Miskell consider a 10m setback from the central and southwest wetlands, and 5m from all other wetlands to be appropriate. I understand that Boffa Miskell initially considered a blanket 10m setback from all wetlands. However, this was reduced to 5m because of economic viability concerns from Helios, and the small, modified, nature of these wetlands meaning that any additional benefit would be minimal. Wildlands agreed that a 10m buffer would be appropriate for the central and southwest wetlands, but considered that a 10m setback should be applied to the other wetlands, too, based on best practice, the activity standards of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020¹⁴ (NES-FW) and a desire to minimise the lake effect.
- [67] Based on the opinions of Boffa Miskell's and Wildlands' ecologists, I consider that the provision of a 10m setback from the central and southwestern wetlands will be appropriate to manage long term effects from the presence of the panels on these wetlands. Based on this, I would have no reason to believe a 10m setback would not also adequately manage effects on the other wetlands (If this were to be required by the panel), even though this scenario has not been specifically assessed by either Boffa Miskell or Wildlands.
- [68] I consider that the panel should not have regard to the financial viability of the proposal when considering this application.¹⁵ The applicant's concerns about the viability of a 5m versus 10m setback from wetlands is not relevant to the panel's consideration. Instead, it should focus on the potential effects. In my opinion, if measures considered necessary to adequately manage adverse effects of a proposal make that proposal no longer financially viable, that would be strong evidence that it may not have been appropriate in the first instance.

¹⁴ Under Clause 45 of the NES-FM, resource consent would be required from the Otago Regional Council as a discretionary activity for vegetation clearance or land disturbance within 10m of any natural inland wetland in association with specified infrastructure.

¹⁵ *NZ Rail Ltd v Marlborough District Council* [1994] NZRMA 70 at 22.

- [69] I do not consider that compliance or otherwise with the NES-FW constitutes best practice, per se. Instead, it simply sets a threshold between what proximity to wetlands is appropriate in every case as of right, and when that proximity requires additional oversight from the relevant regional council in order to manage potential effects. The proposal as it currently stands would require resource consent from the Otago Regional Council under the NES-FW. Given this, I do not consider that it is appropriate that CODC's decisions in any way potentially pre-empt any decisions of the Otago Regional Council, for example by allowing a smaller setback as part of this consent. In this context, I consider it more appropriate that, if the panel approves the application, a 10m setback be required from all wetlands, in line with what can be undertaken as of right under the NES-FW. However, I also consider it appropriate that this condition be drafted in such a way that, if ORC approves a smaller setback under the NES-FW, this smaller setback will override the 10m setback required by this consent. This would avoid a need to obtain CODC consent to vary this condition if ORC approves a smaller setback, but keep the starting point as needing to comply with the permitted activity standards in the NES-FW unless further assessment under the is undertaken appropriate jurisdiction.
- [70] The applicant has proposed that the two largest wetlands on the site be fenced off and de-stocked, allowing for positive benefits on wetland quality through ending livestock entering the wetland and browsing. The applicant has also proposed to undertake wetland restoration plantings in these areas, with the intent being to achieve a net gain in the values of these two wetlands. The other, smaller, wetlands would continue to be grazed, with no notable change in their qualities anticipated as a result.
- [71] Where cables are required to cross wetlands, these are proposed to be direct drilled instead of trenched. Boffa Miskell's ecologists consider that this will help to avoid effects on the quality of the impacted wetlands by minimising ground disturbance. I concur with the applicant that direct drilling will have lower effects on wetland quality relative to trenching.
- [72] Boffa Miskell and Wildlands both agree that the proposal would likely have minimal impacts on water movement into, through or out of the wetlands. I concur with this assessment.
- [73] I concur with Boffa Miskell that the constructed ponds across the site are not natural wetlands, have limited ecological values, and can be managed through smaller, 2m setbacks between them and the solar farm.
- [74] Overall, I consider that the proposal will, likely, have net positive effects for the two larger wetlands on the site, and minor adverse effects on the other wetlands, at most.
- [75] I understand that the applicant and Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou have agreed that, if consent is granted, conditions should be imposed that achieve the following:¹⁶
- (a) Protect and enhance ecological values;
 - (b) Monitor native manu;
 - (c) Provide visual and habitat enhancement for the Mānīatoto landscape;
 - (d) Require inclusion of local seed sources for screen planting;
 - (e) Require adherence to an Accidental Discovery Protocol; and
 - (f) Prescribe the commencement and operating duration of the activity authorised by resource consent.

¹⁶ #071 – Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou

- [76] Conditions to this effect were proposed by the applicant in Appendix 3 to the application.¹⁷ I concur that, if consent is granted, conditions to achieve the above points should be imposed. I will be considering the wording of all of the proposed conditions and whether I think they will be appropriate in more detail later in this assessment.
- [77] Overall, I consider that there are some limitations to the ecological assessment of the proposal, namely the timing of ecological assessments not being during peak growing seasons and the lack of investigation of potential effects on invertebrate communities. However, I am satisfied that effects on invertebrate communities can be minimised through avoidance of extant indigenous plants where practical. I also consider that effects on spring annuals or other intermitted plant species within the solar farm area would likely already be highly compromised by livestock grazing. These effects could be mitigated by an ecologist surveying the site during the growing season after consent is issued and including species found during this survey into the species used for the proposed offsetting plantings. There is a risk of bird strike adversely affecting native birds that use the area, particularly waterfowl. However, I currently do not consider this to be fatal to the application. Overall, I consider that the ecological effects of the proposal can be adequately managed.

Productive Capacity of the Soil

- [78] The applicant intends that the productive capacity of the overall site would largely be retained by minimising ground disturbance and associated soil removal during construction, and through the facility (Other than around the substation) still being able to be grazed by sheep. Ms Rosser contends that soils can never be replanted while the panels are in place, limiting its utility, even if animals can graze under them.¹⁸ I agree that the uses of the land will be limited by the installation of solar panels. For example, I understand that farming cattle or other livestock under solar panels is not preferable due to their increased propensity to damage the panels compared to sheep. Similarly, options for more intensive agricultural or cropping activities that benefit from automation and vehicles can be limited because larger vehicles would not fit under the panels. However, it would retain the ability of the land to be used for land based primary production. The applicant intends to remediate the site after the lifespan of the facility, allowing it to continue to be used productively.
- [79] Preliminary research from the Ministry of Primary Industries suggests that solar panels can help improve grass growth around them in some circumstances through decreased loss of water from the soil, albeit that growth directly under the panels (On single axis tilting arrays, similar to those proposed) in the study was reduced.¹⁹ Overall differences in yield between the facility in the study and a control site were not statistically significant,²⁰ suggesting the panels had limited influence on grass growth. The researchers used the results to model effects of solar panels on grass growth, including around Naseby, with their model suggesting a 3% reduction in grass yield.²¹ Relying on this and the assessment of the applicant, I have no reason to conclude that the proposal will substantially inhibit the ability of the land to be used for sheep grazing.
- [80] Mr Gardyne submits that the height of panels should be tall enough that inspections of livestock can be carried out, health problems treated, and livestock moved from one place to another.²² This is a fair point, but I consider that this can primarily be considered an operational matter between the applicant and the landowner. I see no reason why the

¹⁷ Specifically, proposed conditions 16-27

¹⁸ #009 - Rosser

¹⁹ Zac Beechey-Gradwell, Ashehad Ali and Paul Shorten *Putting the Farm into Solar Farms* (Ministry for Primary Industries Technical Paper Number 2025/15, December 2024), at 47.

²⁰ At 15.

²¹ At 40.

²² #070 - Gardyne

facility could not be designed to allow these activities without significantly changing the nature, scale or intensity of the other effects of the proposal.

- [81] In this context, I consider that the proposal will adversely affect the productive capacity of the soil. However, I consider that this effect will be minor, at most.

Road Safety Effects

- [82] Several submitters considered that glare from the panels may have a higher effect on the safe operation of Ranfurly-Naseby Road, in particular, than assessed by Mr Logan. In support of this they argue that, because this road is a 100km road that is frequented by tourists unfamiliar with the area and its driving conditions, the effects of any glare will be greater. Submitters also typically considered “yellow” glare, being that with potential to create a temporary after-image, as being potentially more dangerous for drivers than assessed by Mr Logan. For consistency with Mr Logan, I will refer to different levels of glare as “Green”, “Yellow” or “Red”, as defined by Mr Logan in Section 1.2 of his assessment. Mr Swinbourn submitted that Mr Logan’s assessment did not consider strobing effects as people travelled along the road creating flashes of light.²³
- [83] Mr Logan predicts that, if no mitigating actions are taken, Ranfurly-Naseby Road would receive approximately 47 hours of cumulative yellow glare per annum and Ranfurly Back Road would receive about 91 cumulative hours. These would be concentrated primarily mornings and evenings during the winter months, when the sun is lower in the sky. Proposed mitigation included altering the rest angles of the panels to either 5 or 10 degrees, the latter of which is projected to remove all yellow glare from both roads, with 21 hours of cumulative green glare concentrated in the mornings from 21 May to 23 July, when the sun is lowest in the sky. In the longer term, Mr Logan anticipates that vegetation planted to screen the facility would also be able to effectively eliminate yellow glare and substantially reduce green glare. Based on this evidence, I consider that a mixture of 10 degree rest angles for the panels and plantings could effectively eliminate all glare from the facility.
- [84] The applicant has asked Mr Copland to assess how glare from the facility might affect road safety, in order to address the concerns of submitters outlined above. Mr Copland considered that any yellow glare on any part of the roading network should be avoided on the basis that it could cause distraction or visual impairment. He considered that green glare could be acceptable in non-complex transport environments, but may be less appropriate in more complex environments, such as intersections or other key decision making points, parts of the network that are vulnerable to queuing, or along vertical or horizontal curves. In this case, he is satisfied that the road network around the site is not so complex that green glare would not be acceptable.
- [85] Broadly speaking, I agree with Mr Swinbourn that people traveling past the site while it is creating glare will experience strobing as the observer moves between individual points of glare off each array and points where glare is and is not blocked by vegetation. I also agree that strobing could potentially be more disruptive than a constant glare, as the light level changes more often, increasing its potential to cause a distraction and making it harder for road users to adapt to. The arrays are close to being aligned with the direction of travel along the road. I consider that this would reduce the frequency and intensity of strobing effects. However, a level of strobing may still occur. Having regard to the assessment of Mr Copland, I am satisfied that, if the development could be undertaken in a way that avoids any instances of yellow or red glare, the effects of glare would be sufficiently low that strobing would not substantially change the potential effects.

²³ #081 – Swinbourn

- [86] It is not clear from the application what downsides changing the rest angle of the panels would entail. Assuming there are no notable downsides to the applicant, I see no reason why the commissioners should not require the panels be programmed with a rest angle of 10 degrees in order to avoid most potential glare. This would both improve road safety and reduce the visual effects of the facility.
- [87] Mr Copland notes that, once the landscaping has been established, the panels may be able to be kept at a lower rest angle without resulting in glare. He suggested that a condition could be drafted that would allow for a lower rest angle when glare can be addressed by landscaping. He suggested that an adaptive management plan be developed by the consent holder to demonstrate how glare will be managed and provide a complaints procedure if members of the public or the road controlling authority complain about glare. This has been reviewed and accepted by Mr Logan and the applicant. The condition takes a precautionary approach to managing the effects of glare, and factors in uncertainties in modelling glare. I accept this recommendation.
- [88] I concur with the applicant in Section 5.8 of the assessment of effects provided in support of the application that the proposal will have traffic generation patterns that have minimal effects on the safe and efficient operation of the roading network once operational.

Construction Effects

- [89] Construction is anticipated to occur over a period of approximately 24 months, between 07:30 and 18:00 hours, Mondays to Saturdays other than public holidays. During this time, construction would be undertaken in stages across the site.
- [90] Construction noise and vibration, particularly from pile driving, was raised as a concern by several submitters, particularly those who lived or worked near the site.²⁴ Ms Grimmatt opined that there was a risk the noise could be considered unreasonable under Section 16 of the RMA.²⁵ The applicant proposes that all construction activities be undertaken such that noise and vibration do not exceed the limits recommended in NZS 6803:1999 “Acoustics – Construction Noise” and DIN 41503:2016 “Vibration in Buildings – Part 3: Effects on Structures”.
- [91] Mr Ibbotson, for the applicant, has concluded that construction noise would be able to be undertaken in accordance with NZS 6803:1999, based on a 75dB construction noise limit. The applicant has relied on this assessment to conclude that the effects of construction noise will be minor and acceptable without further limitations. I disagree with Mr Ibbotson’s assumption that 75 dB L_{Aeq} is the relevant acceptable noise limit. Mr Ibbotson has used the noise limits for “typical duration” construction work. Under Clause 7.2.1 of NZS 6803:1999, “typical duration” is any construction with a duration between 14 calendar days and 20 weeks in any one location (Figure two). The proposed construction will extend well beyond 20 weeks and, while the construction activity will shift around the site, I don’t believe “any one location” in the standard was intended to refer to construction activities moving around a site. Noise levels may fluctuate as the construction moves around the site, but it will still create noise. Even if works shifted from one part of the site to another after 20 weeks, then back to the same general area again, it remains one set of construction work which will have longer term impacts. Therefore, in my opinion it should be considered “long term” construction under the standard. For long term construction, NZS 6803:1999 would recommend an upper limit of 70dBA L_{eq} and 85dBA L_{max} within the proposed construction hours.

²⁴ For example, #058 – Crossan, #085 – Graham, #120 – Becker and #128 – Healey

²⁵ #024 – Grimmatt

7.2.1

In tables 2 and 3:

- (a) "Short-term" means construction work at any one location for up to 14 calendar days;
- (b) "Typical duration" means construction work at any one location for more than 14 calendar days but less than 20 weeks; and
- (c) "Long-term" means construction work at any one location with a duration exceeding 20 weeks.

C7.2.1

Noise from construction work is generally of limited duration. Therefore the community will usually tolerate higher noise levels than for permanent activities provided that the noise is no louder than necessary. The short and long-term noise limits in the tables reflect this.

The precise location of construction work on a large construction site is likely to vary throughout the project. Construction work at the same location within a site for more than 14 days falls outside the "short-term" category and work at the same location for more than 20 weeks would be within the "long-term" category).

Figure two: Extract from NZS 6803:1999 showing how short, typical and long term construction durations are determined.

- [92] Given this discrepancy in Mr Ibbotson's assessment, I invite the applicant to provide updated comment from Mr Ibbotson confirming whether the works would comply with the lower noise limit. In the interim, I consider it appropriate that the applicant would need to provide a noise management plan to show how they intend to meet the 70dBA L_{eq} and 85dBA L_{max} noise limits as a condition of consent. If Mr Ibbotson can adequately satisfy the panel that these noise limits can be met without any particular mitigations, then this requirement may be waived. I consider that this will still result in adverse effects on the amenity values of nearby landowners, as argued in submissions. How a person experiences construction noise is person specific, and some people, such as Ms LaBonte, more sensitive than others.²⁶ However, I agree with the overall assessment of the applicant that, provided NZS 6803:1999 is complied with, the noise effects of construction will be reduced to broadly acceptable levels on the basis that NZS 6803 is the standard the District Plan uses to determine what construction noise is permitted for all other activities under Rule 12.7.4.ii.
- [93] Several submitters consider that pile driving, in particular, will result in vibration effects for nearby landowners and occupants. Mr Ibbotson is of the opinion that there would be no perceptible vibration from pile driving on the basis that the nearest pile driving would be 400m from any dwelling. Regardless, he recommends that vibration not be allowed to exceed the limits in German Standard DIN 41503:2016 Vibration in buildings – Part 3: Effects on structures. Given the distance between dwellings in the area and the proposed location of pile driving, I concur with the recommendations of Mr Ibbotson.
- [94] Mr Healey suggests that any construction noise and vibration management plans required by the consent would need to include regular monitoring and review in order to ensure construction noise remained within any specified limits.²⁷ Mr Ibbotson considers that, because noise limits could be comfortably met, no management plans would be required. As per my above assessment, I consider that a noise management plan may be required. Even if a noise management plan is not required, I concur with Mr Healey that it would be beneficial to have some monitoring of noise levels in order to ensure that actual noise levels are complying with NZS 6803. I note that this may require a consent holder access third party land to undertake noise monitoring. Therefore, in order to avoid

²⁶ #093 – LaBonte, #100 - Hore

²⁷ #128 – Healey

such a condition being able to be frustrated by a third party, this requirement would either need to have the formal agreement of all nearby landowners, or the condition be flexible enough to allow a monitoring programme that does not require the consent holder monitor their noise from third party land.

- [95] Section 16 of the RMA imposes a duty on all persons to adopt best practicable options to ensure their activities do not result in unreasonable levels of noise. What is unreasonable is considered on a case by case basis and, in my experience, typically requires assessment of actual noise generation, instead of desktop assessments. On initial consideration, I do not see why proposed noise, if undertaken in compliance with NZS 6803, will definitely be unreasonable.
- [96] Erosion and sediment are proposed to be managed using an erosion and sediment control plan, to be developed after consent is issued, to guide how construction earthworks will minimise discharges of contaminant laden water to other land or to receiving waters. Given the main earthworks associated with the facility are associated with pile driving and laying underground cabling across a site with generally low gradients and no identified increased propensity for erosion. In this context, I consider that any effects on the receiving environment due to sedimentation or erosion can be adequately managed through the development of an erosion and sediment control plan.
- [97] In terms of construction traffic, the proposal will result in a notable increase in traffic volumes over the anticipated two year construction period.
- [98] Four main access points are proposed to the site. Three would be along Ranfurly-Naseby Road, and the fourth along Ranfurly Back Road. The applicant proposes that these would be built in accordance with Council's standards. Specifically, they reference Figure 12.5, which is the District Plan's diagram for non-residential accessways to rural collector roads. Part 29 of Council's Roading Policies 2015 go into more detail on how these types of accesses need to be constructed. The basic parameters, such as access width and curve radius are the same between the two documents. I consider it more appropriate that the accessways all be constructed to comply with Part 29 of Council's Roading Policies 2015. Provided this is undertaken, with the amendments proposed by the applicant to increase the length of seal to at least 5m inside the site boundary, I consider that the access to the site will be adequate.
- [99] Ms Munro submits that Ranfurly-Naseby Road is not capable of managing construction traffic, and that Ranfurly Back Road should be used instead.²⁸ Ranfurly-Naseby Road is sealed and Ranfurly Back Road is metalled. The evidence from Mr Copland on behalf of the applicant is that Ranfurly-Naseby Road will have capacity to accommodate construction traffic. The proposed access points are in locations with good visibility in both directions. Because Ranfurly-Naseby Road is sealed, it has better ability to withstand heavy vehicle movements compared to a metalled road. Ranfurly-Naseby Road is also wider, making it better at allowing two way traffic flow, and would not emit dust. In my opinion, Ranfurly-Naseby Road also has the safer connection into State Highway 85 and the wider transport network compared to the intersection between State Highway 85 and Ranfurly Back Road. In particular, the Ranfurly-Naseby Road intersection has right and left hand turning lanes for traffic turning off the highway (Figure three). Ranfurly Back Road, via Goff Road, has no such provision (Figure four). This means turning vehicles would be disrupting through traffic along the highway to a greater extent. Council's Infrastructure Manager has verbally confirmed that they would prefer heavy vehicles use sealed roads, where possible, to minimise damage to gravelled roads. In this context, I agree with the expert assessment of Mr Copland regarding the access points to the site and consider it preferable that most construction traffic access the site over Ranfurly-Naseby Road.

²⁸ #060 – Munro



Figure three: Google Street View image of the intersection of State Highway 85 and Ranfurly-Naseby Road dated August 2019 showing the left and right turn lanes. Retrieved from https://www.google.com/maps/@-45.0885065,170.0927751,3a,63.6y,143.69h,77.38t/data=!3m8!1e1!3m6!1sG_Qebj1Njx-dtcFqCF24Kw!2e0!5s20190801T000000!6shhttps:%2F%2Fstreetviewpixels-pa.googleapis.com%2Fv1%2Fthumbnail%3Fcb_client%3Dmaps_sv.tactile%26w%3D900%26h%3D600%26pitch%3D12.618881179409811%26panoid%3DG_Qebj1Njx-dtcFqCF24Kw%26yaw%3D143.69210430507002!7i16384!8i8192?entry=ttu&q_ep=EgoyMDI1MDYxMS4wLWlKXMDSoASAFQAw%3D%3D



Figure four: Google Street View image of the intersection of State Highway 85 (Right), Goff Road (Centre left) and Ranfurly Back Road (Top left) dated June 2019. Retrieved from https://www.google.com/maps/@-45.1168482,170.1060436,3a,75y,52.59h,64.89t/data=!3m7!1e1!3m5!1s5FXWb2TXQmles2wZC2LEkA!2e0!6shhttps:%2F%2Fstreetviewpixels-pa.googleapis.com%2Fv1%2Fthumbnail%3Fcb_client%3Dmaps_sv.tactile%26w%3D900%26h%3D600%26pitch%3D25.107485982187256%26panoid%3D5FXWb2TXQmles2wZC2LEkA%26yaw%3D52.586754329233145!7i13312!8i6656?entry=ttu&q_ep=EgoyMDI1MDYxMS4wLWlKXMDSoASAFQAw%3D%3D

[100] Ms de Louw questions why heavy vehicles should be directed through Ranfurly. Instead, she submits that construction vehicles could be routed through Goff Road, bypassing the

town.²⁹ State Highway 85 is the main road through Naseby, with heavy vehicles instructed by signage to bypass the town centre using Thomas Street. Goff Road is a rural road that bypasses Ranfurly. The application proposes a condition to the effect that trucks would not use Goff Road, supported by the assessment of Mr Copland, who notes the lack of turning lanes into or out of Goff Road. Council's Infrastructure Manager has verbally confirmed that their preference is for heavy vehicles to continue to use established routes, but that there would be minimal effects on the operation of the roading network if individual drivers opted to use Goff Road, for example due to convenience or road conditions. Given the presence of a formal heavy vehicle bypass, I see no justification in requiring construction vehicles use Goff Road when travelling to and from the site. However, I also do not consider it justified that vehicles be precluded from using Goff Road as part of this consent, either. I do not consider that the effects of the occasional use of Goff Road, at driver or company discretion, by construction traffic would have a substantial enough effect on the operation of the roading network to warrant regulation through the resource consent process.

Risks of Fire

- [101] A large number of submitters oppose that the proposal on the basis that it will increase the risk of fire. Several submitters note that the Mānīatoto area is known for hot, dry, windy summers, with an elevated risk of wildfire. Mr Healey, specifically, considers that the high number of electrical connections that would need to be constructed create, in his estimate, millions of potential points for failure that could cause a fire, and with no way to stop a failure point within a panel from being energised, putting out such a fire could be difficult.³⁰ He also notes that putting water on such a fire may only serve to exacerbate the situation due to the conductivity of water. Ms Potter considers that 12 25,000 litre tanks is not enough water storage, and that the facility should be built in a less fire prone area.³¹ I agree with Mr Hadley that attempting to put out an electrical fire with water is not a good idea. This is reflected in all public guidance for fighting fires in New Zealand that I am aware of. The applicant has proposed on-site water storage for firefighting purposes. This may work for vegetation fires and fires in equipment that have been isolated from electrical charge, but would be inappropriate to use where there is a risk that electric charge is present.
- [102] I agree with the lived expertise of submitters that there is an elevated risk of fire in the Mānīatoto, particularly in the summer. I also agree that a solar farm would elevate the risks of a fire starting, primarily through electrical faults as indicated by Mr Healey. This is a risk that will need to be reduced and mitigated. It cannot be avoided if the facility is built. I agree with the applicants and the assessment of Mr Denize and Dr Horne that, given the construction of solar panels uses primarily low flammability materials, fire spread through the panels themselves is likely to be relatively slow. Therefore, I consider that the focus should be on minimising other sources of fire spread, namely vegetation, and ensuring that there is sufficient on-site storage of firefighting material to allow Fire and Emergency New Zealand (FENZ) to extinguish or control a fire on the property in a safe and effective manner.
- [103] One mechanism to limit the rate of fire spread through the facility and into neighbouring properties is through vegetation control under and around the panels. This is proposed to be achieved through livestock grazing. I consider that regular grazing, along with supplementary vegetation control as needed would be sufficient to prevent excessive vegetation growth and help mitigate the risk of fire spreading through the site.
- [104] In terms of the substation, I understand that the applicant intends that the substation would comply with Transpower's Substation Fire Mitigation Design Standard. I consider

²⁹ #073 – de Louw

³⁰ #128 – Healey

³¹ #118 – Potter

that compliance with this standard would be sufficient to manage fire risk associated with the substation.

[105] In order to manage the risks of fire, Mr Denize and Dr Horne have recommended that three management plans be developed as a condition of this consent, one addressing construction fire risks, with the other two addressing operational fire risks and emergency response, respectively.³²

[106] The proposed reliance on management plans puts Council in a potentially strained position. Typically, Council would defer to FENZ in relation to fire management. CODC has a memorandum of understanding with FENZ that we will impose conditions requiring a 30,000 litre firefighting tank for most simple development (Such as rural dwellings or farm buildings with a low fire load), but allow for alternative solutions where approved by FENZ. More complex activities typically require specific input from FENZ. On that basis, they ought to be the party responsible for reviewing and approving any fire management plans the applicant has proposed. I see no reason why the implementation of these plans would not be able to adequately manage the risk of fire. However, I am loathe to recommend the panel impose conditions requiring these plans be developed, reviewed and implemented on the basis that they may be ultra vires, given compliance would rely on the discretionary approval of a third party (FENZ). In order to manage this, I consider that the applicant should provide draft copies of these management plans either at or prior to the hearing. These should be either clearly developed in consultation with FENZ, or with their approval of a finished draft. Without this information, I cannot be certain that the risks of fire will be adequately managed. However, I see no reason why an acceptable solution could not be found, so I do not consider this to be fatal to the application at this stage. If no acceptable methods of managing the risks of fire starting and FENZ's ability to combat a fire on the site could be achieved, I consider that this should stand as a substantial bar against the application on the basis that fire on the site may not be able to be adequately managed by emergency services.

Risks to Health

[107] Several submitters raised concerns about potential health effects. These are primarily through concerns about toxic materials either being discharged to air or into the soil and groundwater in the event of a fire or other damage to the facility. Most concerns related to the battery storage facility, which has since been removed from the application. However, I consider that the solar farm itself presents a residual risk due to heavy metals used in their construction. The applicant has noted that they anticipate their panels being made of the following materials:

67% Glass
16.4% Aluminium
0.78% Copper
11.2% Plastics
4.36% Silicon
0.03% Silver
0.1% Tin
0.01% Lead

[108] I note that some types of panels may contain other materials such as cadmium telluride or selenium, which can both be toxic at higher doses.³³ I understand that the applicant does not intend to use panels that contain these materials.

³² What each plan is proposed to contain is outlined in Section 3.1 of their assessment.

³³ Adriana Ramos-Ruiz and others "Leaching of Cadmium and Tellurium from Cadmium Telluride (CdTe) Thin Film Solar Panels under Simulated Landfill Conditions" (2017) 336 Journal of Hazardous Materials 57 at 58. Medsafe "Selenium" (July 2000) <https://www.medsafe.govt.nz/profs/puarticles/sel.htm>

[109] I agree with the applicant's position that, under normal operating conditions, the risks to human health will be very low, with the panels only likely to discharge any material if they are damaged. They are also built of solid materials, which would slow the rates at which materials such as copper, lead, cadmium or selenium (If present) would disperse into the environment if exposed due to a panel being damaged. I consider that any individual panel would not contain sufficient material to cause notable risks to human health by the time it reaches receptors, in reliance on the assessment of Ms Rubio. Therefore, the risk would mainly be from a catastrophic failure of a large number of panels at the same time, such as in the event of a fire or extreme weather event, with damaged panels then left exposed for an extended period of time.³⁴

[110] I have already considered the risks of fire and steps that can be taken to manage this risk in paragraphs [100] to [105]. Overall, I consider that the risks associated with fire can likely be managed, subject to the supply of management plans developed with input from FENZ.

[111] Historically, hailstorms have been an infrequent, but present risk for the Mānīatoto area. If the facility is constructed, I consider that some level of damage due to hail could reasonably be expected over its lifetime. Given this, I consider it reasonable that steps be put in place to inspect the facility for damage after a hailstorm, clean up the site and repair or replace damaged equipment that may leach contaminants into the environment where necessary and within reasonable timeframes. For instance, I consider it reasonable that an inspection of the facility could be carried out within 24 hours of a hailstorm event, and any potential source of leaching contained (To a level where the risk is low either through removal of the damaged equipment, or a temporary or permanent repair) within one week, or longer if approved by Council on a case by case basis (For example if an event is sufficiently severe that it is not possible to complete these tasks within the specified timeframe). Provided this is undertaken, I consider that the risks to health from the proposal can be adequately managed.

Risks of Soil or Water Contamination

[112] The submission from Otago Regional Council considered that the application required more clarity on the risks posed to groundwater associated with the now removed battery storage.³⁵ A number of other submitters also raised concerns about effects on groundwater. This was typically either framed in generalities, specific to the battery storage system, or in the event that the site was abandoned. As previously noted, I consider that there is still a low risk to groundwater in the event that significant numbers of panels were damaged and heavy metals or other contaminants allowed to enter the soil. ORC indicated that they may be able to support the application if their concerns were addressed. Given ORC's submission related specifically to the battery storage system, ORC may wish to confirm whether they still have the same concerns prior to the hearing.

[113] I consider that this matter crosses the jurisdiction between Territorial Authorities and Regional Councils under the RMA.³⁶ Therefore, I consider that I can only speak in general terms on matters such as soil conservation and effects on groundwater quality.

[114] Underground infrastructure could be damaged, and contaminants released, if they are located where they may be disturbed by farming operations. Underground cables and

³⁴ #006 – Barton, #060 – Munro, #135 – The Real Dog Equipment Company Ltd, #136 – R Voice and #137 – N Voice all single out hail storms as an example of weather that could damage a large number of panels in a short timeframe.

³⁵ #130 – Otago Regional Council.

³⁶ Under Section 30, regional councils are responsible for controlling land use for the purpose of soil conservation and the maintenance and enhancement of water quality. Under Section 30, territorial authorities are responsible for controlling the effects of the use of land, control of noise and control of effects of activities in relation to surface water.

other infrastructure, particularly where they contain dielectric oils or other potential contaminants, should be buried deep enough that they will not be disturbed by farming operations or animals. Their locations should also be recorded so they can be avoided, or risks to them managed if land around them needs to be disturbed, or found quickly for maintenance purposes. I would expect that a responsible consent holder would want to do this regardless of any condition of consent, in order to protect their assets. Therefore, I do not consider a condition to this effect to be necessary. I am happy to provide draft wording for a condition with this effect if the panel considers one necessary.

- [115] The applicant has proposed that the transformers in the substation, which will contain large volumes of dielectric oil for thermal control, will have bunds constructed around them to contain spills of oil. For point sources of potential oil contamination, such as the transformers, I consider that spill containment would be adequate to manage the risk of oils or other liquid chemicals being discharged into the environment and impact on soil or water quality, or wider environmental health. Given the facility will be unmanned, slowing any potential response to a spill, I consider that spill containment should be sufficient to contain at least the maximum volume of the largest single volume of chemicals. For example, if a containment system contained two separate oil systems with volumes of 10,000L and 9,000L, the system should be capable of containing at least 10,000L of liquid. This would minimise the risk that a spill overwhelms its containment area before the spill can be stopped. I consider that this would be sufficient to minimise the risk of contaminants being discharged to the soil and groundwater to levels that would be acceptable in terms of CODC's jurisdiction.

Cultural Effects

- [116] Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou (Ka Rūnaka) identify that the site is part of a broader environment bordered by two draft wāhi tupuna areas, namely the Hawkdun Range and Taiari Trail. Kāti Tahu's relationship with the Mānīatoto pre and post European settlement, is outlined in Sections 5 and 6 of Ka Rūnaka's submission.³⁷ I adopt this description in full. Ka Rūnaka do not identify any features with specific elevated cultural significance (For example wāhi tapu, known urupā, or associations with particular resource gathering practices) for the application site. Ka Rūnaka's submission has, instead, focused on methods to ensure the proposal protects environmental values, including on native manu (Birds). Ka Rūnaka support the applicant's proposed wetland enhancement planting programme, and reiterates the need for research and monitoring of bird strike. They also reiterate a desire that native plantings used be sourced from local seed sources, which is proposed by the applicant. In this context, noting that the requests of Ka Rūnaka have been incorporated into the application, I consider that the cultural effects of the proposal will be satisfactorily managed.

- [117] The ArchSite database does not identify any known archaeological sites in or around the site. I consider that effects on archaeological or heritage values will likely be low. Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou have recommended a condition be imposed including an accidental discovery protocol to be followed in the event that previously unidentified archaeological material is uncovered during construction works.³⁸ I consider such a condition to be sufficient to manage any effects on unknown archaeological values.

Rural Character Effects

- [118] I consider that rural character is built up from all the matters already considered. The District Plan characterises rural areas through their open space, landscape and natural character values, providing for a wide range of rural primary production activities and supporting activities and industries, with consenting pathways available for residential and extractive activities. A high level of weight is given to protecting the open, natural

³⁷ #071 – Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou

³⁸ #071 – Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou

character of the district's hills and ranges in the rural section of the Plan. This means that there can be high levels of variation in what constitutes "rural character" between different areas. For example, in this part of the Mānīatoto, has a much more open, sparsely developed, pastoral character than, for example, the more residential and "rural lifestyle" oriented areas north of Alexandra, or the more intensive horticultural development in the rural parts of the Teviot Valley, enclosed by the Old Man Range, Knobby Range and Umbrella Mountains.

- [119] The proposal will substantially change the current, open, low intensity rural environment by taking what is currently an open, sparsely developed dryland pastoral farm and converting it to a much more intensively developed, industrialised in appearance, solar farm. However, I consider that it will retain some similar characteristics. For example, I have already concluded that proposed landscape screening, while blocking visibility of current wide open views, are a common feature of the Mānīatoto rural environment that will help to reduce the appearance of industrialisation by limiting visibility of the facility. Additionally, the retention of sheep grazing under the panels will help to retain some of the current pastoral rural character of the site, and provide some sense of continuity between the application site and nearby pastoral farms. Once operational, I consider that noise from the facility will be relatively low, and not out of character with what the District Plan would anticipate for the surrounding area.
- [120] Security cameras are proposed around the perimeter fence. I accept that these are desired to allow for the monitoring of the facility and detection of any unauthorised entry. However, this type of surveillance could have an adverse effect on rural character and amenity if the cameras are pointed towards neighbouring land. The applicant advises that these cameras would be oriented away from neighbouring properties, instead being directed into the site. I consider this to be adequate to avoid effects on the privacy of nearby landowners and occupants due to the surveillance of the facility.
- [121] Given these characteristics, while I consider that the proposal will substantially change the character of the landscape, I consider that there are some mitigating factors that prevent these effects being unacceptable.

Economic Effects

- [122] The proposal will have positive effects through the generation of additional renewable electricity for distribution through the country. These effects have not been quantified by the applicant. It is also not clear from the application how those benefits will be apportioned (For example the national vs local public benefits, and public vs private benefits). Several submissions in opposition have questioned whether the local benefits are sufficiently high, and consider that the benefits will be privatised to the applicant, while benefits to locals and the wider public will be limited. Submissions in support frequently consider that the proposal will result in economic benefits to the area, for example through job creation, financial investment and economic diversification.
- [123] I consider it beyond argument that the proposal will have potentially significant economic benefits. Benefits are anticipated to accrue through revenue from the sale of electricity and be distributed through payments to staff and contractors during construction and operation, and material suppliers, logistics companies, accommodation providers and other organisations during construction. I consider it uncertain whether the proposal will result in notable benefits to electricity consumers through lower prices. However, I consider it reasonably likely that the facility would, at a minimum, help to slow price increases by increasing supply of electricity.
- [124] Some submitters have suggested that the consent holder could be required to provide an amount of funding to local community groups, or set up their own community fund. Ms Pont is very specific in suggesting a \$25 million community fund that then receives

an additional \$500,000 per annum from the consent holder.³⁹ Ms Weir suggests at least \$200,000 per annum be donated by the consent holder to a local community trust.⁴⁰ Submitters see this as a way of ensuring some of the revenue earned from the operation of the facility results in economic and social benefits for local communities. It will not change the overall potential economic benefits from the proposal, and there is no policy in the District Plan or the National Policy Statement for Renewable Electricity Generation 2011 requiring decision makers give more weight to benefits to local communities than wider benefits, or unilaterally require consent holders redistribute their revenue (Unless the applicant volunteers it). However, the applicant may wish to respond to these submissions at or prior to the hearing.

[125] If existing accommodation is used to accommodate construction workers, some submitters consider that this would impact financially on local tourism operators by restricting the numbers of tourists that could visit the area during the two year construction period.⁴¹ I agree that this is a risk in the short term during and immediately following construction. There is a lot of uncertainty about how workers would be accommodated. The applicant may wish to comment further on how they anticipate accommodating workers to address these points.

[126] Overall, I consider that the economic benefits of the proposal will likely outweigh the economic costs in aggregate. However, submitters have raised concerns about how those benefits and costs will be distributed. In particular, submitters are concerned that the applicant would accrue most of the benefits through profiting from selling electricity, with the local community potentially taking economic hits to their tourism industries and limited long term job creation.

Effects on Renewable Electricity Generation

[127] The proposal will contribute positively towards meeting both New Zealand's renewable electricity generation targets, and its overall generation targets, which anticipate requiring significant increases in electricity generation, while transitioning the energy sector to have net zero carbon emissions by 2050.⁴²

[128] A large number of submitters question the appropriateness of the location of the facility relative to the main centres of demand for electricity. Currently, almost two thirds of New Zealand's electricity demand is located in the North Island.⁴³ Submitters argue that generating power in the Mānīatoto would result in efficiency loss due to the increased distances power would need to be transmitted. Some specifically asked whether other transmission infrastructure is adequate to handle the increased electricity generation⁴⁴ and whether it was appropriate to put further pressure on HVDC cables between the South and North Islands, when the facility could be built in the North Island.⁴⁵

[129] In respect of those submissions questioning the appropriateness of the location of the proposed facility, I agree that from an energy efficiency standpoint it is preferable to locate electricity generation close to where it is being used. Doing so reduces energy losses through transmission, and limits the amount of transmission infrastructure that is

³⁹ #154 – Pont

⁴⁰ #072 - Weir

⁴¹ #073 – de Louw, #118 – Potter, #133 – Crawford J, and #164 – Crawford D

⁴² Ministry of business, Innovation and Employment “Energy Strategies for New Zealand” Retrieved from <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand>

⁴³ Transpower Ltd (N.d.) *Market Indicators – Demand*. Retrieved from <https://www.transpower.co.nz/system-operator/notices-and-reporting/weekly-reporting/market-indicators#:~:text=Almost%20two%20thirds%20of%20national,impact%20on%20security%20of%20supply>.

⁴⁴ #060 – Munro, #128 – Healey.

⁴⁵ #135 – The Real Dog Equipment Company Ltd, #136 – Rose Voice, #137 – Nigel Voice.

required, reducing costs and, generally speaking, the environmental impacts of that infrastructure.⁴⁶ However, I do not consider that this should stand against the application for the following reasons.

- [130] Renewable electricity generation, particularly from sources such as solar, are intermittent. The sun does not always shine, and the wind does not always blow. In my opinion, this creates a compelling argument for dispersing supply across a wider area. It also acts in favour of overbuilding your generation capacity when the intent is to have a significant part of the system generating electricity from renewable sources. Having a dispersed generation network maximises the likelihood that some parts of the network are generating, even if others are not. Overbuilding the on-paper maximum generating capacity of the network would also be necessary to minimise disruptions to consumers as a certain amount of downtime for any given facility would need to be built into the system. The proposal would introduce substantial new generation capacity into a new area of the country with identified good access to sunlight and where there is currently limited solar generation capacity. In doing so, it would help support both these aims and could compliment similar planned and under construction solar farms in other parts of the country.⁴⁷
- [131] The site is located close to existing transmission infrastructure. This minimises the need for, and effects of, new infrastructure. Upgrades of existing infrastructure may be required to accommodate additional development capacity. However, with some exceptions, these effects have a permitted activity pathway in the planning framework under the Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009.⁴⁸ Broadly speaking, I consider that limited weight should be given to the effects of upgrades to existing transmission infrastructure under the RMA. The practicalities of any upgrades and how the costs are apportioned, if the exercise of this consented required any, would be between the consent holder and Transpower.
- [132] Nothing about the facility precludes it supplying electricity to the South Island. The facility would be connected into the transmission network the line between the Roxburgh Dam and Christchurch, which allows options to relatively easily transmit electricity to Christchurch, to the North Island via the Benmore DC substation and the HVDC line, or elsewhere in the south island via the rest of Transpower's network.
- [133] The resource consenting process under the RMA cannot be used to oblige an applicant undertake their development on a different site. The panel can only consider the application before them. If the panel were to refuse the application on the grounds that the location was less efficient than others, there is no guarantee that the applicant, or any other party, would seek to build in a more efficient location.
- [134] On the whole, I consider that the proposal will contribute positively through increased capacity for renewable electricity generation. I do not consider the location of the proposal relative to current demand centres for electricity to count against it.

Other Effects

⁴⁶ For example, shorter transmission lines might have lower visual effects, less health effects from having fewer people around them, and require less resources to build.

⁴⁷ For example, the consented 133mW facility near Carterton, 115mW facility near Edgecumbe, 400mW facility near Taupō, a 202mW facility under construction near Te Aroha, and several proposed facilities of different capacities through Canterbury and the Mackenzie District. Retrieved from https://en.wikipedia.org/wiki/Solar_power_in_New_Zealand.

⁴⁸ For example, exceptions include adding a new circuit to an existing line whose support structures were not intended to accommodate one at the time the NES was introduced (Regulation 8), or replacing existing transmission pylons with significantly taller ones (Regulation 14).

- [135] Several submitters argue that the proposal will decrease tourism in the area, as people are turned away due to the loss of rural character.⁴⁹ Mr Hart argues that there will be an increase in tourism as people come to the area because of the facility.⁵⁰ I have some sympathy for the arguments that tourism will decrease. Naseby's economy, in particular, relies heavily on tourism, so a loss of tourists would adversely affect the community. However, taking a long term view, I consider it unlikely that these changes to tourist numbers resulting from the construction of the facility will be substantial. Over time, I anticipate that the facility will become seen as another part of the landscape, in a similar way that the Clyde and Roxburgh Dams form an accepted part of the Clyde, Alexandra and Roxburgh landscapes. I consider that the area has more to offer tourists than just these two views of farmland from Ranfurly-Naseby Road and Ranfurly Back Road, and I struggle to see how the facility would ruin the whole ambiance of the wider area for tourists seeking a predominantly rural environment or the amenities of the Naseby township.
- [136] In terms of the future decommissioning of the site, the applicant has stated that the facility would be deconstructed, and the land returned to its pre-development state at the end of the operational lifespan of the solar farm and the lease agreements with landowners. Submitters have raised concerns about the manner in which the materials from the facility would be disposed of, stating a preference for recycling of panels and other equipment, but also expressing concern that there may not be the required technology or capacity in New Zealand's recycling system to process this volume of material. They also sought assurances that the site would not simply be abandoned by the consent holder at the end of the facility's life, leaving the community to clean it up.
- [137] Some submitters questioned whether any obligation to remediate the site would need to be fulfilled by a future operator other than Helios. I can confirm that any conditions of consent, if issued, would need to be complied with by any party exercising the consent, not just Helios. This would include any conditions related to the disestablishment of the facility.
- [138] I consider that the conditions of consent related to decommissioning should be flexible enough to apply at any time the site is to be decommissioned, in order to account for changes in circumstance that might warrant the facility being decommissioned at an earlier or later date than currently intended by the applicant.
- [139] I agree with submitters that, if the facility was abandoned at the end of its life, this would have unacceptable adverse effects for the area. Several submitters proposed that a bond be taken and held by CODC that could be used as a last resort if the consent holder was not able to be made to remediate the site, for example in the event of the operator defaulting. Ms Pont, in particular, suggested a \$10 million dollar bond.⁵¹ Upper Taieri Wai suggests that interest from any bond could be used to fund community projects in the Mānīatoto.⁵²
- [140] My understanding is that bonds could be either cash or a bank guarantee. Cash held in a bond would generate interest, a guarantee would not. Regardless, my understanding of the law that relates to bonds under the RMA is that any interest earned on a cash bond should be used for the specified purpose.⁵³ It cannot be taken for other purposes. CODC has historically interpreted this to mean that all interest on a bond should be returned to

⁴⁹ For example, #006 – Kelland, #036 – Elliot, #061 – Dowling, #072 – Weir, #082 – Swinbourn, #107 – Nisbet and #133 – Crawford

⁵⁰ #001 – Hart,

⁵¹ #154 – Pont

⁵² #083 – Upper Taieri Wai

⁵³ Resource Management Act 1991, s111, requires money held by Council for a bond be dealt with in accordance with the purpose for which it was received.

the consent holder. I do not consider that providing any interest earned on a cash bond to community groups would be an appropriate use of this money.

- [141] Given the intended lifespan of the facility is known, and there is community concern that the site may not be remediated, I consider it appropriate that a bond be entered into for this intended duration to provide funds to remediate the site in the event that the consent holder is not able to, for example due to insolvency. The applicant has indicated that they intend to include a condition to establish a security fund as part of their lease agreement, which is intended to cover decommissioning and reinstatement costs. The agreement is intended to require the decommissioning and reinstatement costs be determined by a third party expert. How the fund is managed is intended to be between the applicant and the landowner. However, it would operate similarly to a bond held by Council, with similar potential benefits. I consider that this could adequately address the concerns of submitters that there would be no security against a consent holder abandoning the site and leaving the landowner and community to clean it up. However, I consider it appropriate that Council also be a party to the bond instead of it being a completely private agreement. This would better help protect the interests of the wider public, and it would also ensure that Council, on behalf of the wider community has control over managing potential adverse effects on the Mānīatoto environment.

Effects

- [142] In accordance with section 104(1)(a) of the Resource Management Act 1991, the actual and potential adverse effects associated with the proposed activity have been assessed and outlined above. I consider that the short term adverse effects on the environment arising from the proposal will be more than minor, but most could be appropriately managed through adherence to conditions of consent, if consent is granted. I recognise that noise effects from pile driving during construction may not be able to be managed to levels considered acceptable by some submitters. However, taking into consideration the potential benefits of the proposal, the expert noise assessment provided by the applicant, the management measures that have been proposed by the applicant and the temporary nature of this noise, I consider that these effects should not be fatal to the application.

Offsetting or Compensation Measures

- [143] In accordance with section 104(1)(ab) of the Resource Management Act 1991, there are no offsetting or compensation measures proposed or agreed to by the applicant that need consideration.

Objectives and Policies

- [144] In accordance with section 104(1)(b) of the Resource Management Act 1991, the following objectives and policies are relevant to the proposal:

Objectives:

- 13.3.2 – Utilities
- 13.3.3 – Development of Energy Resources
- 13.3.5 – Landscape and Amenity Values
- 13.3.6 – Power Generation Facilities

Policies:

- 12.4.1 – Positive Contribution of Infrastructure
- 13.4.3 – Public Works and Network Utilities
- 13.4.4 – Development of Utilities
- 13.4.6 – High Voltage Transmission Lines

- 13.4.7 – Development of Power Generation Facilities
- 13.4.8 – Reducing the Environmental Impact of Power Generation
- 13.4.13 – Power Generation Facilities
- 13.4.14 – Renewable Electricity Generation

- [145] While Section 13 is applied as a complete code, I will occasionally reference objectives and policies in other sections of the Plan, particularly Section 4 – Rural Resource Area. This assessment does not seek to assess the proposal against these provisions directly. However, I consider them to be useful to guide what matters are important when applying the above provisions to a specific context. For example, when assessing whether the proposal adequately avoids, remedies or mitigates its effects on the landscape under Policy 13.4.7.d, it can be useful to refer to the specific landscape values sought to be managed for rural areas identified in Policy 4.4.2, Objective 4.3.3 and Issues 4.2.2, 4.2.3 and 4.2.15.
- [146] For the reasons provided in my assessment of effects I consider that, subject to conditions, the proposal would provide for the development of a significant grid-scale solar farm in a location that can manage its effects on amenity, heritage and landscape values. I consider that, in the short term, the proposal may have significant effects on the landscape. This means that the panel is not directed to enable the proposal under Policy 13.4.3. However, I consider that the policy does not preclude the panel from concluding that a proposal with significant adverse effects should not be approved. It sets an expectation that proposals without significant adverse effects will be enabled through the planning framework, but I consider it to be sufficiently broad in scope that a proposal that has significant effects should not immediately be prevented from occurring.⁵⁴ Instead, I consider it appropriate that regard should be had to Policies 13.4.4 and 13.4.7, which require adverse effects of infrastructure be managed to appropriate levels, when considering whether any significant effects will be acceptable under the District Plan.
- [147] The high voltage transmission lines proposed to connect the facility to the wider transmission network are located well away from nearby urban areas and can be located away from existing buildings such that they, their occupants or the wider public would not be substantially impacted by a line failure. The proposal is consistent with Policy 13.4.6.
- [148] Policy 13.4.7 seeks to ensure development of power generation facilities avoids, remedies or mitigates its adverse effects on ecosystems, communities, the landscape, heritage and cultural values, climate, natural hazards and public access. Policy 13.4.4 mirrors these by seeking to ensure the design location and operation of utilities recognises and provides for avoiding, remedying or mitigating adverse effects on noise, vibration or lightspill, effects on landscape values or risks to public safety. Policy 13.4.4 also requires the protection of areas of significant indigenous vegetation, water bodies and their margins, the protection of the integrity of sites of significant heritage value, the protection of the integrity of sites of importance to Kai Tahu, and the maintenance of the operation of other infrastructure. Where effects are to be avoided, remedied or mitigated, these policies provide no guidance for how these effects are to be weighted and what level of avoidance, remediation or mitigation is necessary. This means that whether a proposal adequately avoids, remedies or mitigates its adverse effects on these matters must be assessed on a case by case basis.
- [149] For the reasons provided in Paragraphs 90 to 94 and 96 to 99 of my assessment, I consider that the effects of construction noise, traffic and vibration and the operational noise, lightspill and glare effects of the proposal can be adequately managed. I consider the proposal to be consistent with Policies 13.4.4.a, and 13.4.7.c.

⁵⁴ As a point of comparison, if Policy 13.4.3 was worded along the lines of “To only enable...” or “...provided they are sited or designed...” this would create a policy that is more restrictive and directive.

- [150] Issue 4.2.2 in the District Plan recognises that the district's rural landscapes are constantly changing, but can be vulnerable to effects of new structures, large scale earthworks or planting shelterbelts on elevated land. Under Issue 4.2.15 and Policy 4.4.10, increased weight is given to managing effects on prominent hillsides and terraces, and the natural character of wetlands and other surface water bodies. In this case, the proposed facility is not located in an elevated position. Setbacks and enhancement plantings are proposed to help maintain the character of the main wetlands on the site. In Paragraphs [117] to [120] I conclude that the proposal's use of screening and the retention of pastoral farming help to mitigate the significant change in rural character that would result from the construction of the proposed solar farm. In Paragraphs [39] to [41], I conclude that the proposed landscape screening will establish itself within a reasonable timeframe. There is scope for the facility to be removed at the end of its lifespan, allowing for the area to be reverted back to a solely pastoral farm or other use. In this context, I consider that the proposal adequately remedies and mitigates its short and long term adverse landscape and visual amenity effects for the reasons provided in paragraphs [36] to [51] of my assessment, and is consistent with Policies 13.4.4.b and 13.4.7.d.
- [151] The site is not in an area with identified significant indigenous flora, habitats for significant indigenous fauna. Subject to compliance with conditions, including setbacks from wetlands, the provision of restoration plantings and taking steps to manage bird strike, I consider that the proposal will adequately protect water bodies, and adequately avoid and mitigate its effects on ecosystems and habitats. I consider the proposal to be consistent with Policies 13.4.4.c and 13.4.7.a.
- [152] The site is not identified as having any elevated heritage or cultural values. I consider that adherence to an accidental discovery protocol will adequately manage effects on previously unknown archaeological or cultural material. In terms on heritage values, I consider that these are largely associated with the character of the landscape. These effects have already been considered and found to be able to be adequately managed through conditions of consent. I consider the proposal to be consistent with Policies 13.4.4.f, 13.4.4.g, 13.4.7.e and 13.4.7.f.
- [153] I consider that any adverse effects on the operation of the roading network can be managed through conditions of consent. There is no evidence that the proposal would negatively impact the efficient operation of other utilities and infrastructure. The proposal is consistent with Policy 13.4.4.e.
- [154] The application site is not in an area as being subject to natural hazards or land instability identified in either the District Plan or the Otago Natural Hazards Database.⁵⁵ I consider the proposal to have minimal effects in terms of these matters in terms of Policy 13.4.7.g and 13.4.7.i.
- [155] Four submitters argue that the proposed solar farm would create a localised warming effect that could change local climate patterns.⁵⁶ Publicly available research indicates that solar farms can create localised warming of the air above the facility through lowering the solar reflectivity of the area.⁵⁷ Equally, soil temperature and air directly under the

⁵⁵ Otago Regional Council (n.d.) Otago Natural Hazards Portal, retrieved from <https://experience.arcgis.com/experience/30bb9b65ada445b5af4ab4a0bc2d6d93/page/Regional-Overview->

⁵⁶ #031 – Allan, #036 – Elliot, #045 – Davidson and #149 – Crossan.

⁵⁷ Greg Barron-Gafford and others "The Photovoltaic Heat Island Effect: Larger Solar Power Plants Increase Local Temperatures" (13 October 2016) Scientific Reports <https://doi.org/10.1038/srep35070> and Vasilis Fthenakie and Yuanhao Yu "Analysis of the Potential for a Heat Island Effect in Large Solar Farms (Paper presented to the Photovoltaic Specialists Conference, 2013).

panels may be slightly cooler in summer as they receive less direct radiation.⁵⁸ Generally, these effects were found to be isolated to solar farms themselves, with changes falling off rapidly above and around facilities.⁵⁹ Based on this, there is a possibility that localised changes to ambient conditions will occur. However, given research suggests that these should be relatively localised effects, I consider it highly unlikely that there will be any notable changes to weather patterns (For example changing rainfall or wind patterns) around the application site.

[156] The application site is currently in private ownership, with no public access. It is not in a location where public access might be expected (For example along navigable waterways). Public access would be precluded by security fencing. Given the current lack of legal public access, or any expectations of a right of public access, do not consider this to be contrary to Policy 13.4.7.j.

[157] In terms of risks to public safety, I consider that these can be adequately managed through proposed security measures preventing access to what will be a hazardous area, and through measures to inspect the site after severe weather and remediate any damaged material that could discharge potentially hazardous contaminants. I consider the proposal to be consistent with Policy 13.4.4.d.

[158] Policy 13.4.8 seeks to encourage investigation into a wide range of renewable energy sources that can help reduce the environmental impacts of electricity generation. The application proposes to increase solar electricity generation capacity. I note and understand the concerns of submitters about the environmental impacts of producing and disposing of solar arrays. However, aligning with the intent of this policy, the proposal works to reduce the environmental footprint of electricity generation relative to using fossil fuels or other non-renewable sources.

[159] Policies 13.4.1, 13.4.13 and 13.4.14 seek to implement the National Policy Statement for Renewable Electricity Generation 2011 by ensuring the District Plan, and any assessment made under it, recognises the positive effects of infrastructure, the need to recognise locational, operational and technological constraints associated with renewable electricity generation. Throughout this assessment, I have recognised the potential benefits of renewable electricity generation associated with the proposal. I also accept that this area has several factors in its favour, including proximity to existing transmission infrastructure, reasonable sunlight hours, reasonably flat terrain and lack of known historic, social or cultural limitations. I consider that the proposal adequately addresses these requirements and is consistent with the above policies.

[160] Overall, I consider that the proposal is consistent with the relevant policies in the District Plan. The proposal would provide for the establishment and operation of a new renewable power generation facility in a manner that adequately maintains rural character and avoids, remedies or mitigates its significant adverse environmental effects. I consider the proposal to be consistent with the objectives in Section 13 of the District Plan.

⁵⁸ Alona Armstrong, Nicholas Ostle and Jeanette Whitaker "Solar Park Microclimate and Vegetation Management Effects on Grassland Carbon Cycling" (13 July 2016) Environmental Research Letters <http://dx.doi.org/10.1088/1748-9326/11/7/074016> at 4, and Vasilis Fthenakie and Yuanhao Yu "Analysis of the Potential for a Heat Island Effect in Large Solar Farms (Paper presented to the Photovoltaic Specialists Conference, 2013) at 2.

⁵⁹ Vasilis Fthenakie and Yuanhao Yu "Analysis of the Potential for a Heat Island Effect in Large Solar Farms (Paper presented to the Photovoltaic Specialists Conference, 2013) at 5.

Operative and Proposed Regional Policy Statements

[161] The Otago Regional Policy Statement 2019 (RPS2019) was declared operative on 04 March 2024. Decisions on the Proposed Otago Regional Policy Statement 2021 (PRPS2021) were notified on 30 March 2024. This decision is subject to a number of appeals. I note that, since the application was lodged, several of these appeals have been resolved, but many are ongoing. Where provisions in the PRPS2021 are beyond appeal, I will give these relatively high weight compared to the equivalent provision in the RPS2019. Where provisions are under appeal, the provisions of the RPS2019 will receive more weight.

[162] The following provisions of both policy statements are relevant to the application:

RPS2019:

Objective 1.1 – Otago’s Resources are Used Sustainably to Promote Economic, Social and Cultural Wellbeing for its People and Communities

Policy 1.1.1 – Economic Wellbeing

Policy 1.1.2 – Social and Cultural Wellbeing and Health and Safety

Objective 1.2 – Recognise and Provide for the Integrated Management of Natural and Physical Resources to Support the Wellbeing of People and Communities in Otago

Objective 1.2.1 – Integrated Resource Management

Objective 3.1 – The Values (Including Intrinsic Values) of Ecosystems and Natural Resources are Recognised and Maintained, or Enhanced where Degraded

Policy 3.1.1 – Fresh Water

Policy 3.1.2 – Beds of Rivers, Lakes, Wetlands and their Margins

Policy 3.1.9 – Ecosystems and Indigenous Biological Diversity

Policy 3.1.13 – Environmental Enhancement

Objective 3.2 – Otago’s Significant and Highly-Valued Natural Resources are Identified and Protected, or Enhanced Where Degraded

Policy 3.2.15 – Identifying the Significant Values of Wetlands

Policy 3.2.16 – Managing the Values of Wetlands

Objective 4.2 – Otago’s Communities are Prepared for and Able to Adapt to the Effects of Climate Change

Policy 4.2.2 – Climate Change

Objective 4.3 – Infrastructure is Managed and Developed in a Sustainable Way

Policy 4.3.1 – Managing Infrastructure Activities

Policy 4.3.2 – Nationally and Regionally Significant Infrastructure

Policy 4.3.3 – Functional Needs of Infrastructure that has National or Regional Significance

Policy 4.3.4 – Adverse Effects of Nationally or Regionally Significant Infrastructure

Policy 4.3.5 – Protecting Infrastructure with National or Regional Significance

Policy 4.3.6 – The National Grid

Objective 4.4 – Energy Resources and Supplies are Secure, Reliable and Sustainable

Policy 4.4.1 – Renewable Electricity Generation

Policy 4.4.4 – Efficient Transport of Electricity

Policy 4.4.5 – Electricity Distribution Infrastructure

Objective 4.6 – Hazardous Substances, Contaminated Land and Waste Materials do not Harm Human Health or the Quality of the Environment in Otago

Policy 4.6.1 – Hazardous Substances

Policy 4.6.2 – Use, Storage and Disposal of Hazardous Substances

Objective 5.3 – Sufficient Land is Managed and Protected for Economic Production

Policy 5.3.1 – Rural Activities

Objective 5.4 – Adverse Effects of Using and Enjoying Otago’s Natural and Physical Resources are Minimised

Policy 5.4.3 – Precautionary Approach to Adverse Effects

Policy 5.4.6 – Offsetting for Indigenous Biological Diversity

Policy 5.4.7 – Biological Diversity Compensation

PRPS2021:

LF-FW-O9 – Wetlands

LF-FW-P10A – Managing Wetlands

LF-LS-O11 – Land and Soil (Under appeal)⁶⁰

LF-LS-O2 – Use, Development and Protection (Under appeal)⁶¹

UFD-O4 – Development in Rural Areas (Under appeal)⁶²

LF-LS-P16 – Maintaining Soil Quality

LF-LS-P17 – Soil Values

LF-LS-P20 – Land Use Change

LF-LS-P21 – Land Use and Fresh water

LF-LS-P19 – Highly Productive Land

UFD-P7 – Rural Areas (Under appeal)⁶³

ECO-O1 – Indigenous Biodiversity (Under appeal)⁶⁴

ECO-O2 – Restoring and Enhancing (Under appeal)⁶⁵

ECO-P6 – Maintaining Indigenous Biodiversity (Under appeal)⁶⁶

ECO-P8 – Restoration and enhancement (Under appeal)⁶⁷

EIT-INF-P4 – Provision of Infrastructure (Under appeal)⁶⁸

EIT-INF-O5 – Integration (Under appeal)⁶⁹

EIT-INF-P10 – Recognising Resource Requirements

EIT-INF-P12 – Upgrades and Development (Under appeal)⁷⁰

EIT-INF-P13 – Locating and Managing Effects of Infrastructure, Nationally Significant Infrastructure and Regionally Significant Infrastructure Outside the Coastal Environment (Under appeal)⁷¹

EIT-INF-P14 – Decision Making Considerations (Under appeal)⁷²

EIT-EN-O1 – Energy and Social and Economic Wellbeing

EIT-EN-O2 – Renewable Electricity Generation (Under appeal)⁷³

EIT-EN-O2A – Greenhouse Gas Emissions and Renewable Energy Targets

EIT-EN-P1 – Operation, Maintenance and Upgrade (Under appeal)

⁶⁰ ENV-2024-CHC-29 Oceana Gold

⁶¹ ENV-2024-CHC-29 Oceana Gold

⁶² ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-31 GlenPanel Limited, ENV-2024-CHC-36 Kāi Tahu

⁶³ ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-29 GlenPanel Limited, ENV-2024-CHC-29 Oceana Gold, ENV-2024-CHC-37 QLDC

⁶⁴ ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-27 Forestry Appellants

⁶⁵ ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-27 Forestry Appellants

⁶⁶ ENV-2024-CHC-24 Aurora Energy Limited, Network Waitaki Limited, PowerNet Limited, ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-27 Forestry Appellants, ENV-2024-CHC-32 Manawa Energy, ENV-2024-CHC-22 Meridian Energy Limited, ENV-2024-CHC-29 Oceana Gold, ENV-2024-CHC-35 Transpower

⁶⁷ ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-27 Forestry Appellants

⁶⁸ ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-40 Queenstown Airport

⁶⁹ ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-40 Queenstown Airport, ENV-2024-CHC-35 Transpower

⁷⁰ ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-40 Queenstown Airport, ENV-2024-CHC-36 Kāi Tahu

⁷¹ ENV-2024-CHC-24 Aurora Energy Limited, Network Waitaki Limited, PowerNet Limited, ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-36 Kāi Tahu, ENV-2024-CHC-32 Manawa Energy, ENV-2024-CHC-22 Meridian Energy Limited, ENV-2024-CHC-38 NZTA, ENV-2024-CHC-37 QLDC, ENV-2024-CHC-40 Queenstown Airport, ENV-2024-CHC-35 Transpower

⁷² ENV-2024-CHC-30 Cain Whānau, ENV-2024-CHC-36 Kāi Tahu, ENV-2024-CHC-40 Queenstown Airport

⁷³ ENV-2024-CHC-39 EDS, ENV-2024-CHC-26 Forest & Bird, ENV-2024-CHC-36 Kāi Tahu

EIT-EN-P2 – Recognising Renewable Electricity Generation Activities in Decision Making (Under appeal)
EIT-EN-P3 – The Security of Renewable Electricity Generation Supply
EIT-EN-P6 – Managing Effects (Under appeal)⁷⁴
HAZ-CL-O3 – Contaminated Land
HAZ-CL-P15 – New contaminated Land (Under appeal)⁷⁵

- [163] I note that there is a high degree of overlap between a number of provisions between both documents. Where there is sufficient overlap, I will consider both documents in tandem.
- [164] In their submission, the Otago Regional Council confirms that they consider the proposal to be broadly consistent with the above provisions as they relate to renewable energy generation and its benefits to New Zealand's climate response initiatives and energy resilience. For the reasons provided throughout my report and adopting Ms Banhidi's assessment in Section 6.2 of her assessment of effects where they touch these matters, I consider that the proposal will be consistent with these aspects of both the operative and proposed RPS. This leaves consideration of the provisions that relate to ecology and biodiversity, rural activities and land contamination.
- [165] For the reasons provided in my assessment of effects, I consider that the values of existing wetlands can be maintained through setbacks and enhancement plantings, provided a 10m setback is maintained from all wetlands as the default position (Unless otherwise approved by ORC under the NES-FW). The proposal would include the enhancement of two degraded wetlands through plantings and livestock exclusion. I consider the proposal to be consistent with the provisions of both RPS's as they relate to wetlands.
- [166] For the reasons provided in my assessment of effects, I consider that effects on indigenous biodiversity within the site can be adequately maintained through minimising the loss of extant indigenous plants and the use of a range of native species in the proposed landscape plantings. I consider the proposal to be consistent with the ecology and biodiversity provisions of both RPS's.
- [167] The proposal utilises rural land in a way that limits its ability to be used for primary production. However, it will not preclude primary production in its entirety. Consistency with the NPS-HPL will be considered further in its own section below given the low weight to be given to UFD-P7(3) due to the policy being under appeal. I consider that there is a functional need for the facility to locate in a rural area due to its scale. I consider the proposal to be broadly consistent with Policy 5.3.1 and UFD-P7 (Noting that the NPS-HPL will be considered later in this assessment), and their associated objectives.
- [168] I consider that the proposal has a risk of creating newly contaminated land. However, I consider that, for a solar farm facility, it is impossible to avoid this risk entirely. For the reasons provided in Paragraphs [111] to [114] of my assessment, I do not consider this risk to be so substantial that the proposal itself should be avoided. I consider that the proposal is consistent with Policies 4.6.1, 4.6.2 and HAZ-CL-P15, and associated objectives.

National Policy Statements

- [169] The National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG) seeks to recognise the national significance of renewable electricity generation and

⁷⁴ ENV-2024-CHC-39 EDS, ENV-2024-CHC-32 Manawa Energy, ENV-2024-CHC-36 Kāi Tahu, ENV-2024-CHC-22 Meridian Energy Limited

⁷⁵ ENV-2024-CHC-29 Oceana Gold, ENV-2024-CHC-28 The Fuel Companies

provide for the development, operation, maintenance and upgrading of renewable electricity generation activities. It requires decision makers recognise and provide for national, regional and local benefits of renewable electricity generation, acknowledge the practical constraints associated with renewable electricity generation activities, and acknowledge the practical implications for achieving New Zealand's renewable electricity generation targets, among other matters not as relevant to this application.

[170] In this case, I consider it to be evident that the proposal will result in notable positive national benefits through the increased capacity for generation of renewable electricity. The facility would provide a substantial increase in New Zealand's renewable power generation capacity. The site is not in an area where existing activities around it are likely to result in notable effects from nearby activities on the solar farm's operation. The application site is understood to be in an area with good access to solar resources, and is in a different location to other planned solar facilities, diversifying their location and increasing the resilience of the overall system against inclement weather in any one part of the country. I consider that the proposal addresses and is consistent with the relevant provisions in the NPS-REG.

[171] The National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) seeks to ensure that there is no overall loss in biodiversity after the commencement date of the NPS. Clause 1.3(3) of the NPS-IB states that the development, operation, maintenance or upgrade of renewable electricity generation and transmission assets are not subject to this policy statement. The application is solely for the development of renewable electricity generation and transmission activities. I do not consider the NPS-IB to be applicable to the application.

[172] The National Policy Statement for Highly Productive Land 2022 (NPS-HPL) seeks to ensure that specified highly productive land is maintained for land based primary production. The application site includes two areas of land identified in the New Zealand Land Resource Inventory as Land Use Category 3 (LUC 3), with the remainder being LUC 4. Under Clause 3.9 of the NPS-HPL, development of highly productive land in a way that is not land based primary production should be considered inappropriate and be avoided unless, among other things, it is for the development, operation or decommissioning of specified infrastructure that has a functional or operational need to locate on the highly productive land.⁷⁶ As defined in the NPS-HPL, specified infrastructure includes infrastructure that delivers a service operated by a lifeline utilities, which includes electricity generation,⁷⁷ and infrastructure recognised as nationally significant in a National Policy Statement, including the National Policy Statement for Renewable Electricity Generation. The proposed facility would be considered specified infrastructure for the purpose of this clause.

[173] In terms of demonstrating a functional need to locate in the area, the applicant has argued that the following operational needs are relevant:

- The solar farm needs to be close to the transmission network and preferably an existing substation to minimise infrastructure needed to connect the facility to the grid
- The relatively small amount of highly productive land utilised would allow the facility to make a more meaningful contribution to renewable generation.
- The site lines up with existing field boundaries to enable continued management of the wider farm and sheep grazing as complimentary activities
- There needs to be adequate flat (Less than 5° slope) land
- The highly productive land is free of ecological, heritage or cultural constraints
- The site has a strong solar resource with medium to high sunshine hours and limited shading from natural features

⁷⁶ National Policy Statement for Highly Productive Land 2022, cl 3.9(2)(j).

⁷⁷ As defined in the Civil Defence Emergency Management Act 2002, s 4 and Part B of Schedule 1.

- The site has suitable geology to ensure the facility is stable while not needing to rely on complex foundations

[174] I agree with the applicant that the functional and operational needs of a solar farm include good access to the solar resource, reasonably convenient access to distribution infrastructure, reasonably flat land with favourable geological characteristics and few ecological, cultural and historical limitations.

[175] I am not certain that these functional needs are unique to the application site. For comparisons sake, the land bordered by State Highway 85, Wedderburn-Naseby Plantation Road, Naseby Link Road and the east branch of the Eweburn would appear, on face value, to provide for a lot of the same functional needs to a similar level (For example, it has similar proximity to the Naseby substation, similar topography and, I assume, similar sunshine levels over a similar land area than the application site). However, it is located entirely on land that is not subject to the NPS-HPL.

[176] I agree with the applicant that there are features of the site, including the sections that are LUC 3, that help provide for the functional needs of the proposed solar farm. However, I am not convinced that these create a need for the facility to be located on this land specifically, compared to other similar sites in the area. Given this, I consider that the proposal doesn't have functional needs that require it being located on this specific site. The proposal should be considered an inappropriate use under Clause 3.9(2).

[177] In this case, the application will involve the use of LUC 3 land for accommodating solar arrays and their supporting infrastructure. The LUC 3 land forms a small part of the overall site, and is relatively isolated from other, more cohesive areas of LUC 3 land due to being bisected by Ranfurly Back Road and different landholdings. Within the solar farm, the land is still intended to be used for land based primary production to farm sheep. I consider that the presence of the panels does limit the types of farming that could be undertaken on the site. For example, I understand that farming cattle under solar panels is not preferable due to their increased propensity to damage the panels compared to sheep. Similarly, options for more intensive agricultural or cropping activities that benefit from automation and vehicles can be limited because larger vehicles would not fit under the panels. However, it would retain the ability of the land to be used for land based primary production. In doing so, it minimises actual loss of highly productive land in the district. At the end of the solar array's life, the applicant proposes that the land would be reinstated. This would allow for the recommencement of a broader range of land based primary production activities. While I consider that the proposal would fail Clause 3.9, I consider that the fact that the proposal would not remove the ability of the land to be used productively, both during the operation and after the decommissioning of the facility, would sufficiently protect the productive capacity of the subject land from effects associated with this otherwise inappropriate development. In this context, I consider that the proposal is not contrary to Policies 4 or 8 of the NPS-HPL. I do not anticipate any notable reverse sensitivity effects from the proposal that would limit the ability of land based primary production on nearby land, making the proposal consistent with Policy 9. Overall, I consider that the proposal adequately protects highly productive land on the site for land based primary production that I can consider it consistent with the objective of the NPS-HPL.

Other Matters

[178] Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou have identified several provisions of the Kāi Tahu ki Otago National Resources Management Plan 2005 that are relevant to the proposal. Ka Runkaka do not directly assess the proposal against these provisions, and do not provide their thoughts on whether the proposal is or is not

consistent with them. I consider that adherence to an accidental discovery protocol, works to restore native wetland habitats, avoidance of significant landscape features, mitigation of the visual effects of the proposal through screen plantings, I consider that the proposal would adequately address these provisions in the Kāi Tahu ki Otago National Resources Management Plan 2005.

[179] Having regard to section 104(1)(c) of the Resource Management Act 1991, no other matters are considered relevant.

Part 2

[180] Under Section 7(j) of the RMA, the benefits to be derived from the use and development of renewable energy as a matter over which particular regard must be had. To this point, the proposal will result in potentially significant benefits through the provision of an additional 300 megawatts of solar energy generation capacity. Submitters have questioned where these benefits fall, arguing that the proposal nationalises and privatises the benefits, while the costs primarily fall on Naseby and Ranfurly, and whether it is necessary to have this level of generation in this part of the South Island where most demand is in the North Island. I reiterate that, looking from a nationwide point of view, I consider it preferable that renewable energy generation be constructed in an unideal location than not be built at all. I do not consider that the location of the facility relative to the main sources of electricity demand should be fatal to the application. The planning framework (Including Section 7(j), the NPS-REG and Section 13 of the District Plan) requires decision makers consider the benefits of renewable electricity generation at all levels, but doesn't give guidance for weighting of those effects based on whether they fall at a local, regional or national level. As noted in paragraphs [123] and [124], the applicant may wish to address those submitters further. However, for the purposes of this assessment, I consider that sufficient weight has been given to the positive effects of the proposal that Section 7(j) has been adequately satisfied.

[181] Based on the findings above, I consider that the proposal would satisfy Part 2 of the Resource Management Act 1991. Granting of consent would promote the sustainable management of District's natural and physical resources.

Duration of Consent

[182] A land use consent is granted in perpetuity unless otherwise specified in the consent.⁷⁸ The applicant and their experts have indicated that the facility would have a lifespan of up to 35 years. Based on their description of the application, the duration of the proposal and, therefore the scope of the application, is bound to the lifespan of the panels. In order to ensure the panel approves the application consistent with its scope, I recommend that the panel set a 35 year duration on the exercise of this consent under Section 123(b) of the RMA. This is the longest lifespan for the facility suggested by the applicant.

Draft Conditions

[183] The applicant proposed a suite of draft conditions in Appendix 3 to their application. If the panel approves the consent, I consider that these draft conditions can reasonably form the basis of conditions of consent, subject to some changes, as they broadly cover the main issues and effects that would need to be managed. I provide commentary on these conditions below.

⁷⁸ Resource Management Act 1991, s 123(b).

- [184] Conditions 28-30 relate to the removed battery storage system. These conditions are no longer necessary and can be removed.
- [185] Conditions 3-5 relate to the development of a construction management plan (CMP) to manage aspects of construction such as the construction methodology, dust management, construction traffic. Given my conclusions about construction noise in paragraphs [90] to [94], I consider it appropriate that the management of construction noise, including provision for monitoring and review of noise mitigation measures be included in this plan. Otherwise, I consider this condition to be appropriate.
- [186] The advice note to Condition 3 includes reference to Council needing to notify the consent holder within 10 working days if they cannot certify the CMP on the basis that it does not address the matters required to be addressed. I understand why the applicant may wish to have this. It would take time for them to prepare and provide additional information if any was missing or deficient. However, I do not consider that the consent should bind CODC, either explicitly or implicitly, as they are not the consent holder. This advice note should either be removed, or its wording softened to avoid directive language. If the consent holder is faced with a wait to certify any management plan that they do not consider reasonable, I note that they can lean on Council's duty to avoid unreasonable delay under Section 21 of the RMA.
- [187] Similarly proposed Condition 5(b) would place a requirement on Council to respond to a notification of some changes to the CMP within 5 working days, otherwise it would be deemed to have approved the change. I do not consider it appropriate that a condition should bind Council, particularly where it is acting in the public interest to certify that a management plan is adequate. This condition should be removed. Instead, I would suggest the applicant provide more detail on what they may consider to be an administrative change, in addition to changes of nominated personnel. These could then be incorporated into the condition to provide more certainty about what is and is not an administrative change, minimising the need for any further discretionary consideration from CODC. In order to ensure CODC has the most up to date copy of the management plans for monitoring and enforcement purposes, the condition should also require the consent holder notify CODC of any administrative changes.
- [188] Proposed Condition 8 includes a provision that would let the erosion and sediment control plan be amended at any time during construction to suit contractor methodology or respond to the on-site environment. I consider that this provision, which is not fettered by any further need for certification, might allow for substantial changes to the plan in a way that may not achieve the purpose of the plan, or adequately manage potential effects. I adopt this condition, but consider it appropriate that any amendments during construction have the prior approval of the Planning Manager in order to ensure continuing oversight of the erosion and sediment control plan.
- [189] Proposed Conditions 9 and 10 refer to the construction of access, I consider that these could be merged into one condition specifying all access requirements. I also consider it appropriate that reference to Figure 12.5 of the District Plan be amended to instead refer to Part 29 of Council's Roadway Policies 2015, which is a more recent standard for the formation of access to Council's roads.
- [190] Proposed condition 13 requires a corridor access request (CAR) be submitted prior to works commencing. CAR's and temporary traffic management plans are all required for any works within road reserve, regardless of any condition in this consent. I consider it more appropriate that this requirement be highlighted as an advice note, instead.
- [191] Proposed Condition 14 requires the rated noise level from all solar farm operations comply with specified noise limits. The rated noise level is easier to quantify and show compliance with. However, it does not necessarily reflect real world operations and their

associated effects. I consider that the noise levels proposed are adequate. However, I consider that the condition should relate to actual noise generated, rather than predicted noise outputs, in order to better manage the effects of the proposal on rural amenity and the amenity of nearby landowners and occupants.

- [192] Proposed Condition 19 would appear to require the solar arrays themselves be coloured with a reflectivity value of less than 30%. This appears to run counter to other information in the application, that state the arrays would be made from galvanised steel with a matte finish. The applicant may wish to confirm whether they intend the solar arrays themselves to be caught by this condition or not.
- [193] Proposed Condition 19 also has a level of vagueness in that it allows for a departure from the condition for structures where operational requirements preclude the use of a darker colour. I understand that this would include the inverter units, but it is not clear from the application what other structures might need to be exempted. Therefore, I anticipate that unnecessary disputes could arise about whether a structure had an operational requirement to be a lighter colour. I consider that it would be preferable that the applicant specify which buildings or structures they anticipate would have an operational need to be in a different colour than otherwise specified in the condition. This could then form part of the condition, making its effect clearer.
- [194] Proposed Condition 21 requires exterior lighting be minimised where possible. I consider this to be unnecessarily vague, because whether lighting has been appropriately minimised is a subjective decision. Instead, I prefer my suggested requirements in Paragraphs [49] to [50], that do not limit the overall amount of lighting, but requires lighting be pointed away from property boundaries, security lighting be on a motion sensor, and higher power lighting be shielded to avoid direct upwards lightspill. I consider that this creates more certainty for the consent holder and Council around what lighting is acceptable, while addressing submitter concerns about the effects of lightspill.
- [195] Proposed Conditions 22 to 27 relate to managing ecological effects. They include a requirement to prepare and implement a wetland enhancement plan, management of nesting birds during construction, and monitoring of bird strike. Any wetland enhancement plan would need to be prepared in accordance with the recommendations from Boffa Miskell, and I consider these to be adequate. Condition 24, related to nesting birds, identifies the breeding season as 1 September to 28/29 February. Wildlands indicates that the breeding season for some species, such as kawukapa (Little shag) could extend into May, but that most species likely to be present on the site could have a breeding season from September to March, inclusive. I understand that pinning down exact breeding seasons can be difficult. Birds may breed and nest at different times each year. Given this, I consider it appropriate that the specified breeding season be extended to the end of March, as indicated by Wildlands.
- [196] Proposed Condition 25, which requires a bird strike literature review, is appropriate. Proposed Conditions 26 and 27 require monitoring of bird strike if recommended by the literature review. However, it does not include any requirement that the consent holder take any measures to implement any additional measures to try limit bird strike, for example if research and monitoring indicates that there is a high level of effect on avifauna. Given the potential risk to avifauna from bird strike, I consider it reasonable that a consent holder be required to take steps to reduce or otherwise manage this risk. I consider that one of the functions of any Avifauna Collision Risk Monitoring Plan developed in accordance with these conditions should also include provisions for recommending and implementing practical measures to reduce the risk of bird strike, and for reviewing the effectiveness, or otherwise, of those measures. Any such condition would require a high degree of flexibility to allow for different measures to be developed, trialled and adopted if effective, or removed if not effective.

[197] Proposed Conditions 31-33 relate to site decommissioning. Specifically, they require the development and certification of a site decommissioning plan at least 8 weeks prior to the expiry of the consent, or the cessation of the activity, whichever comes first. This plan must then be carried out through the decommissioning of the site. The condition is vague about what the contents of the decommissioning plan should include. Given the substantial time until the facility is disestablished, I consider that allowing some flexibility is reasonable, for example to allow the consent holder to take into consideration technological change. However, I do consider that the condition should set some parameters and baseline requirements that need to be met by the decommissioning plan. I consider that this would increase certainty about what the decommissioning would need to achieve, helping address concerns about decommissioning raised in submissions. It would also make it clearer what Council is checking the plan against when certifying it, reducing the administrative burden on Council, and increasing certainty for the consent holder. This condition could also be expanded to include administrative changes to the erosion and sediment control plan.

[198] In terms of the requirements that site decommissioning must achieve, I consider the following to be of most relevance:

- Methods for reusing or recycling solar panels and supporting infrastructure and cables, or for their safe disposal if it can be demonstrated that reuse or recycling is not practicable.
- Methods for identifying and remediating any soils that have been contaminated as a result of the operation of the facility (For example, around the substation) in order to avoid ongoing risks to human or environmental health based on the anticipated future use of the land
- Methods for reinstating and rehabilitating the site, including revegetation, to enable it to be used for land based primary production or another activity permitted as of right by the relevant planning framework and approved by Central Otago District Council⁷⁹

[199] A condition should also be imposed to the effect that the decommissioning should not commence until after the decommissioning plan is approved by Council.

[200] I consider that Conditions 32 and 33 could be adopted unchanged if the panel approves the consent.

[201] The submission of Ka Rūnaka indicates an agreement between them and the applicant that an accidental discovery protocol will be followed. No condition to this effect was proposed by the applicant. An accidental discovery protocol can be useful in managing the effects of the proposal on any previously unknown archaeological or cultural material uncovered during works. Given the apparent agreement to provide one, I consider it appropriate that a standard accidental discovery protocol be included as a condition to this consent, in line with that proposed by Ka Rūnaka.

⁷⁹ While submitters and the applicant both anticipate the site being returned to a farming land use, we cannot be certain that, over the lifespan of the facility, the surrounding land uses will not change in such a way that renders farming uses undesirable or inappropriate. I consider that this can be managed through allowing discretion to approve remediation to a level acceptable for another land use permitted by the planning framework that applies at the time, provided this is approved by Council.

RECOMMENDATION

After having regard to the above planning assessment, I recommend that:

1. The Panel grant consent to the proposed activity, in accordance with sections 104 and 104B of the Resource Management Act 1991, subject to the conditions imposed under section 108 of the Act listed below.



Adam Vincent
Planning Officer - Intermediate

Date: 07 July 2025

Proposed Conditions:

Note: Placeholders have been included where the contents of a condition or its final wording are yet to be determined. These are identified with square brackets []. It is anticipated that these conditions will be refined during the hearing process.

General

1. The activity authorised by this consent must be carried out following these conditions and otherwise in a manner that follows the application received on 29 March 2024, completed by The Property Group Limited titled 'Application for Resource Consent 48 Ranfurly-Naseby Road, Naseby: Mānīatoto Plain Solar Farm' and the amended assessment of effects received on 16 June 2025, except where modified by these conditions, and:
 - The revised Site Layout Plan completed by Helios Energy Limited, titled 'Naseby – Preliminary Layout', Revision A dated 08 May 2025.
 - The Acoustic Assessment completed by Marshall Day Acoustics titled 'Helios Solar Farm - Maniototo Assessment of Noise Effects', dated 17 October 2023.
 - The Integrated Transport Assessment completed by Abley, titled 'Naseby Solar Farm Development Transport Assessment', dated 23 August 2023.
 - The Landscape Effects Assessment completed by Boffa Miskell Limited, titled 'Mānīatoto Solar Farm: Landscape Effects Assessment. Report prepared by Boffa Miskell Limited for Helios Energy Ltd', dated 28 February 2024.
 - The Graphic Supplement completed by Boffa Miskell Limited, titled 'Helios Maniototo Solar Farm – Graphic Supplement', dated 28 February 2024.
 - The amended "Mānīatoto Solar Farm Landscape Planting and Maintenance Plan" prepared by Boffa Miskell dated 28 May 2025
 - The Ecological Impact Assessment completed by Boffa Miskell Limited, titled 'Mānīatoto Solar Farm: Ecological Impact Assessment. Report prepared by Boffa Miskell Limited for Helios Energy Limited', dated 18 December 2023.
 - The Hazardous Substance Assessment completed by Beca Limited, titled 'Hazardous Substance Assessment Naseby Solar Farm', dated 20 December 2023.
2. The consent holder must construct, operate, and maintain the Solar Farm in general accordance with all management plans submitted to, and certified by, the Planning Manager, Central Otago District Council, to fulfil the conditions of this resource consent
3. The consent holder shall pay to the Council all required administration charges fixed by the Council pursuant to section 36 of the Act in relation to:
 - a. Administration, monitoring and inspection relating to this consent; and
 - b. Charges authorised by regulations.
4. The duration of this consent is 35 years after its date of commencement.

Note: *The commencement date of this consent will be set by Section 116(1) of the Resource Management Act 1991 as the date at which either when the time for lodging appeals to the Environment Court have expired and no appeals have been lodged, when the Environment Court resolves the appeals, all appeals have been withdrawn, or a determination of the Environment Court states another date.*

Construction Management

5. A minimum of eight (8) weeks before the activity commences (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must submit to the Planning Manager, Central Otago District Council, for their certification, a Construction Management Plan (CMP) with the objective of developing measures and processes to manage and minimise the effects of noise, traffic and dust caused by the construction of the Solar Farm. For that purpose, the CMP must include:
 - a) A final construction methodology plan.
 - b) The contact details of the construction site manager.
 - c) Methodology of dust and stockpile management.
 - d) A Construction Traffic Management Plan (CTMP) including, as a minimum the following detail:
 - Truck drivers are advised:
 - To adhere to the speed limit and drive to the conditions during periods of adverse weather.
 - Of the circulation arrangements onsite, including the requirement to access the site via Access 1 and exit the site via Access 2.
 - An outline of how traffic will be directed onto the site and where parking and the layby area will be located. The layby area must be set back sufficiently away from the gate to avoid vehicles queuing over the sealed access area.
 - Identifies that only Accesses 1 and 2 are to be used by heavy vehicles, and that the use of Access 4 (and Ranfurly Back Road) must not include heavy vehicles. Light vehicle movements through Access 4 may only consist of infrequent access to the rear parts of the solar farm.
 - Any temporary traffic management measures.
 - e) Details of how the noise limits for long term construction in NZS 6803:1999 will be complied with.
 - f) Provision for monitoring and review of actual noise levels during construction and procedures for ensuring these noise levels are reduced to comply with condition (e) above.
6. A minimum of eight (8) weeks before the activity commences (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must submit to the Planning Manager, Central Otago District Council, for their certification, an Erosion Sediment Control Plan (ESCP) authored by a suitably qualified person. The ESCP shall identify the measures required to manage erosion and sediment arising from works on the site, and shall provide as per the following:
 - a) All earthworks must be managed to minimise any discharge of debris, soil, silt, sediment or sediment-laden water beyond the subject site to either land, stormwater drainage systems, watercourses or receiving waters.

- b) All machinery associated with the earthworks and construction activity must be operated in a way which ensures that spillages of hazardous substances such as fuel, oil, grout, concrete products and any other contaminants are prevented.

The ESCP may be amended during construction to suit the appointed Contractor's methodology and/or respond to the onsite environment, with the prior approval of the Planning Manager, Central Otago District Council.

- 7. The CMP and ESCP may be amended or updated without the need for certification where:

- a) The amendment is to change any nominated personnel,
- b) [Placeholder for any other changes that are accepted to be administrative in nature]

Provided the Planning Manager, Central Otago District Council is notified of the changes prior to them taking effect.

- 8. Noise from construction activities must not exceed the limits recommended in, and shall be measured and assessed in accordance with, New Zealand Standard NZS 6803: 1999 "Acoustics – Construction Noise" and German Standard DIN 41503:2016 Vibration in buildings – Part 3: Effects on structures [vibration].
- 9. Prior to commencing construction (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must upgrade Access 1, 2, 3 and 4 to be constructed in accordance with Part 29 of Council's Roading Policies 2015, with the following amendments:
 - a) The geometry for Access 1 and 2 must also be in general accordance with the vehicle tracking shown in Appendix A of the Integrated Transport Assessment completed by Abley, titled 'Naseby Solar Farm Development Transport Assessment', dated 23 August 2023.
 - b) Accesses 1, 2 and 3 must be sealed from the edge of Ranfurly-Naseby Road to a distance of not less than 5m inside the property boundary

Note: The consent holder is also required to obtain permission to construct a vehicle crossing, an approved Corridor Access Request and temporary traffic management plan from the Central Otago District Council Roading Manager prior to the commencement of any works within road reserve.

- 10. The main internal accessways identified on the Site Layout Plan completed by Helios Energy Limited, titled 'Naseby – Preliminary Layout', dated 10 January 2024, in Condition 1 must be formed and constructed to a 4m width with an all-weather metalled surface. All other internal accessways can remain unformed provided they do not result in any airborne or deposited dust beyond the site's property boundary, determined by the relevant regulatory authority to be noxious or dangerous, offensive or objectionable. If any airborne or deposited dust beyond the property boundary is noxious or dangerous, offensive or objectionable then the remaining internal accessways must be required to be formed to an all-weather metalled surface
- 11. Heavy vehicles must access and leave the site via Ranfurly-Naseby Road. Light vehicles may use either Ranfurly-Naseby Road or Ranfurly Back Road.
- 12. If an unidentified archaeological site is located during works, the following applies:
 - a) Work must cease immediately at that place and within 20m around it

- b) The consent holder or any contractor must shut down all machinery, secure the area and advise the site manager
- c) The site manager must secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required
- d) If the site is of Māori origin, the Site Manager must notify the Heritage New Zealand Regional Archaeologist and the appropriate papatipu rūnaka of the discovery and ensure site access to enable appropriate cultural procedures and tikaka to be undertaken, as long as all statutory requirements under legislation are met (Heritage New Zealand Pouhere Taonga Act, Protected Objects Act).
- e) If human remains (kōiwi) are uncovered the Site Manager must advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate papatipu rūnaka and the above process under 4 must apply. Papatipu rūnaka will lead the management of any kōiwi tangata (human remains of a Māori person) that have been uncovered, in line with the Te Rūnanga o Ngāi Tahu Kōiwi Tangata policy 2019. Remains are not to be moved until such time as papatipu rūnaka and Heritage New Zealand have responded
- f) Works affecting the archaeological site and any human remains (kōiwi) must not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Works affecting a site of Māori origin or containing kōiwi tangata must not resume until papatipu rūnaka give written approval for work to continue. Further assessment by an archaeologist may be required.
- g) Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.
- h) Heritage New Zealand Pouhere Taonga will advise if an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required for works to continue.

Note: *It is an offence under Section 87 of the Heritage New Zealand Pouhere Taonga Act 2014 to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of whether the works are permitted or consent has been issued under the Resource Management Act. Please note that this Consent is not an Archaeological Authority.*

Design Conditions

- 13. The substation transformers must be surrounded by spill containment measures with a capacity of 100% of the largest single volume of oil stored within the containment area.
- 14. Stormwater from within the substation where there is a risk that it will be contaminated with oil must be collected and treated to remove oil before being discharged within the site.
- 15. Solar panels and associated buildings or structures and all surface earthworks must be located a minimum of 10m from the margin of all natural wetlands on the site unless resource consent is granted by the Otago Regional Council for structures or earthworks within 10m of any natural wetland under the Resource Management (National Environmental Standards for Freshwater) Regulations 2020.

Landscape and Visual Effects Management

16. A minimum of eight (8) weeks before the commencement of the activity authorised by this consent (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must submit to the Planning Manager, Central Otago District Council for certification:
 - a) A final Landscape Mitigation Plan (being any updated details to the Landscape Mitigation Plan provided as Figure 5A in the Graphic Supplement completed by Boffa Miskell Limited, titled 'Helios Maniototo Solar Farm – Graphic Supplement', dated 28 February 2024); and
 - b) A Landscape Management Plan which includes the following:
 - i) Details that are in accordance with the recommendations identified in section 6 the Mānīatoto Solar Farm Landscape Effects Assessment, dated 28 February 2024, and the recommendations identified in section 8.1.2 in the Mānīatoto Solar Farm Ecological Impact Assessment, dated 18 December 2023, and in general accordance with the preliminary Landscape Planting and Maintenance Plan dated 28 May 2025.
 - ii) Details of irrigation provision for five years after implementation
 - iii) Monitoring and maintenance requirements for weed removal and pest control.
 - iv) Detailed mitigation and enhancement planting areas required for the Project including layout, species, grades, numbers, spacing, eco-sourcing, and a programme and specification for implementation and maintenance.
 - v) Replacement planting with evergreen species where there are gaps or where there are trees that are failing and need to be removed.
 - vi) Inclusion of matagouri, desert broom, porcupine shrub, and pohuehue shrubs.
17. The certified final Landscape Mitigation Plan must be implemented before the solar farm is operational.
18. The landscape planting must be maintained in accordance with the certified Landscape Management Plan for the duration of the exercise of this consent. Should any tree become diseased or die, it must be replaced with the same species in the following planting season (spring or autumn).
19. Screen plantings along Ranfurly-Naseby Road must be maintained to a minimum height of 3.0m.
20. Unless specified below, materials and colours of onsite buildings and structures ancillary to the solar arrays must have a Light Reflectivity Value (LRV) of less than 30%, and be in keeping with the materials and colouring of existing infrastructure, or of a colour that will blend with the landscape such as in a natural range of browns, greens and greys to complement the tones found in the rural surroundings. The following buildings and structures are exempt from this condition:
 - a) The solar arrays and mounting structures
 - b) Inverters

- c) [Placeholder condition for any other buildings with an operational need to be in a lighter colour]
- 21. The consent holder must ensure that all areas of soil disturbed by the project are rehabilitated progressively or immediately post-construction

Ecological Effects Management

- 22. Prior to the commencement of the activity authorised by this consent (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must commission a site survey by a suitably qualified and experienced ecologist during spring or early summer in order to identify any indigenous plant species not found on the site during surveys undertaken in support of the application during winter. If any additional species are identified, they should be included in the wetland enhancement and landscape management plantings required by Conditions 16-18 and 23-24 unless it is not practicable to do so (For example due to unavailability of seed).
- 23. A minimum of four (4) weeks before the commencement of the activity authorised by this consent (excluding any enabling works such as geotechnical investigations, piling tests and site surveys or testing), the consent holder must provide a copy of the Wetland Enhancement Plan to the Planning Manager, Central Otago District Council for their information. The Wetland Enhancement Plan shall be prepared by a suitably qualified ecologist in accordance with the recommendations identified in section 8.1.5 of the Mānīatoto Solar Farm Ecological Impact Assessment, dated 18 December 2023.
- 24. The wetland enhancement measures identified in the Wetland Enhancement Plan must be implemented before the solar farm is operational.
- 25. Any construction works occurring during the bird breeding season (1 September to 31 March) shall be undertaken in accordance with the recommendations identified in section 8.1.1.2 of the Mānīatoto Solar Farm Ecological Impact Assessment, dated 18 December 2023. At a minimum, this must include the following:
 - a) A site inspection by a suitably qualified and experienced ecologist within 48 hours of works commencing to determine whether any indigenous birds are nesting on the site on or in the vicinity of the construction area(s).
 - b) If nesting birds, eggs or chicks are found, then works must not commence until after an exclusion zone has been established around the nesting birds, eggs or chicks within which construction must not commence until after nesting activities have ceased. Exclusion zones must be 100m, or smaller if considered appropriate by the suitably qualified and experienced ecologist, but under all circumstances must be no less than 25m.
 - c) If works are paused for 8 successive days or more, then are resumed during the breeding season, a new survey will be required.
- 26. Six months prior to the commissioning of the solar farm, the consent holder shall engage a suitably qualified and experienced ornithologist or ecologist to undertake a bird strike literature review in accordance with the recommendations identified in section 8.1.4 of the Mānīatoto Solar Farm Ecological Impact Assessment, dated 18 December 2023. The outcome of this literature review will determine if post-construction bird strike monitoring is required at the Site.

27. If monitoring is recommended by the suitably qualified and experienced ornithologist or ecologist as an outcome of the bird strike literature review required by Condition 26, the monitoring methodology must be identified in an Avifauna Collision Risk Monitoring Plan (ACRMP), prepared by a suitably qualified ornithologist / ecologist. The ACRMP must be provided to the Planning Manager, Central Otago District Council for their information prior to implementation. The ACRMP should include, but not be limited to, the following details:
- a) Frequency and duration of surveys (e.g., one day fortnightly for one year). Due to seasonal variation in bird behaviour including migratory movements, for any monitoring to be worthwhile the minimum time period is one year.
 - b) Survey methods (e.g., slowly drive up and down a defined subset of the solar farm rows searching for indigenous bird carcasses, noting species, number of carcasses, weather conditions, cause of death, location, etc (and sending carcasses away for autopsy if cause of death is unknown).
 - c) Mortality thresholds for At Risk and Threatened indigenous species that if reached, trigger a management response.
 - d) Results analyses (e.g., estimated annual mortality rates).
 - e) Methods for developing, implementing and reviewing management responses to either reduce the risk of bird strike or mitigate its consequences in the event that a management response is considered necessary under Condition (c).
 - f) Requirements for review and reporting, including making the results publicly accessible.
28. Bird strike monitoring must be undertaken in accordance with the methodology identified in the ACRMP

Operational Conditions

29. The Consent Holder must prepare and implement a Glint and Glare Adaptive Management Plan (GGAMP) to address any substantiated adverse glint and glare impacts on affected parties and/or the surrounding road network as identified in the Naseby Glint and Glare study Rev 02, by ITP Renewables, dated September 2023. The GGAMP must include the following:
- a) Details of mitigation to be established in line with the Naseby Glint and Glare study Rev 02, by ITP Renewables, dated September 2023 and updated by the following documents:
 - i) Consultants' Advice Notice (CAN No. 001) - Glare Study Addendum, by ITP Renewables dated 24 June 2024
 - ii) Consultants' Advice Notice (CAN No. 001 v2) – Minimum Screening Analysis for Maniatoto Solar Farm, by ITP Renewables dated 30 April 2025.
 - iii) Landscape Planting and Maintenance Plan, by Boffa Miskell, dated 28 May 2025
 - b) Contact Information: The GGAMP must provide contact details for the Consent Holder and their agent responsible for addressing glint and glare complaints,

ensuring that affected parties have a direct line of communication for reporting issues.

- c) Reporting Procedures: The plan must include procedures for reporting glint and glare issues by affected parties, including Road Controlling Authorities for any road network affected by “Yellow glare” or “Green glare”. This includes:
 - i) The process for lodging a complaint.
 - ii) The timeline within which the Consent Holder must acknowledge receipt of the complaint.
 - iii) A detailed timeline for the investigation and response process, ensuring that any substantiated glare issues reported are addressed promptly and effectively within a specified timeframe.
 - iv) Adaptive Management Strategies: The GGAMP should detail a range of possible mitigation solutions to address reported glint and glare issues. These solutions may include but are not limited to, physical alterations to the solar farm setup, installation of screening or landscaping to block or diffuse glare, and adjustments to the operational procedures of the solar farm (such as tracking management).
- d) Monitoring and Evaluation: The Consent Holder must implement a monitoring regime to assess the effectiveness of the mitigation measures implemented under the GGAMP, including any road affected by “Yellow glare” or “Green glare”. This includes feedback from affected parties on the resolution of reported glare issues.
- e) Duration of the Plan: Unless otherwise authorised by the Consent Authority, the GGAMP must be implemented for whichever is the greater duration of the following:
 - i) A period of three years following the mitigation planting obtaining the minimum height required by (a) above; or
 - ii) For a year following any remedial action undertaken.

During this period, the Consent Holder is obligated to respond to and manage glint and glare complaints as per the procedures outlined in the GGAMP.
- f) Review and Reporting: If complaints are received, the Consent Holder must submit an Annual Report to the Consent Authority, summarising the glint and glare complaints received, actions taken, and the effectiveness of the mitigation measures implemented. The Annual Report may also recommend whether ongoing management of glint and glare issues is required along with any relevant supporting information.

Note: *An adaptive management plan offers a flexible and responsive approach to managing glint and glare that may arise from the approved solar farm, recognising the inherent challenges and uncertainties in accurately predicting glare impacts ahead of time. This approach allows for real-time monitoring and addressing of actual impacts as they occur, rather than relying solely on predictive models that may not fully capture the dynamic and variable nature of sunlight and its interactions with the environment. By focusing on adaptive measures, the plan can more efficiently respond to affected parties' concerns, ensuring that mitigation strategies are directly tailored to the specific conditions and experiences of those impacted*

31. The noise level from all solar farm operations must meet the following noise limits at the notional boundary of all existing or consented dwellings on any other site at the time of issue of consent:
- a) 55 dB L_{A10} from 7:00 am to 10:00 pm
 - b) 40 dB L_{A10} and 70 dB L_{AFmax} from 10:00 pm to 7:00 am the following day

Note: Noise levels shall be measured and assessed following NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise (or any subsequent replacement standard).

32. After a hailstorm or similar weather event, the following must be undertaken:
- a) The facility must be physically inspected to identify any damaged solar panels or supporting infrastructure that may discharge contaminants into the environment due to that damage within 24 hours of the cessation of the weather event.
 - b) Any solar panel or supporting infrastructure found to be damaged and at risk of discharging contaminants must either be removed from the site, be replaced, or be repaired in such a way that it is no longer at risk of discharging contaminants either permanently or until a more permanent repair can be undertaken within seven calendar days of the cessation of the weather event. This seven day period can be extended with the prior approval of the Planning Manager, Central Otago District Council, if they are satisfied that site conditions, including extent of damage to the facility, mean it is not practicable to undertake the necessary works within the seven day period.
33. Fixed exterior lighting must comply with the following:
- a) Lighting must be oriented so that it is angled away from the closest adjoining road or other property
 - b) Security lighting must be fitted and controlled with a motion sensor
 - c) All outdoor lighting with a light output of 500 lamp lumens or greater must be shielded or tilted so as to not emit any light at or above a horizontal plane measured at the light source
34. Any security cameras must be oriented so that their field of view does not include visibility any neighbouring private land.
35. Prior to the commencement of commencement of the activity authorised by this consent, the Consent Holder must enter into an enforceable agreement acceptable to the Council that provides a bond, pursuant to Sections 108(2)(b) and 108A of the Resource Management Act 1991. This bond may be in conjunction with any security entered into by the consent holder and site landowners.
36. The purpose of the bond is to secure compliance with all the conditions of this consent that address site decommissioning in the event of any default by the consent holder:
37. The bond must be a cash bond or bank bond provided by a registered trading bank of New Zealand, acceptable to the Council. The guarantor must bind itself to pay up to the bond quantum for the carrying out and completion of all obligations of the consent holder under the bond.

38. The consent holder must provide a report to the Council which specifies all matters covered by Condition 44 of this consent and identifies the matters to be bonded for, all assumptions, costs, and risk elements that inform the recommended bond amount.
39. If the Consent Holder and the Council cannot agree on the terms of the bond, including the bond amount and any revised bond, the dispute shall be resolved through an agreed dispute resolution process or referred to arbitration at the cost of the Consent Holder.
40. On the fifth anniversary of this consent being given effect to and every five years thereafter, the Consent Holder shall provide a report to the Council which addresses whether the bond quantum should be revised. The purpose of the adjustment is to reflect changes in the risk profile of the solar farm complex or to the Consumer Price Index. The Council may peer review the report.
41. If the consent is transferred in part or whole to another party or person, the bond lodged by the transferor shall be retained until any outstanding work at the date of transfer is completed or a replacement bond is entered into by the transferee, to ensure compliance with conditions of the consent unless the Council is satisfied adequate provisions have been made to transfer the liability to the new Consent Holder.
42. The Council shall release the bond once the site has been deemed to be closed by the Council following completion of the actions referred to in Condition 46.
43. All reasonable costs of, and incidental to, the preparation of documentation to meet Conditions 35 to 42, including the consent authorities' costs, shall be met by the Consent Holder.

Site Decommissioning

44. A minimum of eight (8) weeks before the expiry of this consent, or before the cessation of the activity authorised by this consent, whichever is earlier, a Site Decommissioning Plan must be submitted to the Planning Manager, Central Otago District Council for certification. The Site Decommissioning Plan must, at a minimum, address the following matters:
 - a) Methods for reusing or recycling solar panels and supporting infrastructure and cables, or for their safe disposal if the consent holder can demonstrate that reuse or recycling of any parts of the facility is not practicable.
 - b) Methods for identifying and remediating any soils that have been contaminated as a result of the operation of the facility in order to avoid ongoing risks to human or environmental health based on the anticipated future use of the land.
 - c) Methods for reinstating and rehabilitating the site, including revegetation (Excluding areas of native planting), to enable it to be used for land based primary production or another activity permitted as of right by the relevant planning framework and approved by Central Otago District Council
45. The site decommissioning works must not commence until after the Site Decommissioning Plan has been certified by Central Otago District Council under Condition 44
46. The site decommissioning works must be completed in accordance with the certified Site Decommissioning Plan.

47. The consent holder must notify the Planning Manager, Central Otago District Council, at least ten (10) working days before completion of the decommissioning to allow Council staff to carry out site inspections to determine compliance with the certified Site Decommissioning Plan

Advice Notes:

1. *In addition to the conditions of a resource consent, the Resource Management Act 1991 establishes through sections 16 and 17 a duty for all persons to avoid unreasonable noise, and to avoid, remedy or mitigate any adverse effect created from an activity they undertake.*
2. *Resource consents are not personal property. The ability to exercise this consent is not restricted to the party who applied and/or paid for the consent application.*
3. *It is the responsibility of any party exercising this consent to comply with any conditions imposed on the resource consent prior to and during (as applicable) exercising the resource consent. Failure to comply with the conditions may result in prosecution, the penalties for which are outlined in section 339 of the Resource Management Act 1991.*
4. *The lapse period specified above may be extended on application to the Council pursuant to section 125 of the Resource Management Act 1991.*
5. *This is a resource consent. Please contact the Council's Building Services Department, about any building consent requirements for the work.*

Summary of Submissions on RC 240065 for s42A Report of Planning Officer

Submitter Name	Reference Number	Support/ Oppose	Summary
Paul Hart	1	Support	Proposal will be great for the area. Will be a tourist attraction and bring needed jobs to the area.
Rachael Carson	2	Oppose	Batteries are a risk to the environment in the event of fire. Containers will be unsightly and change the landscape of the Maniototo. Landscape should be maintained in its current state.
Harriet Cameron	3	Oppose	Large scale solar farm will have direct impact on landscape and surrounding community. Will be an eyesore that does not serve immediate community and will devalue neighbouring farms. Concerned about long term impacts, e.g. tourism.
Rebecca Aplin	4	Oppose	Solar panels should be placed over carparks or concreted areas, not productive farmland
Ngaire Barton	5	Oppose	Will ruin landscape and create noise and glare, which will also affect wildlife. What happens in event of a hail storm or a battery fire? Maniototo Plains will never be the same for our children and their children. Concerned at lack of public consultation.
Tania Kelland	6	Oppose	Facility will destroy prime farmland without consideration of effects on neighbours or their families, including loss of income and property values from being near the solar farm. Concerned that tourists will not want to come look at 5km of glass panels when visiting the area. Instead, considers that solar panels should be put of roof spaces, such as on large sheds etc.
Clement Rowe	7	Oppose	Solar farm will be a blot in beautiful landscape. Concerned that glare will make surrounding area unpleasant when sun is low in the sky. Considers that heat from refracted light could start a fire and considers it unlikely that the land under the panels would be able to be managed

			adequately to reduce fuel loading. Local volunteer fire service not equipped to deal with lithium fires. What will happen when the panels need to be replaced? Is there a recycling scheme available or will they be left as waste on the site? Considers application to be a cash grab that will be a blight to the natural beauty of the area and local community.
Daren Harvey	8	Support	Major economic positive for the district and the region.
Chloë Rosser	9	Oppose	Doesn't think it is appropriate to turn productive farmland into a synthetic eyesore. Instead, why not require solar panels on every new house, warehouse or industrial building that is built? The number of buildings present and being built in NZ should have ample space for solar power. Soil can never be replanted while the panels are in place. Views will be impeded. Does not want this in the Māniototo.
Heidi Gillespie	10	Oppose	Proposal will drastically change the natural beauty of the area.
Becky McAuley	11	Oppose	Proposal will ruin the area and effects of batteries and storage is horrible. Will have lasting effects on area, water and landscape. Power company will make huge money but with no benefit to the area.
Shelley Ensor	12	Oppose	Do not need solar farm in the area as the power will for elsewhere. Concerned about catastrophic effects on this small community.
Richard Garden	13	Support	Solar farm allows for energy production while still allowing sheep grazing under the panels. It is at a scale that contributes to NZ's renewable energy generation needs, with solar farms now the cheapest form of renewable electricity generation

			globally. Site is close to existing infrastructure, but in a working farm environment not visible from nearby townships. Will have economic benefits through job creation during construction. Solar farms are silent, produce no emissions and have no negative impacts on soil or groundwater. Faster to develop than other energy sources. Concerned that misinformation is being spread in opposition to the proposal.
Debbie Phillips	14	Oppose	We live in a beautiful area. Don't spoil it with a dangerous and ugly battery farm.
David Steele	15	Support	More work, growth and clean, green, efficient energy.
Kate Gregan	16	Oppose	Proposal will not be good for local community or environment. No long term benefits and will ruin the iconic countryside.
Matt Davis	17	Oppose	Location will bring visual pollution to the area and will stand out like a sore thumb. Trees will not be at an adequate height for at least 10 years. Battery fires pose a risk to communities and the water table, and local brigades are inadequate to combat a battery fire. Considers it unlikely that Helios will still be running the facility in 35 years, so questions who will be responsible for removing the farm. No benefit to local community as farm is operated remotely, employs no locals, no reduction in power costs, and locals get to look at an enormous eyesore. Solar farm should be moved further away from local communities. Out of site would have less opposition. Feels there has been lack of communication with the local community in order to try rush the application through. Community has been given limited time to consider application.
Marielle and Mike	18	Oppose	Maniototo all about big skies and

Craighead			mountain views. Having more trees planted in this landscape is not acceptable as they would obstruct these views. Even 3m too high. Proposal will ruin sense of calm and feeling of having arrived somewhere special for people traveling to Naseby. Low glare potential does not equal no glare, meaning travellers will be distracted from the road by continuous bright light. Many travellers will be unused to local road conditions. Glare will have a safety effect and may impact on night sky tourism. Construction traffic will degrade roads in the area. No mention about how many construction employees will be from local populations. Limited long term employment. Short term employment spike will put pressure on community services. While renewable energy production is a matter of national significance, it should not be considered a positive compared to adverse effects on a unique landscape of national significance. Solar energy not fast to start and not consistent. No lasting values for the area. Only benefit to Helios and landowners.
Charles Hore	19	Support	Land still able to be farmed. Proposal will generate economic boost and provide sustainable energy to NZ.
Lucia Dowling	20	Oppose	Potential for fire and chemical leaching from batteries. Energy generated will be sent to the North Island, so why does it need to be built in the Maniototo when there are suitable sites in the North Island? Very little long term benefit to the community, but will be a significant eyesore. Considers that there will likely be a drop in property prices. Proposal will not reduce power prices.
Duncan Nicholson	21	Oppose	Concerned about fire risk, glare from panels, risk to Naseby's dark sky accreditation, sun strike, lack of consultation with community, visual

			effects and heavy metals getting into water supplies
Scott Becker	22	Oppose	Opposes the project.
Jenny Grimmett	24	Neutral	Considers that pile driving will result in consistent nuisance effect for people living in the area and that construction noise may breach Section 16 of the RMA. Questions whether operational noise will be higher than stated in application due to need for fan cooling. Landscape effects highly reliant on mitigation plantings that will not be effective for five years. No details in application of irrigation, maintenance and wind protection regimes. Any consent conditions will need to be robust in relation to these matters. Applicant has not sufficiently responded to all FENZ requirements in application documentation. Measures required to control contaminants in event of fire. Considers that, of the two types of batteries proposed, one has less contamination potential. More detail required to demonstrate fire risk is being appropriately managed. No information on how proposal will comply with Naseby Dark Sky standards or detract from dark skies in the area due to glare off panels at night. Considers glare during day to be a hazard for vehicles travelling at 100km/hr due to temporary blindness from sun glare. No mention of where development infrastructure will be taken at completion or when components are replaced. Local refuse centres not large enough or adequately equipped to deal with this waste. Clean-up and management of infrastructure at end of life needs to be addressed early and conditions put in place to protect landowners and others from having to pay for remediation costs,

			including a realistic bond. Missing information about ORC consents that are required for works within wetlands and other waterbodies. Considers that CODC consents not be granted without ORC consents. No additional resilience for local community power supply. Not clear how many local people will be employed in construction. No clear benefit to community, which is inconsistent with objectives and policies in the District Plan that seek to support the local community. Considers that further information in relation to the above and more control in conditions of consent are required if they are to consider supporting the application.
Richard Parker	25	Oppose	Opposes whole proposal, but particularly concerned about risk of fire given proximity to Naseby Forest. Smoke from fire could also be toxic and affect whole of Maniototo.
Kerry Amyes	26	Oppose	Inappropriate use of land. Will film companies come here if the facility is built? Considers that glare will cause blindness for drivers along a busy route. Submitter considers that there may be accidents. Risk of fire in dry environment.
Jean Leyland	27	Oppose	Lack of detail in application. Batteries will generate noise, there will be a fire risk in a dry area and this amount of glare will blind drivers on the road.
Parker Earthmoving Ltd	28	Support	Proposal will create economic benefits and will meet objectives and policies in the District Plan.
Andrew Blue	29	Support	Would increase growth of things such as jobs, accommodation, revenue for shops, in the community
Lisa Fox	30	Support	More renewable energy urgently required. Proposal is an environmentally good option for area that will provide opportunities for local community.
Sandra Allan	31	Oppose	Location will be blight on the landscape. Risks to the environment from damage to

			panels of battery fire. Concerned that operators could walk away in the event of a disaster. Concerned that panels will change microclimate of area. Cannot see a benefit to ratepayers and visitors to the Maniototo.
Matthew McSkimming	32	Oppose	Rick of fire and toxic plumes. Wants guarantee that batteries will not go on fire.
Simon Neilson	33	Oppose	Creates environmental concerns and destroys landscape for no local community benefits.
Bronwyn Budgen	34	Oppose	Opposes storage of toxic batteries upstream from where Ranfurly township water is taken from. Glare from panels will be a blight on the landscape.
Shona Harrison	35	Oppose	No long term benefit to local community. Concerned that glare from panels will impact Naseby Dark Sky status. Risk of fire, including spreading into Naseby Forest, which would be catastrophic to Naseby. Has a Fire and Risk prevention document been provided to Earnslaw One or the local fire brigade? Are there fire suppression units fitted in the batteries? Concerned that the noise from all inverters and transformers will not comply with CODC regulations. Proposal will create visual pollution in an area promoted for its uninhibited views of rolling land and mountain ranges. Site in vicinity of town water supply. Considers that there is a risk of chemicals leaching into water supply in event that panels are damaged. What measures are in place to address contaminants entering water, soil and air?
Courtney Elliot	36	Oppose	Eyesore for tourist area. Cadmium telluride is toxic and can leach out of panels into groundwater. Soil erosion will increase. Heat will also increase due to being emitted from the panels, which may affect local weather patterns.
Grant Campbell	37	Oppose	Eyesore on environment. Concerned about heavy metals leaking into waterways. Considers that farms are for stock, not solar panels at this scale. Development should be on city roofs

			where the power is needed, instead.
Wendy Kearney	38	Oppose	Risks of irreparable environmental damage, fire, noise pollution from construction and from fans colling batteries, glare and devaluation of property. Considers planting proposal to be unrealistic as trees can take decades to establish, with many dying.
Hannah McAtamney	39	Oppose	No benefit to community.
Nicky Dougherty	40	Oppose	Far too many risks that outweigh the positives. Considers proposal to be an environmental disaster waiting to happen.
Elizabeth Campbell	41	Oppose	Planting to a height sufficient to reduce glint and glare will take years to establish and need continuous water supply. Considers that long grass will grow around panels where sheep will not eat it, exacerbating risks of fire from panels or battery systems. Wouldn't take much to blow embers from a fire into nearby Naseby Forest. Concerned about gases that may be emitted from a fire, and how visitors to the area will be protected. Proposal will impact on beautiful environment. Why not build it where electricity is needed?
Paul Bishop	42	Oppose	Naseby has been seeking Dark Sky Community accreditation for 8 years. Considers that solar farm installation would almost certainly result in the rejection of Naseby's application. Submitter concerned by actual glare effects on night sky, but also perceived effects experienced by people visiting dark sky community being greeted by half a million solar panels. Considers that Maniototo will receive no energy benefits and the proposal will be a scar on the landscape.
Raeleen Brown	43	Oppose	Will be a blot on the landscape that increases risks of fire in an already high risk area. Concerned about noise from the plant and glare hazard while driving to Naseby. No benefits for the Maniototo and

			no need for this solar farm in the area.
James Backer	44	Oppose	Solar farm would destroy countryside. Concerned about chemical pollution, fire hazard, visual pollution, loss of land value, water contamination, health of livestock and health of people.
Karenne Davis	45	Oppose	Location will be an eyesore that will spoil iconic central Otago landscape and deter visitors from stopping. This will impact businesses. House prices will fall as new residents put off from living near solar panels. Will create solar heat island effect. Concerned that there is not enough information about long term toxin leakage risks. Risk of fire, with not enough people in area to fight a fire if one breaks out. Concerned that the town may need to be abandoned, and may be destroyed by fire. Considers that risks will drive up insurance premiums. No plans in application regarding fighting fire. Sunstrike already a concern at some locations. Concerned about glare from panels adding to road safety risks. What will impact be on Naseby Dark Sky precinct?
Felix Davis	46	Oppose	Opposes all parts of the application because it would potentially be detrimental to the Maniototo and its people.
Brendan Pheasant	47	Support	Proposal increases New Zealand's renewable energy supply in a way that is cost effective, compliments other forms of renewable energy, is less impactful than hydro or wind, diversifies land use in the area, is adjacent to existing transmission infrastructure and will bring skills and investment into the area.
Valerie McSkimming	48	Oppose	Concerned about health and wellbeing of residents in event of a fire that will not be extinguished. No management of housing or medical issues.
Amanda Davis	49	Oppose	Location impacts scenery and overall look of Maniototo, and will be off putting to

			people, impacting businesses due to less tourism. Frustrated that there is no plan for disposal after end of life of facility and for toxins leaching into the soil. Concerned about risk of glare, fire, increased insurance premiums and reductions in house prices near the facility. How will the solar farm cope with Maniototo temperature extremes? Considers that this may reduce lifespan of panels and potentially cause a fire.
Sandra Stuart	50	Oppose	Concerned about health and safety of people, pets, livestock, the tourism industry and the environment. Proposal will have visual, water safety, noise, air pollution and night sky effects, and reduce property values. Concerned about lack of suitably qualified emergency responders in event of fire, earthquake, etc. Considers that applicants should pay a substantial bond to cover clean up costs if they do not remediate the site. Concerned that mitigation plantings will be too small for many years and will not screen views from a distance.
Frank Amyes	51	Oppose	Application fails to address reinstatement and decontamination of site should the project not be completed, fails or the operators go into liquidation. Concerned that ratepayers will end up picking up these costs. If consent is granted, considers that the landowner and project company must be responsible for returning the site to its original condition, with a bond no less than the total estimated cost of the project lodged.
Hans Raetz	52	Support	Solar farm will contribute to reduction in fossil fuel needs. Considers that glare issues will be minimal as solar panels are regularly located in motorway corridors overseas without increases in accidents. PV is a clean technology with no effect on local waterways or aquifers. Agrivoltaics has potential to increase profits for local farming community.
Stewart Parker	53	Support	Proposal is a great opportunity to enhance the economic wellbeing of the

			area through a passive activity. Country needs renewable electricity generation.
Susan McKeague	54	Support	Considers that proposal is consistent with the Otago Regional Policy Statement 2021, which supports the development of renewable energy, and the National Policy Statement for Renewable Energy Generation 2011. Proposal is not using land with high value for primary production, but is not lost to grazing altogether. Solar diversifies land use. Considers that long term effects of proposal will be less than minor, with short term effects able to be tolerated given consistency of project with long term outcomes.
Hazel Harrison	55	Oppose	Naseby has almost gained Dark Sky accreditation, but considers that proposal may put this in jeopardy due to glare reflecting from the panels during full moons. Panels will be fully visible from night sky observation site on Buster Road. Lithium batteries prone to combusting and are almost impossible to extinguish. Resulting smoke could contain life threatening chemicals. People could take steps to minimise contact, but animals cannot. Concerned that no-one will be held responsible for dismantling and disposing of solar panels at the end of the facility's life. This would be a massive expense if it fell to the landowner. How does CODC intend to ensure the solar farm is constructed in accordance with the consent?
Mark van Leewraden	56	Support	Proposal meets commitment to future of renewable energy and will bring economic benefits to the community.
Inez Baxter	57	Neither	Concerned that visual screening won't be effective for at least five years, with problems caused by land of screening (Such as glare and threats to Naseby's Dark Sky status) likely to be substantial.

			Given site is to be operated remotely, how safe will the site be from fire? Concerned that local volunteer fire and ambulance staff will not have necessary skills to fight fires in the facility. Questions whether toxic fumes from the facility could be a community danger and questions what benefits there will be to the local community.
Gavin Crossan	58	Oppose	Nothing in application could mitigate views experienced from the submitter's house. Hedge proposed by applicant would not be suitable to remediate loss of views of farmland. Concerned about glare from Ranfurly Back Road. Considers that BESS systems are proven to go on fire and high vegetation and proposed plantings could cause this to spread. Concerned about effects of toxic plumes on livestock in event of fire. Does not believe driving steel piles into the ground will meet Central Otago noise standards, nor will the sound from the transformers. Notes that Millers Flat gold mine required to bund whole site to mitigate noise. Considers that this should be required here. Concerned at potential for chemicals to leach into groundwater. Water table under the site runs through to submitter's property and location of potential new water supply for Ranfurly. Concerned about potential for drops in property values and increases in insurance premiums.
Dallas Mason	59	Oppose	Maniototo doesn't need the power produced, and if it did, the area should use dams, not unproven solar panels that may result in substantial hazardous wastes in the future.
Karen Munro	60	Neither	Considers that solar farm should be built in North Island, where power is needed. Questions whether other transmission infrastructure is adequate to handle

			increased power generation. Concerned at 24 month construction period creating noise, dust and heavy vehicle traffic. Considers that Ranfurly-Naseby Road not capable of managing this traffic and Ranfurly Back Road should be used, instead. What plans are in place to house the construction workers? If in holiday homes etc, then this will affect tourism operators. Concerned at risk of contaminants from site flowing downstream to Ranfurly and surrounding areas, including Taieri River. What plans are in place to prevent this? What systems are in place to prevent "Lake effect" impacting on airborne waterfowl around the wetlands? Currently, solar panels cannot be recycled. What plans are in place to deal with solar panels that are damaged during transit or construction? What about panels that are damaged during high winds or hail storms? What is being put in place to trap water used to fight an inverter or battery fire to prevent chemicals entering waterways? What safety plans are proposed to protect livestock, wildlife and residents from gases and toxic residues from a fire? Who is responsible for monitoring stormwater? What are the rules for CODC requiring a bond to avoid operator from walking away from site remediation? Considers that there is no clear benefit to the people of the Maniototo. Considers further information to be required if Council is to approve the application.
Heather Dowling	61	Oppose	Maniototo popular tourist destination

			based on its clean, untouched environment. This would be marred by construction of solar farm. Would result in glare and an eyesore. Batteries are highly flammable and would put firefighters, locals and wildlife at risk due to toxic smoke plumes. Concerned that tourism would drop as people won't be visiting an area of untouched farmland. Facility should be built in North Island.
Bev Helm	62	Oppose	Opposes location and considers the application to be vague about controlling leaching and the dangers to the community. Considers that solar farm will ruin iconic view of the Hawkdun Mountains and will be an opening for more solar farms in the area. Considers that proposal will reduce house prices. How will applicant dispose of panels when they are past their use-by date? Can they guarantee no toxic chemicals leaching into waterways? Solar farm should be built elsewhere "out of site, out of mind"
Sharon Thompson	63	Oppose	Oppose due to effects on environment and community, including danger to area in event of battery fires and landscape effects until effective screening is developed.
Wendy Mulholland	64	Oppose	Solar farm would be an eyesore on the landscape due to its size. Battery fire would stretch volunteer fire services. Where would workers be housed? Concerned at construction and traffic noise. Solar farm should be built in North Island.
Michelle Knox	65	Oppose	Solar farm three times size of Ranfurly would ruin lovely views. Would be an eyesore and a battery explosion would be catastrophic to the area.
Sally Anderson	66	Oppose	Proposal will create visual pollution.

			Concerned that less tourists will come to visit as they come for natural, quiet and unaffected beauty of the area. Concerned that noise pollution has not been addressed in application and there is potential for Naseby to lose its Dark Sky status. Wants more detail regarding noise, light and chemical pollution, recycling of panels, management of energy storage units, tree growth, fire management, land pollution management and consideration of Naseby's dark skies.
Robert Ede	67	Neither	Would like to see more information regarding how fire risk will be managed, including how threats from toxic chemicals will be mitigated, and who will be responsible for cleaning up the site and reinstating the land at the end of the project.
Richard Smith	68	Support	Proposal will increase employment, be a more productive use of the site while retaining its farming use and diversify the economy.
C J Sinclair Ltd	69	Support	Local economy needs more diversity. There is a need to grow the economy to combat rising static costs and reduce economic risks.
Robert Gardyne	70	Support	Support application on the basis of potential increase in demand for electricity as milk and meat plants in the south move away from fossil fuels to electrification. Notes that there is already transmission infrastructure in place and considers that undulating site, along with proposed screening, helps to reduce visual effects. Height of panels needs to be considered so inspections of livestock can be carried out, health problems treated and livestock can be moved from one area to another
Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga Ōtākou	71	Neither	Area is bounded by two draft wāhi tupuna areas, known as the Hawkdun Range and Taiari Trail. Important for Kā Rūnaka that solar farms do not give rise to adverse precedent or cumulative effects.

			Kā Rūnaka and applicant have agreed that, if consent is granted, conditions should be imposed regarding protecting and enhancing ecological values, monitoring native manu (Birds), providing visual and habitat enhancement, using local seed sources for plantings, adherence to an accidental discovery protocol, and specifying commencement and operating durations of the activity. Identifies several provisions of the Kāi Tahu ki Otago Natural Resources Management Plan 2005 that are relevant to the proposal. These include (But are not limited to) regarding recognising and supporting rakatirataka and kaitiakitaka, and consultation with Kāi Tahu for certain activities, protecting habitats for mahika kai and taoka species, and recognising cultural landscapes in decision making.
Renee Weir	72	Oppose	Considers that proposal has significant ecological, environmental and social risks. Submitter favours smaller scale solar activities without battery storage, but not at the scale proposed. Appeal of Maniototo landscape arises from its wide open grasslands, dramatic skies, distinct seasons, cultural and historic significance and peaceful rural charm. Concerned that proposal will affect wetlands in the area, exacerbate rabbit infestations, increase local temperatures, release toxic plumes or contaminants to groundwater in event of a fire, loss of tourism, transparency and a lack of community benefit. If consent is granted, considers that neighbours should be compensated for loss of land values, a monetary donation of at least \$200,000 per annum be provided to a local community trust, regular groundwater testing be undertaken, neighbours be provided with pest control support, a dam be provided to store firefighting water, donations be

			made to local fire and ambulance services, expert fire and emergency training be provided, along with protective gear to the local brigade to assist them in fighting battery fires, the development have less priority in grid capacity than local hydro schemes, 15% of profit be provided back to the community, an opportunity be provided for locals to access solar panels for their homes (Allowing economies of scale at procurement phase), and a bond be provided to either Maniototo Community Trust or CODC for end of life reinstatement of the site.
Suzanne de Louw	73	Oppose	Questions why heavy vehicles should be directed through Ranfurly, not Goff Road, which is bordered by less homes and more industrial activities. If heavy traffic must go through town, could a curfew be Imposed? Concerned that traffic projections are not accurate due to uncertainty about whether the model development used has been extrapolated correctly to this proposal. No mention is made of how construction workers will access the site and their effects on the roading network, including where vehicles would be parked. Does not appear to be any consented water takes to fill firefighting tanks. Given water cannot be used to fight lithium fires, should the water tanks instead be dispersed across the site to help combat vegetation fires? Concerned that sheep will not do a good enough job to control grass to manage vegetation fire risk. Submitter is chronic obstructive pulmonary disease sufferer and is concerned about effects of toxic smoke and gases from a battery fire drifting over Ranfurly. No provision in application for an Emergency Management Plan. Considers that one should be developed. Considers that fire safety is one of the most critical areas of the application that

			requires addressing. Considers that end of life of the facility has not been thought through. Dismantling will be expensive and noisy, with similar effects to construction. Without some sort of bond, submitter considers that there is a risk that the area will simply be abandoned. If so, who will clean the facility up? Considers that Helios's website saying they set funds aside to cover decommissioning raises questions about how much is set aside, and how this money is kept in reserve. Considers that a decommissioning plan and bond should be required as part of the application and there should be certainty that any future purchasers of the facility would be bound by the same conditions. No mention of accommodation of workforce. Notes that unemployment in the Maniototo is low. Use of visitor accommodation facilities would limit availability of beds for tourists for the construction period, with flow on effects for other tourism operators and venues. Film industry regularly films in the Maniototo, but will they still be interested if the solar farm was constructed? Unclear how large landscaping will be when planted and how long they will take to provide effective screening. Considers that it can be difficult to establish plantings in the Maniototo, with plants taking a long time to establish, especially without irrigation. Application does not appear to include provision for irrigation. Will Council communicate to affected communities mechanisms for ensuring everything proposed by the applicant will be carried out, audit schedules, penalties for non-compliance, cost recovery mechanisms and processes for the public
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			to report non-compliance? Currently opposes, but willing to reconsider if all issues in submission were resolved satisfactorily and robust conditions, monitoring regimes and financial guarantees are in place
Kristina Wills	74	Oppose	Considers that a lot of information is missing from the application related to the proposed substation and connections to the wider electricity network. Questions whether construction noise would go against the RMA, and thinks that parameters should be set for construction noise if consent is granted. Concerned about ongoing noise from the operation of transformers, whose noise is low frequency and can travel long distances, causing potential health risks. Also notes that noise may increase over time due to wear and tear Landscape and glint and glare assessment rely on mitigation plantings, which won't reach mature height for at least 5 years. Would like to see more detail on how plantings will be established and maintained. Considers that solar farms can disrupt native habitats and wildlife, especially birds, and cause long term land degradation. More detail needed regarding fire risks, with fire being a significant risk. Limited information responding to FENZ requirements in application. Considers that new recruits may be dissuaded from joining local fire brigades if they have to cover a solar farm due to issues with fighting lithium fires. Concerned about potential for air and groundwater pollution in the event of a fire, with batteries not proposed to be

			bunded or isolated from the ground to avoid chemicals leaching into the groundwater. Not enough time to ensure safety of people in the event of a fire, and the community does not have sufficient medical facilities to treat large numbers of people exposed to airborne chemicals released during a fire. Concerned that there is no plan for containing or cleaning up after a fire. No continuation planning in the event of natural disaster, such as alpine fault earthquake. No information about glare at night and effects on Naseby's dark sky. Concerned about glare during the day having an effect on the safe operation of the roading network, especially while landscaping is being established. No information about where infrastructure will be taken at end of life, with submitter concerned that existing facilities are not equipped to deal with infrastructure at end of life. Considers that clean-up, recycling and disposal needs to be addressed early, with a bond held to ensure this can be undertaken. No clear community benefit, with limited long term employment potentially offset by job losses in tourism. Loss of rural charm and questionable economic benefits to local community. No consideration of alternatives that are less disruptive, such as solar generation in the North Island, or hydroelectric or geothermal electricity generation. Need more detail about whether ORC consents are required, and CODC should not approve application before any ORC consents are also approved, or conditions be imposed requiring ORC consents be
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			approved before works commence.
Richard Parker	75	Oppose	Considers that battery fires are common. Requests that, if consent is granted, the applicant should be required to provide training and equipment to fire brigade.
Upper Clutha Environmental Society Inc	76	Support	Considers proposal will have overall positive effect due to provision of renewable energy production and storage outweighing landscape effects. Will have positive effects in terms of climate change in terms of Part 5 of RMA. Proposal will create a positive precedent for other such developments in New Zealand.
Annabel and David Dodd	77	Oppose	Location of solar farm is too close to Ranfurly, a blot on the landscape and a danger to Eweburn aquifer, people and animals in event of a fire. Submitter's water comes from Eweburn aquifer.
Robert Potter	78	Oppose	South Island produces more electricity than it needs and exporting electricity results in transmission losses. Why build here instead of where electricity is required? Concerned with risk of fire from battery storage and noise levels from transformers humming. Light pollution could affect Naseby's dark sky accreditation. Considers that construction traffic forecasts are low, with no mention of construction workers accessing the site. Concerns with lack of availability for water for dust management during construction. Considers that there's not enough certainty in site remediation. For example, what will happen to structure foundations, thermal sand and underground cabling? What is to stop applicant from liquidating and walking away from the site?
Wayne Hill	79	Oppose	Fire danger in very dry climate, light pollution may endanger Naseby dark sky accreditation. Will ruin landscape.
Vanessa O'Dowell	80	Oppose	Blackrock has an approximately 15% share in Helios OTA OP LP. Submitter considers that applicant is untrustworthy, given Blackrock's involvement in the voluntary liquidation of SolarZero, which

			left many New Zealanders out of pocket. Concerned that Boffa Miskell assessment may not adequately consider all hazards of the project, such as leaching of heavy metals into groundwater and associated risks to humans, plants and livestock, degradation of panels before replacement, lack of recycling infrastructure for panels, risks to water supplies, poisonous gases (Particularly hydrogen fluoride) being emitted into the air and risk of explosion during a battery fire, ability of local fire brigades to respond to fires in or around the facility, water availability, and a lack of medical resources in Ranfurly to treat people exposed to toxic materials in event of fire.
Eric Swinbourn	81	Oppose	Application is vague about specifics such as type of battery storage and number of inverters. No details of how workers will access the site, and the effects of this, or how wastewater from workers will be managed. Concerned that trip forecasts during construction are underreported based on scale of construction. Glint and Glare assessment does not consider strobing effects due to light through trees, or how reflections from the moon may affect Naseby's dark sky status. Concerned that proposed water storage will be inadequate to control fire. No detail is provided about smoke plumes. No construction noise and vibration management plan provided with application. No hiding 660 hectares of solar panels and people will have to view 4km of panels instead of their current rural views. Concerned about effects of 200 transient workers on the local community. Application doesn't outline what will be recycled where at time of decommissioning, how long decommissioning would take, and how many people would be involved. No benefits to the Maniototo.
Marilyn	82	Oppose	Facility out of scale with normal rural

Swinbourn			operations. Grazing sheep under the panels doesn't make it a farm. Risks of fire and contamination that may linger for generations. Site highly visible along approach to Naseby and Central Otago Touring Route. Glint and Glare assessment based on topography which may be changed during construction and doesn't address night time reflection which may affect Naseby's dark sky accreditation. Considers that site could never be fully reinstated. Facility should be constructed closer to users to limit transmission losses.
Upper Taieri Wai	83	Neither	Would like to see more details about groundwater flows and characteristics, and potential effects of catastrophic events. Concerned that groups such as them may be required to clean up any contamination downstream. Requests hydrogeological mapping, recharge and discharge analysis, water quality testing and modelling and impact assessments be undertaken in relation to groundwater in the area to understand these systems and ensure effects on them are managed. A fund should also be held in line with the costs to clean up the facility at end of its life, with the credit interest on this amount being provided for community projects in the Maniototo. Notes that growth rates in the Maniototo are low, with the group's planting projects recording up to 50cm of growth over 3.5 years. Survival rates are low without irrigation water or nearby watercourses. Considers that not all waterways in the site have been identified. For example, battery storage considered to be located next to an unidentified waterway.
Marilyn Ede	84	Neither	Requests more details about how fire would be contained and how climactic conditions would affect dispersal of toxic clouds. Concerned that glare may create

			a hazard and impact on Naseby's dark sky accreditation, the proposal will affect aesthetics along the road to Naseby, with landscaping growing too slowly to be effective. Wonders what plans are in place for end of life clean up, or a clean up after a natural event causing damage to the panels.
Suzanne Graham	85	Oppose	Considers that public have not been given enough time to consider the project, and that more information is required in relation to noise and vibration from pile driving, risk of contamination in event of fire and site remediation at end of project.
Scott Smith	86	Support	Would like to see job opportunities in the local area.
Glenda Bonham	87	Oppose	Requests that application be rejected in full
Cindy McCallum	88	Oppose	Potential risks on land and people. Doesn't fit visually with community values and risks posed by battery fire could cause mass evacuations and contamination of the environment.
Tanya Newman	89	Oppose	CODC LTP states CODC's strategic directives area to protect productive lands, support recreation activities, clean lakes and rivers and preserve wide open spaces. Maniototo is a unique landscape that supports the work of artists, photographers and astronomers and tourism operators, to name a few. Glare will have significant impacts, day and night, disturbing humans and animals. Fires common in Maniototo, but firefighters can take time to arrive to remote locations. Lithium batteries create risk of fire that cannot be put out by water and could result in emission of highly toxic gases that threaten life. Damage to solar panels could result in chemicals entering waterways and soils, then into the food chain through livestock. Considers that some chemicals, such as cadmium, do not break down and can remain in environment for a long time.

			Concerned about effects of electromagnetic fields for people in the vicinity, including health effects from living nearby to solar farm.
Cheryl Smith	90	Support	Proposal will bring economic benefits to the Maniototo
Alan Gould	91	Oppose	Concerned about siting of proposal adjacent to main road, risk of fire and difficulties extinguishing fire, toxicity of panels and absence of ongoing benefit to community. Any application should require company restore the land to its original state should they walk away from the facility.
Jill Derbyshire	92	Oppose	No benefits to local community, will destroy landscape and have a risk of wiping out Naseby in the event of a fire. Risk of sunstrike from reflections and potential health risks. Submitter moved to area for landscapes, clean air and night skies, which would be destroyed from reflection from the panels.
Phyllipa LaBonte	93	Oppose	Proposal will have a detrimental impact on submitter's health and wellbeing. Submitter is particularly sensitive to environmental triggers, including noise and glare. Proposal would exacerbate submitter's existing conditions and pose a wider safety risk due to glare.
James Crossan	94	Oppose	Does not believe good farming land should be changed in this manner. Does not want to have to visit their farm at 366 Ranfurly Back Road and have views of a large industrial facility or be blinded by glare from solar panels. Concerned about risk of fire and contamination of groundwater. Considers that solar power facilities should be built in the where power is needed, not on valuable farming land.
Anne Gould	95	Oppose	Site would have a high fire risk, with fires being difficult to control with local resources. Concerned with glare on local area and roads. Considers that the proposal is a short term solution to New Zealand's energy

			needs, in the wrong location in the country and which provides no benefit to the local community. Considers that full reinstatement of the land at the end of the facilities life, along with full repair immediately after any storm damage should be required if consent is granted .
Sarah Anderson	96	Oppose	Considers that the proposal is more about battery storage to play NZ electricity market than generating power. Scale of project too large for Maniototo. Considers that proposed mitigation measures are inadequate, unrealistic and vague, with no accountability for decommissioning the facility or ensuring proposed mitigations actually occur. Considers that grazing is not compatible with proposal. Numerous hazards associated with the proposal, such as fire, which are not fully understood as types of BESS and transformers are not specified. Questions how feasible an underground transmission line to the Naseby Substation will be and how toxic waste will be managed at the end of the project's life. Considers glint and glare assessment is inadequate.
Jan MacKenzie	97	Oppose	Solar farm will be an eyesore in the Maniototo landscape and will adversely affect the dark sky. Maniototo will get little benefit from the project. Activity will mostly benefit North Island.
Dennis Brown	98	Oppose	Considers noise levels and glare will be unacceptable. Proposal will scar the landscape forever and questions who will clean up the site at its end of life. May devalue homes and divide an otherwise close community.
David Scott	99	Oppose	Application being pushed through quickly at Christmas time is a red flag and considers that there is not enough truthful detail in the application. Considers that, if power is needed in the North Island, it should be generated there, or if every house had solar panels, a big solar farm wouldn't be needed. Concerned about noise, fire management, effects on night

			sky and benefits to wider community.
Margaret Hore	100	Oppose	Concerned that low, continuous sound can travel on a still day, with some people sensitive to that type of sound. Proposal will increase fire risk that is difficult to put out and could leave toxic deposits on surfaces and in the atmosphere.
Peter Hore	101	Oppose	Information in application vague. No mention of how power will leave Maniototo. Questions where water will come from for native planting and wetland development as neither site has a water take. Supports submitters who are concerned about toxic gas emissions from lithium batteries. Visual impact will change landscape forever. Area will no longer have a world of difference.
Mike and Lisa Fridd	102	Oppose	No needs for what the submitter considers is effectively an energy storage facility. Environmental impacts would be catastrophic due to fire and weather damage. The aquifer feeding water to Ranfurly and several nearby farms runs under the site. Concerned that contamination would render this unsuitable for domestic water supply and may affect its use for irrigation and livestock. Development would adversely affect house values in Ranfurly. Tourism and Naseby's Dark Sky status would be affected. Facility should be placed in the North Island, where it is needed.
Alice Perry	103	Oppose	Solar farm will be an eyesore and must fall outside the planned use for the area. Considers that natural beauty of Central Otago should be conserved. Solar farm will make it more difficult to market tourist attractions, such as the rail trail. Location should be away from residential areas and main arterial roads.
Stuart Weir	104	Oppose	Will be an eyesore of the landscape and may create problems for viewing the night sky. Provides no benefits to the local community. Should be built closer to where the power is needed.
Ian MacKenzie	105	Oppose	Will be detrimental to the Central Otago landscape. Project should be located

			closer to where power will be used.
Gary Hore	106	Oppose	Will create an eyesore. Does not agree with battery storage, fire risks or glare. Wildlife and water will be affected and land prices will fall. If it goes ahead, land should be required to be remediate to its original state and people who are affected compensated.
Skye Nisbet	107	Oppose	Use of lithium batteries close to Naseby Forest poses very high fire risk, with Naseby town very vulnerable to fire. Batteries may also break and release harmful chemicals into the soil or waterways, affecting health of livestock and people. Naseby and surrounding towns rely heavily on tourism, with main selling point being natural beauty and cleanliness. Solar farm could deter tourists from visiting.
Melissa Inder	108	Oppose	Concerned that, if batteries catch fire, they will not be able to be put out. No details in application about chemical make-up of batteries or how chemicals will be stopped from leaking into aquifers under the solar farm. Water contamination is a concern for livestock, for irrigation and for Ranfurly's water supply. Also concerned that fire will emit toxic gases that may threaten life. No details of any smoke plumes or emergency management plans have been provided with application. No plans for decommissioning the facility, or how the operators will be held financially accountable for returning the site to its original state.
Tracey Weir	109	Oppose	Opposes energy storage aspects of proposal. Considers that the proposal will be an eyesore and pose a risk of fire. If approved, it will set a precedent and provides no community benefit.
Lisa Murphy	110	Oppose	Solar panels will be highly visible and change landscape.
David Hore	111	Oppose	Will create an eyesore, noise effects, effects on waterways and risk of fire. If application goes ahead, considers that

			there should be no batteries or noise and the land is to be put back to its original state after.
Anne Kirk	112	Oppose	No clear statement of risks of battery fire and no emergency plan. No provisions in place to prevent release of chemicals and heavy metals from batteries into water and air. What happens at the end of the project's life? No financial guarantees that the land will be returned to its original state.
Sheryl Edwards	113	Oppose	Concerned about construction and ongoing noise, glint and glare throughout the Maniototo, size and safety of battery storage and lack of guarantees that land will be returned to its original state at the end of the project's life.
Ewan Carr	114	Oppose	Landscape and visual effects, rural character and amenity effects will be significant and unacceptable. Considerable risk of contamination. Benefits of proposal in this location on security of energy supply overstated. Proposal inconsistent with the relevant planning provisions and will not achieve the purpose of the RMA.
Ewan Kirk	115	Oppose	Concerned about long term impacts through air, water and land pollution and noise from transformers. No clear statement of risks to local community in event of battery fire, with no emergency management plan in place and no requirements to bund the batteries. Concerned that fire cannot be put out and what is left will leach into groundwater. What happens at the end of life of the project?
Kim and Rex Gibson	116	Oppose	Concerned about negative visual effects on unique landscape, risk to communities in the event of battery fire, difficulty getting trees established in this area to mitigate landscape effects, no economic or social benefits to local community and difficulty

			disposing or recycling panels at the end of their life.
Charles Inder	117	Oppose	If batteries catch fire of a nor-wester day, the submitter's farm will be affected by toxic smoke and gas. When the submitter is mustering stock on the Hawkdun Range, they will experience glare from the panels. Proposal will change landscape forever.
Ann Potter	118	Oppose	Has been told 30% of power generated in South Island lost in transmission to North Island. Why put solar farm in South Island. Should be closer to end user to loose less electricity in transmission. Concerned about where money for construction is coming from. Considers that most locals have jobs, so construction workers will mostly come from outside the area, so where will they live and who pays for their accommodation? Concerned that if they use local tourist accommodation, this will adversely affect tourism operators. Information on types of battery pack proposed to be used is vague, meaning research on specific types of packs cannot be done. How will battery fires be contained? Will lighting of the project comply with Dark Sky requirements? How will dust be managed on hot, windy days? Not enough water in area for dust suppression. How will applicant ensure people accessing the site are doing so correctly? Concerned at effects on residents and businesses in Ranfurly from construction traffic through the town. How will fire be managed, in one of the most fire prone places in NZ? Considers 12x25,000L water tanks are not adequate and the facility should be built in a less fire

			prone area. Any leakage of chemicals would be an environmental disaster. Concerned that screen plantings will not survive without irrigation and protection from rabbits. Concerned that noise will be continuous day and night and will affect health, particularly if audible from nearby houses and towns. Who will oversee building of the complex to ensure it is being done correctly and who will ensure the site is dismantled and returned to its original state at the end of the project? Considers that companies tend to disappear prior to when they need to dismantle their facility, leaving it to ratepayers and locals.
Lynette Davidson	119	Oppose	Currently South Island generates more electricity than it needs. 30% of energy transmitted to North Island lost during transmission. Considers that solar farm should be built in the North Island, where the power is generated, as it could provide 30% more power by avoiding transmission losses. Concerned with potential for hazardous material leaching into soil and waterways, with battery fires not able to be controlled. 20% of wetlands remain in NZ and this proposal will subject the wetlands on the site to further risk. Due to soil and environmental conditions, landscaping trees will be slow to grow. Where will the required water come from? Dust will be difficult to control on hot, windy days. Traffic will become a hazard due to heavy vehicle movements on a road that caters for cyclists, caravans, motor homes and tourists. Road not built for this level of

			vehicle traffic. No guarantees about end of life disposal of the facility. Concerned that operator will liquidate and walk away from the site.
Lauren Becker	120	Oppose	Considers that construction noise will be constant and have adverse effect on nearby people. Questions whether operational noise levels will be higher than modelled due to colling fans operating during higher temperature days. Considers that success of plantings in the area can be limited due to climate. No assessment of visual effects of proposed wind screens, or details on how it will be maintained. No details in application of how Naseby's Dark Sky Community standards would be complied with and whether a full moon would cause glare that detracts from night sky quality. Disputes that glare during the day will not be a hazard for road users. Significant risk of fire in the area, with high winds common. Considers that FENZ requirements provided with the applicant have not been responded to in enough detail. Also considers that it is not clear what risk is posed to groundwater from contamination from a battery fire, how contamination is proposed to be contained, or whether release of contaminants to air could affect health of people in the area. Site clean up and disposal of infrastructure needs to be addressed early and consent conditions, including a bond, should be in place to prevent landowners or others from being responsible for cleaning up the site. Considers that jobs for locals will likely be limited due to need for specialist skills. Construction jobs will be short term. No gain to local community as power would

			be going to the North Island. Solar farm should be built closer to where power is needed and where there is more infrastructure.
Solar Installation Specialist Ltd	121	Support	Proposed solar farm will generate temporary jobs for two years, with wages being spent in local economy. Benefits to local housing market due to increased demand for rentals and houses increasing prices for landowners. New long term employment could include to clean the panels. Considers that visual effects will be minimal through screening, such as dense trees, flaxes or toi toi. Scale of solar farm will benefit all of New Zealand through renewable power generation. Considers that it will have minimal noise or contamination effects. Considers that solar farms elsewhere have resulted in revenue growth in the surrounding area.
Julie Ashton	122	Oppose	Opposes due to visual pollution, fire risk, risk of contamination to local water table, risks to Naseby's dark sly status and noise pollution.
Jan Dearing	123	Oppose	Application located on main thoroughfare to Naseby, with the road known for its outstanding mountain views. Growing landscape plantings will be a challenge in Maniototo climate. Whole area is a fire risk with high winds and poor water supplies. Supports solar farm in general, but considers site to be unsuitable.
Carol Goodlass	124	Oppose	Concerned about noise, glare, landscape mitigation, site remediation at the end of the project and risk of fire/contamination. Considers that application lacks detail, for example regarding the new substation and transmission lines. Considers that application is more about battery storage, is wrong project in the wrong place. Concerned about project of this scale in an outstanding natural landscape. Requests application be paused until full

			and clear application is submitted addressing concerns.
Hazel Holloway	125	Oppose	Concerned about risk of fire from lithium-ion batteries. Area, including Naseby Forest, is already vulnerable to fire, with dry and windy conditions. Also concerned about risk of contamination of farmland and waterways from the batteries and the visual effects of the solar panels on the approach to Naseby. Considers that facility should be built in the North Island, where the energy is needed.
Peter Mottram	126	Oppose	Concerned about risk of fire from lithium-ion batteries. Area, including Naseby Forest, is already vulnerable to fire, with dry and windy conditions. Also concerned about risk of contamination of farmland and waterways from the batteries and the visual effects of the solar panels on the approach to Naseby. Considers that facility should be built in the North Island, where the energy is needed.
Debbie Grundy	127	Oppose	Questions whether construction noise will be unreasonable in terms of Section 16, and whether operational noise will be higher than modelled by applicant due to colling fans needing to operate during summer months. Considers that noise could have unpleasant effects. Considers that success of plantings in the area can be limited due to climate. No assessment of visual effects of proposed wind screens, or details on how it will be maintained. No details in application of how Naseby's Dark Sky Community standards would be complied with and whether a full moon would cause glare that detracts from night sky quality. Disputes that glare during the day will not be a hazard for road users. Significant risk of fire in the area, with high winds common. Considers that FENZ requirements provided with the applicant have not been responded to in enough detail. Also considers that it is not clear

			what risk is posed to groundwater from contamination from a battery fire, how contamination is proposed to be contained, or whether release of contaminants to air could affect health of people in the area. Site clean up and disposal of infrastructure at end of life needs to be considered early and consent conditions imposed to protect landowner or others from having to be responsible for clean-up of the site. This should include a bond. Any need for ORC consents should be confirmed, and consent should not be approved without any necessary ORC consents also being approved. Lack of information in application about infrastructure required to connect to existing transmission network. No additional energy resilience to local area. Not clear how many workers will be employed locally. No clear benefit to the community, other than the landowner.
Richard Healey	128	Oppose	Considers that there are large numbers of oversimplifications, misrepresentations and omissions throughout the application. Solar farm would include over 1 million electrical connections and thousands of kilometres of wiring, with large amounts of energy flowing through them. In the event of a fire there is no way to stop more energy from being generated and potentially exacerbating any fire. No information given about types of panels to be used, including their flame spread categorisation under IEC 61730-2. Some panels can be encapsulated in EVA films, which are flammable. If water is used on a panel fire, this would conduct electricity and could cause additional arcing or short circuits, which may re-start a fire, or may cause electrocution. Fire could release

			toxic chemicals (Including lead and cadmium) into soil, water and air. Arc detectors to help isolate any areas with a fault would only be as useful as they are reliable and able to identify arcs with different characteristics or with interference. Considers it likely that the oil capacity of the transformers will be higher than stated in the application, as no information about transformer models is available, and that transformers and substation buses would not be able to be practically containerised, as proposed. Regardless, containerisation is not a guaranteed protection from fire due to electrical failure and a BESS unit with pressure relief valves to mitigate against explosion risks could allow the release of flammable gases into the environment. Containerisation could be used to contain fire or stop its spread, but only if specifically designed for that purpose. Disputes claims that wiring from panels to inverters will be underground. Transmission costs and increased rates of energy loss due to distance and increased energy flow (Doubling energy squares energy lost) creates an argument for more electricity generation closer to where the centres of load are located. Considers that, if Tiwai smelter is decommissioned, the proposal could restrict the ability of Transpower to redirect the energy powering Tiwai north without additional network upgrades due to the solar farm taking up network capacity. Considers that new solar generation at this scale in the South Island is, therefore, not of national importance. Limited detail in application regarding BESS systems. Unable to rely on NFPA 855 due to exemptions to the standard for
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			electric power utilities. Testing for faults in the cells will be complex due to their number, with ignition pathways multiplying. Evidence suggests that test failures may not represent real world failures. Considers that current codes and regulations are inadequate, so a decision should not be made in reliance on them. Suggests an approximately 2.5% probability of a failure in the BESS installation in any given year of operation. Suggests that this risk may increase as the facility gets older and approaches the end of its life. Battery fire dependant on factors such as battery chemistry, state of charge and what fire prevention and suppression is available. Fire could emit large volumes of Hydrogen Fluoride and Phosphoryl Fluoride, to levels that may be a risk to health of life in sufficient concentrations. Carbon Monoxide and Hydrogen Cyanide can also be produced. Lithium fires observed to often result in shelter in place orders for surrounding community. This may work for humans, but not animals. A BESS facility would require substantial upskilling and up-resourcing of the local fire brigades, an emergency response plan and alarms on each unit to trigger with any abnormal function. The units should be on seismically strengthened, impervious pads that are fitted with bunds that could contain all water that might be involved in fighting a BESS fire, and a system for disposing of that water safely. Concerned that BESS would have no spill mitigation measures in an area with several watercourses and a shallow water table. Batteries would be used to buy electricity when prices are low, and sell when they are high, as well as store some of the output of the solar farm during periods of lower demand. Importing energy to the
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		site would result in more transmission losses in each direction. Considers that transformer noise has a component around 100Hz that humans find irritating and is not easily attenuated due to its low frequency. Considers that noise levels during operation will be higher than predicted by Marshall Day, instead closer to 93-95 dBA during peak operation. Considers that construction noise and vibration management plan, including regular monitoring and review, would be required due to duration of construction and noise generated by pile driving. Considers glare mitigation to be inadequate and glare to be an issue with the power to severely impact the community. Suggests that material provided by the applicant demonstrating best practice is not adequate. Considers glare from the proposed panels to be a risk to road users. Glare is also slow to dissipate, so would be visible over long periods, potentially having effects further afield. Notes that panels would not track the sun in three dimensions, so don't account for seasonal variation in the height of the sun, increasing the angles of incidence and reflection, increasing the amount of light that is reflected. Glare calculations use inadequate modelling methods (Using single point source with no consideration of elevation). Screen plantings will take years to become effective and benefits from changing angle of panels would only start when the solar tracking programme was operational, but risk to road users and effects on nearby parties will be immediate. Suggests that a similar requirement to the Millers Flat Gold Mine, which requires bunding around the site, be required in this case. Suggests a planted bund 4m in height.
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			Considers that a 220kV underground connection to the Naseby Substation likely to be impractical and that an overhead line would be required instead. Considers that solar farms have a bad reputation for not remediating sites at the end of the facility's life. Critical that consent conditions do not leave the Maniototo potentially cleaning up after the solar farm, and should include a bond or similar.
William McIntyre	129	Oppose	Considers that installation of panels will create lots of waste (For example, packaging and waste from workers). No information in application about how this waste will be managed and how any faulty or damaged panels will be disposed of. Requests waste minimisation plan be required before consent is granted. Questions how the site will be remediated. Requests bond from applicant to cover decommissioning of the site at the end of solar farm's operation. Considers that management of fires and other emergencies are not adequately considered. Fire is a risk in the area, and local healthcare services could also be overwhelmed if there is a construction accident. Requests emergency management plan be required before consent is granted.
Otago Regional Council	130	Neutral	Considers that application needs more clarity on risks to groundwater (Particularly the Maniototo Tertiary Aquifer) from any potential compromised BESS. Effects on the aquifer not assessed. Hazardous substances assessment focused on human contact with substances, with risk to groundwater not assessed in detail. Any leakage from the BESS would not be contained as proposed, which could result in discharges to soil and groundwater, the

			effects of which have not been addressed in the application. Considers that requiring containment facilities around the BESS should be considered by the consenting authority. Considers proposal inconsistent with Regional Policy Statements due to promoting land use that is inconsistent with the management of freshwater and soils, and inconsistent with the Objectives and Policies in Section 4 of the Central Otago District Plan for the same reasons. Considers proposal broadly consistent with provisions of Regional Policy Statements related to renewable energy generation, energy resilience and climate change. Recognises positive aspects of the proposal for renewable energy generation. May consider supporting application if concerns are addressed.
Philip Dowling	131	Support	Supports proposal, but would like provision for additional noise mitigation if noise from the BESS is louder than predicted.
Stephen Goodlass	132	Oppose	Considers application sparse in detail, factually incorrect and possibly misleading. Application appears to be to position Helios to take advantage of electricity spot prices to maximise profit by supplying electricity elsewhere with no benefit to local community. Solar can be co-located with where energy is used, with transmission resulting in energy loss. Considers solar in South Island to be suboptimal due to varying sun angles and daylight hours across seasons. Some short term benefits to local businesses during construction. Not clear if long term jobs will be in local community.

			No indication of how solar panels will be arranged overnight and whether moon reflecting off panels might affect Naseby's dark skies. No details of BESS or transformers, so unclear what noise generation characteristics will be. No consideration given of wind noise moving through the facility. Without knowing characteristics of BESS, no ability to consider environmental contamination risks. Proposed screening fails to take into account local environment. Concerned about possible use of evergreen conifers as screening due to risk of wilding species. Why are these being considered? Should include provision for any replacement equipment over the lifespan of the facility meeting minimum environmental considerations. Concerned with risk that the operator may not adequately clean up the site at its end of life.
Jacquie Crawford	133	Oppose	Location and scale in appropriate for area known for natural beauty, tourism and a unique character. As operator of tourism business using the Rail Trail, understands that tourists come to the area for its unspoiled beauty. Proposal would undermine this asset. Influx of construction workers will create pressure on accommodation facilities and have economic consequences for tourism operators if tourists are unable to secure accommodation. Alternative locations with lower visual and economic impact should be considered before jeopardising what makes the region so special.
Barbara MacLeod	134	Oppose	Considers main objective of application to make money for overseas investors and will not reduce energy costs for New Zealanders. Electricity will be used in the

			North Island, so location seems wrong. Considers site to be large, but will contribute relatively little to the supply of energy. Considers that battery storage makes proposal more to do with waiting to sell electricity when prices are high, which is not in NZ's best interests. No detail on where workforce will come from or where they will be housed. No long term employment benefits. Construction will create noise and vibration effects which will disrupt people. Lack of detail in application about mitigating visual effects, including if for any reason the solar farm fails, or operator declares bankruptcy and walks away without remediating the site. Naseby's dark sky application may be affected due to moonlight reflecting off the panels. Using the Road to Naseby will become off-putting due to presence of farm, which might affect tourism and house prices. Increased risk of fire in an area that already has high risk. Fire would be almost impossible to put out and local brigades are volunteers without access to lots of equipment. Risks to waterways, wetland and native flora from construction and from possible leakage from batteries, inverters etc. If proposal to go ahead, would want to see details on how equipment failure, fire etc. would be managed.
The Real Dog Equipment Company Ltd	135	Oppose	Submitter's business activities considered to be untenable if the proposal goes ahead as they would not be able to guarantee dog safety in event of a fire due to emission of toxic fumes. Living in continual fear of toxic byproducts not consistent with Objective 4.3.1. Concerned about loss of character in the area, which is a source of pride for local families.

			Notes that they have planted trees and shrubs on their property over 13 years. Most have died and had to be replaced. Survivors have struggled to reach 2m in that time, with water and wind shelter supplied. All plantings would need daily watering, frost protection and wind protection. However, views from Ranfurly-Naseby Road will still be hanging forever by blocking a famous vista of rolling hills and mountains. Believes the area is iconic and part of a wider outstanding natural landscape. If consent approved, should include a condition requiring construction not commence until all mitigation of visual effects is successful and complete. Noise from pile driving will be high, noting that piles being driven into Lyttleton Port resulted in complaints from up to 6km away. Concerned at these noise effects on their use of their property. Considers that construction noise for 24 months would be unreasonable in terms of Section 16 of the RMA. Considers that application fails to adequately consider noise from proposed transformers, the noise from which (90-95 dB) the submitter considers unacceptable for a rural area. Considers dust to be a problem during construction but also during operation if revegetation around the panels is slow. Risk of fire in BESS resulting in leaching into the aquifer. Considers glint and glare report not very relevant as no clear plan has been provided for the panels, including their elevations. Considers that glare still an issue for nearby roads, and requests that mitigation be in place before construction begins. Would like to see plan for recycling the
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			panels and all other infrastructure at end of life, and a bond held by CODC for remediation works. Would also like to see management plan for how glass shards and chemical leakage will be managed in event that panels are damaged (For example in hail storm). Concerned about loss of tourism appeal, sense of community and potential effects on Naseby's Sark Sky status. No long term benefits to local communities, which is not consistent with District Plan provisions that seek to support the local community. Construction workers will put pressure on local medical, law enforcement and first responder resources. Information missing regarding details of transformers, substation and connections to transmission network, water acquisition, wastewater disposal, effects of light, evacuation protocols and what consents are required from ORC. Why burden the HVDC line when the facility could be built in the North Island, to the advantage of the entire country instead of just the applicant? Would like to see details of why the location has been chosen. Considers that their property would hold no value if proposal were approved. Already talk of other residents selling before prices drop.
Rose Voice	136	Oppose	Submitter's business activities considered to be untenable if the proposal goes ahead as they would not be able to guarantee dog safety in event of a fire due to emission of toxic fumes. Living in continual fear of toxic byproducts not consistent with Objective 4.3.1. Concerned about loss of character in the area, which is a source of pride for local families. Risk of cumulative effects if other

			industrial activities are attracted to the area. Notes that they have planted trees and shrubs on their property over 13 years. Most have died and had to be replaced. Survivors have struggled to reach 2m in that time, with water and wind shelter supplied. All plantings would need daily watering, frost protection and wind protection. However, views from Ranfurly-Naseby Road will still be hanged forever by blocking a famous vista of rolling hills and mountains. Believes the area is iconic and part of a wider outstanding natural landscape. If consent approved, should include a condition requiring construction not commence until all mitigation of visual effects is successful and complete. Noise from pile driving will be high, noting that piles being driven into Lyttleton Port resulted in complaints from up to 6km away. Concerned at these noise effects on their use of their property. Considers that construction noise for 24 months would be unreasonable in terms of Section 16 of the RMA. Considers that application fails to adequately consider noise from proposed transformers, the noise from which (90-95 dB) the submitter considers unacceptable for a rural area. Considers dust to be a problem during construction but also during operation if revegetation around the panels is slow. Risk of fire in BESS resulting in leaching into the aquifer and air. Fire would be vigorous, long lasting and almost impossible to extinguish. Manufacturers advise against fighting fires in their products. Predicts 2.5% risk of fire at the facility in any given year. Considers G and G report not very relevant as no clear plan has been
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			provided for the panels, including their elevations. Considers that glare still an issue for nearby roads, and requests that mitigation be in place before construction begins. Would like to see plan for recycling the panels and all other infrastructure at end of life, and a bond held by CODC for remediation works. Would also like to see management plan for how glass shards and chemical leakage will be managed in event that panels are damaged (For example in hail storm). Concerned about loss of tourism appeal, sense of community and potential effects on Naseby's Sark Sky status. No long term benefits to local communities, which is not consistent with District Plan provisions that seek to support the local community. Construction workers will put pressure on local medical, law enforcement and first responder resources. Information missing regarding details of transformers, substation and connections to transmission network, water acquisition, wastewater disposal, effects of light, evacuation protocols and what consents are required from ORC. Why burden the HVDC line when the facility could be built in the North Island, to the advantage of the entire country instead of just the applicant? Would like to see details of why the location has been chosen. Considers that their property would hold no value if proposal were approved. Already talk of other residents selling before prices drop.
Nigel Voice	137	Oppose	Submitter's business activities considered to be untenable if the proposal goes ahead as they would not be able to

			guarantee dog safety in event of a fire due to emission of toxic fumes. Living in continual fear of toxic byproducts not consistent with Objective 4.3.1. Concerned about loss of character in the area, which is a source of pride for local families. Risk of cumulative effects if other industrial activities are attracted to the area. Notes that they have planted trees and shrubs on their property over 13 years. Most have died and had to be replaced. Survivors have struggled to reach 2m in that time, with water and wind shelter supplied. All plantings would need daily watering, frost protection and wind protection. However, views from Ranfurly-Naseby Road will still be hanged forever by blocking a famous vista of rolling hills and mountains. Believes the area is iconic and part of a wider outstanding natural landscape. If consent approved, should include a condition requiring construction not commence until all mitigation of visual effects is successful and complete. Noise from pile driving will be high, noting that piles being driven into Lyttleton Port resulted in complaints from up to 6km away. Concerned at these noise effects on their use of their property. Considers that construction noise for 24 months would be unreasonable in terms of Section 16 of the RMA. Considers that application fails to adequately consider noise from proposed transformers, the noise from which (90-95 dB) the submitter considers unacceptable for a rural area. Considers dust to be a problem during construction but also during operation if revegetation around the panels is slow. Risk of fire in BESS resulting in leaching into the aquifer and air. Fire would be vigorous, long lasting and almost
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			impossible to extinguish. Manufacturers advise against fighting fires in their products. Predicts 2.5% risk of fire at the facility in any given year. Considers G and G report not very relevant as no clear plan has been provided for the panels, including their elevations. Considers that glare still an issue for nearby roads, and requests that mitigation be in place before construction begins. Would like to see plan for recycling the panels and all other infrastructure at end of life, and a bond held by CODC for remediation works. Would also like to see management plan for how glass shards and chemical leakage will be managed in event that panels are damaged (For example in hail storm). Concerned about loss of tourism appeal, sense of community and potential effects on Naseby's Sark Sky status. No long term benefits to local communities, which is not consistent with District Plan provisions that seek to support the local community. Construction workers will put pressure on local medical, law enforcement and first responder resources. Information missing regarding details of transformers, substation and connections to transmission network, water acquisition, wastewater disposal, effects of light, evacuation protocols and what consents are required from ORC. Why burden the HVDC line when the facility could be built in the North Island, to the advantage of the entire country instead of just the applicant? Would like to see details of why the location has been chosen.
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			Considers that their property would hold no value if proposal were approved. Already talk of other residents selling before prices drop.
Dylan Voice	138	Oppose	660 hectares of solar panels will change the character of submitter's home, with more than minor environmental damage.
Susan Umbers	139	Oppose	Opposes visual effects in a scenic landscape and fire risk from batteries in a dry climate. Facility should be built closer to where demand is.
Leslie Close	140	Oppose	Proposed industrial activity will destroy the Maniototo, its worth and the community.
Amanda Cheesmur	141	Oppose	Concerned about how much noise will be generated by transformer cooling systems, number of batteries on the site, fire risk and risk to ground and surface water, which feeds stock and potable water supplies. More details needed on batteries as some considered safer than others. Landscaping will take years to grow, during which there will be significant effects on the beauty of the area. Concerned about risk of area being left as a toxic wasteland at the end of the project. Requests extremely robust conditions to avoid landowners and others from having to clean up in the event that the operator defaults for any reason, for example a bond. Risks outweigh benefits to community.
Elizabeth Kearney	142	Oppose	Lack of rain and strong winds mean trees less able to grow and survive. Dust from development will blow into Ranfurly and Naseby, affecting residents. No benefit to Maniototo, with no local jobs and power going to North Island. Naseby's dark skies will be affected by light off the panels and glare will be dangerous to road users on State Highway 85 and road to Naseby. What will happen in the event of a fire and who will clean up the site at the end of its life?
Dianne White	143	Oppose	Concerned about visual effects, batteries

			and fire risk. Would prefer it be built in the North Island.
Brent Mckenzie	144	Oppose	Majestic Maniototo landscape will be destroyed. Plume from fire unacceptable.
Jill Berry	145	Oppose	Concerned about ineffective plans for the disposal of batteries and equipment at the end of the project, risk of fire and contaminants leaking into local aquifer and loss of the magnificent beauty of the Maniototo.
Bede Ryon	146	Oppose	Commercial scale wind and solar not answer to our energy needs. Solar panels and transmission lines would take away from natural landscape in this area. Batteries have potential for fire, while being difficult to extinguish. Project driven by a few people who will financially benefit.
Kirstie Heiford and William Murphy	147	Oppose	Batteries will be an eyesore. No community benefit, other than a few jobs. Project of this size should not be on a tourist trail/road/track.
Jill Wolff and Neil Rout	148	Oppose	Sees no positive contributions to the region, but will bring unacceptable change to the landscape. Solar in the North Island would have greater benefit to NZ. What guarantees are there that a future owner will comply with conditions if Helios on-sold the facility? Boundary plantings will not provide visual mitigation for some years due to slow growing conditions. 20 year window for positive mitigation effects seems too close to the end of the facility's life. Proposal will result in ongoing visual effects and impact on visitor's first impressions of Naseby. Important aspects of views are sense of spaciousness and long distance visibility. Risk to road users from glare must be taken seriously. Wants evidence that Naseby's night skies will not be affected. No details in application about decommissioning of the facility, or how faults will be detected and remedied in a timely manner. Considers that there is risk of contamination and fire. Facility being locked would slow fire responses. Emergency management processes

			should be included in the application. Would like to see penalties put in place if construction exceeds 24 months. Limited long term benefits to community, unlike Naseby Forest.
Tracy Crossan	149	Oppose	Proposed landscape plantings will obscure views of submitter's farmland from their house once grown. In submitter's experience, Pinus Radiata takes 20 years to reach 8m in height in Maniototo, longer for native species. By the time trees reach a height useful for mitigating effects on the submitter's views, the facility would be nearing the end of its life. Shelter trees would also need to be maintained to avoid becoming a fire risk or weed and pest haven. No assessment of social impacts of development, or social licence from the community to operate in this location. Considers that proposal will increase local electricity prices. Risk of fire in the site spreading to neighbouring land. Increased insurance burden for landowners as a result. What plans are there to deal with runoff of water and chemicals used for firefighting getting into the water table? Where will the toxic plume from a BESS fire go and who will be affected? How will a fire and any need to evacuate be communicated to residents? Concerned that endangered horses being bred on the property, sheep and farm dogs will be affected by toxic chemicals emitted from a BESS fire, impacting the submitter's livelihood. Concerned about construction and operational noise in a quiet farming area. Does not believe facility will comply with noise regulations. No details in proposal about mitigating noise from transformers, or how far noise will travel. No mention of

			how stormwater will be managed. Not clear where water for irrigation, site maintenance and firefighting will be achieved. Water in high demand locally and often restricted in use. Concerned about non-ethical and environmentally damaging solar panel construction practices, and the level of carbon dioxide required to construct panels relative to their energy output over their lifetime. Chemicals, some of which are toxic to humans, could leach out of the panels through rainwater and routine maintenance, affecting soils and water, damaging productive farmland and impacting on possible locations for Ranfurly's town water supply. Concerned that operator may declare bankruptcy and walk away from the facility at the end of its life. Chemical leaching will mean the farmland cannot be returned to its original state. A bond or similar should be held to cover decommissioning costs if the operator walks away. Currently no effective recycling or disposal process for solar panels, so currently mostly dumped to landfill. Decommissioning plans do not include toxins released from the panels during operation. Proposal will reduce property values, increase insurance premiums, the viability of the submitter's farm, affect livestock and contribute to a heat island effect. No actual plan for the layout of the panels, what battery packs will be used, plans for the substation or connections to the transmission network. Glint and Glare assessment limited by lack of site plan. Concerned that Glint and Glare assessment considers risk along Ranfurly
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			Back Road low due to low traffic volumes. Consider that glare will still have a significant effect on road users due to being like looking at the sun.
Barbara Kearney	150	Oppose	No plans regarding lithium ion batteries in fire safety material. Worried about toxic gases and water contamination. Notes that there is an underground stream running through the property and neighbouring land. How will water quality be monitored?
Keith Campbell	151	Oppose	No way the local fire brigade is equipped to handle a fire caused by a battery failure. Considers that rank grass growth under the panels will not be palatable to livestock and will cause a fire risk. Wants to see a detailed fire safety plan addressing these matters.
Helen Gillespie	152	Oppose	No benefit to local community as power goes to North Island and will employ 2 people long term. Lack of information regarding noise. Trees will be very slow to grow due to climate. Rule of thumb is 10-12 years for a tree to reach maturity, not 5 years. Where will water come from for irrigation and what species will be planted? Glare could be a big issue to road users. Do employees need special qualifications? If so, this reduces local employment during construction. Would like to know more details about the batteries, their lifespan and what happens at the end of their life. What safety plans are there in the event of a fire or other accident that might affect Naseby or Ranfurly?
David Lucas	153	Oppose	Objects to overseas investors profiting from energy prices rather than helping kiwis reduce energy costs. Considers that, if the facility was built in the North Island, less power would need to be generated as less would be lost during transmission. More concerned with battery storage than power generation in general as it makes proposal seem more to do with buying and selling electricity for profit rather than generating it.

			No details of where construction workforce will come from or be housed. Construction will cause noise and vibration, which will be disruptive. Construction traffic will increase wear on local roads, which would need to be paid for by ratepayers. Facility will be unsightly, with no clear detail of how visual effects will be mitigated, especially if the solar farm fails and the operator walks away for any reason. Risk of fire that would be almost impossible to put out in an area with high fire risk and that is reliant on volunteer firefighters without access to lots of resources. Risks to waterways, wetlands and native flora from construction and leakage from batteries, inverters etc. Requests specific details on how failures, fires etc. would be managed. Solar farm will be off-putting to people visiting Naseby, affecting local businesses and house prices. Naseby's Dark Sky application may be affected by reflections off the panels at night. No benefits to local community long term.
Amie Pont	154	Oppose	Little, if any benefit to the Maniototo. How will waste materials generated by construction and operation of the solar farm be managed? Lack of understanding of how proposal might affect aquifer under the site, and potential implications for future Ranfurly town water supply. Location too central to main townships and State Highway 85, and could create glare issues at night, affecting dark skies. High risk of fire in the area, would be increased by batteries, which firefighters would not be able to fight using water.

			Concerned about other solar farms potentially being proposed. Requests that, if consent granted, a \$25 million community fund be set up, with an additional \$500,000 added per year thereafter, to create a community fund similar to the Central Lakes Trust, which would help to provide benefits from the proposal to the local community, helping to offset disruption of landscape and amenity values. Also requests a \$10 million clean-up bond to cover clean-up costs in the event that the operator walks away from the site. Wetlands and waterways on the property should be appropriately protected in perpetuity.
Roberta Sisson	155	Oppose	Solar farm would put lifestyles, businesses, agriculture and conservation at risk. Would drastically, permanently and unnecessarily change an otherwise productive area. Concerned about risk from BESS on ecosystems due to failure and fire. Local firefighters would not have capability to manage such a failure. Who will be responsible for cleaning up the site if the operator walks away? Concerned that glare will affect aviation operations in the area, for example agricultural operations and around the Ranfurly Hospital. Not confident that CODC, the RMA or EPA are adequately equipped to adequately manage the proper execution of the activity at the current time, so consent should be refused.
Bridget Scott	156	Oppose	Proposal will create visual pollution and interrupt the 'big sky' vistas of the Maniototo. Creates an environmental risk due to large scale lithium battery storage, which is a fire risk and can result in chemicals leaching into the environment. Considers the proposed location to be

			inappropriate, and that the facility should be in the North Island, not the South Island, as that is where more energy is being demanded. Considers that the proposal will reduce property values.
Carmen Hodge	157	Oppose	Proposal will create visual pollution and interrupt the 'big sky' vistas of the Maniototo. Creates an environmental risk due to large scale lithium battery storage, which is a fire risk and can result in chemicals leaching into the environment. Considers the proposed location to be inappropriate, and that the facility should be in the North Island, not the South Island, as that is where more energy is being demanded. Considers that the proposal will reduce property values.
Lindsay Scott	158	Oppose	Proposal will create visual pollution and interrupt the 'big sky' vistas of the Maniototo. Creates an environmental risk due to large scale lithium battery storage, which is a fire risk and can result in chemicals leaching into the environment. Considers the proposed location to be inappropriate, and that the facility should be in the North Island, not the South Island, as that is where more energy is being demanded. Considers that the proposal will reduce property values.
Ruby Albert	159	Oppose	Concerned about risk of contamination, amount of lithium ion batteries, the development not visually fitting in with the landscape, noise and potential loss of Naseby's Dark Sky status.
Adrian Hood	160	Support	Proposal will bring activity to the local economy, benefiting businesses. Submitter's business can operate weekend to weekend, with limited cash flow and increasing costs. Increasing resident populations would help increase revenue, helping business viability.
Bailey Forbes	161	Oppose	Proposal visually ugly, may result in contamination and affect dark skies.
Ann-Marie Patterson	162	Oppose	Concerned about the large scale of the facility, glare from the panels for

			neighbours and road users, noise from cooling fans, the unknown content of storage batteries, risk of fire, water requirements to clean the panels and fight fires, and potential effects on groundwater that supplies Ranfurly.
David Brady	163	Oppose	Supports renewable energy generation generally, but opposes the scale of the proposal due to effects on landscape amenity from the single largest construction in the area, dark sky quality, potential cultural effects on Naseby's historic character due to industrialisation, loss of tourism, effects on electricity transmission capacity limiting other, smaller development, risks of hazardous materials being discharged to the environment and risk of fire. Does not consider there to be sufficient information in the application to address these matters.
Donald Crawford	164	Oppose	During construction, solar farm likely to impact on tourism. According to Tourism Central Otago, there are 150 tourist beds in area. Application does not indicate where construction workers will live. If travellers' accommodation is used, this will limit tourists being able to come to area, impacting on tourism operators or event holders. Solar farm would produce limited long term benefits to local area, but tourism does. Proposal would scar rural landscape. Mitigation plantings would take years to screen the solar farm. Considers that the solar farm would create the ugliest approach to a town in New Zealand. No consideration given to Naseby's Dark Sky application and whether glare from the panels would impact this.
Sarah Dunckley	165	Oppose	Application does not address risk of Hydrogen Fluoride emissions from battery fires. Notes that there have been several recent battery pack fires globally. Concerned about location of BESS units close to Naseby and Ranfurly, to wetlands

			on the site, and to nearby dwellings. Application does not show exactly where the units are proposed to be located. Prevailing wind directions not discussed in application, which would influence spread of Hydrogen Fluoride in air. Concerned that local medical facilities may not be able to be equipped to treat people exposed to Hydrogen Fluoride or Hydrofluoric Acid. Considers 20m setback from wetlands more appropriate than the proposed 10m. This would reduce the likelihood of solar panels impacting the wetlands in they are damaged. Notes that there is limited research about effects on insects and birds from solar panels. Considers that noise will be generated overnight from transformers as the BESS units are charged from cheap power to be sold the next day, which has not been considered in the application. Considers it important that noise levels stay within District Plan limits. Solar farm located in popular tourist area and will dramatically change the current rural feel. No assessment has been undertaken about whether the solar panels would affect the night sky and Naseby's Dark Sky status.
Director General of Conservation	166	Neutral	Records indicate that Australasian Bittern (Nationally Critical) are present in the Maniototo basin and may use wetlands around the site. This species is not considered by the ecological impact assessment with the application. Several migratory bird species traverse the Maniototo basin. Concerned that "lake effect" could cause birds to collide with the panels, and that this risk may have been underestimated. DOC has an interest in any conditions proposed to manage bird strike, with an aim to

			increasing understanding of bird strike risks and impacts. Wetlands are a matter of national importance under the RMA and should be given due consideration. Concerned that there is insufficient assessment of effects on identified small wetland areas on the site. DOC has an interest in the proposed wetland enhancement management plan and any other proposed wetland or freshwater restoration requirements. No assessment of effects on freshwater stream values. Streams in the receiving environment may be habitats for Central Otago Roundhead Galaxids (Nationally endangered) and the site likely contributes groundwater to streams in the area. Solar farm groundworks should be undertaken in a way that avoids or minimises sediment discharge to water.
Michelle Bisset	167	Not stated	Seeks more information about how the solar farm would be removed, including how components would be re-used or disposed of. Considers that local recycling or disposal options would not be able to cope with this material and offshore shipping of waste not desirable. Ratepayers and residents should not be faced with consequences of poorly executed decommissioning or abandonment of the site. USA has good examples of advice for end of life decommissioning. A bond commensurate with the size of the project should be required. Sections 4 and 6 of the application require more information due to tenuous connections made between the application and some relevant legislation due to changing regulatory landscape. Considers consents required from Otago Regional Council, and that these should be considered in tandem with this application.

			Considers pre-application consultation undertaken by applicant to have been at lower levels of IAPZ Spectrum of Public Participation, but little reflection of the views of mana whenua in the application. Asks whether engagement forms filled in during pre-application consultation could be made available for review.
Rachel Dixie	168(Late)	Oppose	Naseby and Maniototo are outstanding landscape areas. Solar farm would have substantial landscape effects. Concerned about noise generated from transformers affecting nearby residents. Area is sensitive to fire and batteries will contribute to this and submitter is concerned at the types of gases that might be emitted in event of a fire. Considers that the extra energy is needed in the North Island, so it makes more sense to develop the facility closer to where it is needed.
Pete Burt	169(Late)	Oppose	Solar farm would be to the detriment of the area due to noise, risk of contaminants, fire, glare and site remediation.
Douglas Graham	171(Late)	Support	Proposal will have significant economic benefit to the area. Issues can be adequately managed through current technology and will be a safe asset. Requests that Helios does its upmost to manage the visual effects of the proposal.
Anita Chisholm	172	Oppose	Oppose based on safety for the community, lack of information on what will happen in 35 years, landscape and dark sky effects and who pays if a battery catches fire. Why should we pay for power that goes to the North Island?
Ken Gillespie	173	Neutral	Wants more information about how fire control will be achieved and how visual effects and glare will be immediately remediated.
Billie Masters	174	Oppose	Refuse application in its entirety.
Darryl Spence	175	Oppose	Visual aspect of the panels, facility will affect night sky of Naseby. We have enough power generation in the South

			Island. Build it in the North Island, where it is needed.
David Masters	176	Oppose	Applicant only interested in return on investment, and generating and storing power for sale when prices are at their peak. Maniototo and South Island will receive no benefit, but will take on the risks. Maniototo is uniquely beautiful natural environment. Proposal will scar the landscape in a way that trees will fail to address. Concerned about construction and ongoing noise effects, risk of fire, pollution of water table and who cleans up after a storm. Maniototo does not need this sort of investment.
Lorraine Spence	177	Oppose	Opposes everything in the application, particularly visual effects, safety of batteries and risks to Naseby's dark skies.
Malcolm Hodge	178	Oppose	Submitter former firefighter and ambulance officer. Can't find any information in application about lithium battery fires. Requests further information regarding fire safety measures and emergency plans.
Sarah Smith	179		
Shirley Hodge	180	Oppose	Concerned at toxic gases from lithium ion battery fires. Effects could be catastrophic for community and there are no plans in the application for how this will be dealt with. Decommissioning the site will be very expensive. How can the community be sure this will happen and will be paid for by the applicant? Requests bond be taken to cover decommissioning costs if consent granted.
Susan Farrell	181	Oppose	Solar should be installed where it is needed as so much is lost in transit. Not enough information on how noisy the site will be, day and night. Proposal may create light pollution and affect Naseby's dark sky. Application needs more information on batteries and how incidents will be handled, noise and light issues, and decommissioning before consent if granted.