

LANDSCAPE AND VISUAL EFFECTS ASSESSMENT - PEER REVIEW

RC240065 – HELIOS OTA OP LP

RESOURCE CONSENT APPLICATION TO CONSTRUCT AND OPERATE A SOLAR FARM
ADJACENT TO RANFURLY-NASEBY ROAD AND RANFURLY BACK ROAD

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INTRODUCTION

- 1 Helios OTA OP LP has applied for resource consent to construct and operate a solar farm for energy generation. The solar farm is to cover approximately 665ha on a site that lies approximately 4.5km southwest of Naseby that is currently grazed farmland.
- 2 The application includes a Landscape Effects Assessment Report prepared by Boffa Miskell Ltd dated the 28th of February 2025 (**the BM report**). I have been engaged by the Central Otago District Council to peer review the BM report. Specifically, I have been asked to comment on the adequacy of the proposed mitigation measures to manage the effects of the proposal on the landscape including consideration of whether the timeline for establishing the mitigation measures is appropriate. My review does not include the application's Ecological Impact Assessment (**EIA**) nor the Glint and Glare Study.
- 3 The BM report sets out its approach and process in its Sections 1.3 and 1.4. The approach is comprehensive and appropriately has been guided by Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines (**TTatM**)¹. The BM report follows a clear and suitable structure.
- 4 This peer review has similarly been guided by TTatM. Full findings of a landscape and visual effects assessment are not set out in this report. This report gives review comments on the BM

¹ 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022 (TTatM).

report and discusses its methodology, completeness, plausibility, findings and conclusions. I generally use the headings of the BM report as a structure to my review comments.

- 5 As part of my peer review, I visited the vicinity of the site on 25 June 2025. I visited the various public locations that are discussed in the BM report. I did not visit private land but considered the private viewpoints discussed in the BM report from nearby public locations.

PROPOSAL DESCRIPTION

- 6 The proposal is described in full in Section 2 of the BM report. More detail is given in the application's Assessment of Environmental Effects (**AEE**) and its various appendices. The mitigation strategy is set out clearly in the graphic supplement to the BM report, particularly Figures 7A to 7D.

EXISTING ENVIRONMENT

- 7 Section 3 of the BM report is a detailed description of the existing landscape including a broad scale description, a local scale description and discussion of visual catchment and existing views.
- 8 Reference is made to the 2008 district wide landscape study² and the 1998 regional study. It is identified that the vicinity of the site is outside of any Outstanding Natural Landscape (**ONL**) or Significant Amenity Landscape (**SAL**).
- 9 The landscape is described in relation to physical, associative and perceptual aspects. The key landscape values³ of the site and its immediate surrounds are set out as:
- *Expansive areas of pasture which creates a sense of openness with vast skies and opportunities for long views to the wider plains and mountain backdrops.*
 - *The exotic forestry which is characteristic of this northern edge of the Maniototo / Mānīatoto Plains landscape.*

² "Central Otago District Rural Review – Landscape Assessment Report and Recommendations", LA4 Landscape Architects, July 2008.

³ TTatM (paragraph 6.06 and glossary) defines landscape values as "the various reasons a landscape is valued – the aspects that are important or special or meaningful" and notes that "values are embodied in attributes".

- Legibility of landform such as the undulating folded landscape within the Site as well as the contrast between the plains and surrounding ranges.
- Two large natural inland wetlands.
- A low density of structures and buildings that are predominantly used for rural activities⁴.

10 It would be useful to also set out clearly the landscape values of the broader scale Maniototo landscape. The 2008 district wide study describes the Maniototo landscape as follows:

The main distinguishing feature of this landscape is its open exposed nature and the generally flat terrain. In some places the land is so flat and open that one can see for miles across it with no interruption. Ida Valley, the Maniototo and Taieri Plains are extremely exposed with only a minor ridge or stream or group of trees to give some variety.

These landscapes are very visually exposed as well as having a very strong pastoral rural character. Only alongside the streams do these units have any natural character and even there the trees are exotic.

As stated earlier, in the Ida Valley, Maniototo and Taieri Plain the most noticeable characteristic is the open expansive quality. This means that they are highly sensitive to any change because changes would be visible for miles across the flat plains⁵. New development in the Ida, Maniototo and Taieri Plains would need to be very carefully designed and sited because of the visually exposed nature of the land.

The intrinsic quality of the Ida, Maniototo and Taieri Valleys is their bare spaciousness and rural nature.

Some additional development could be incorporated into these landscapes particularly on the outskirts of existing towns and settlements such as Otarehua, Patearoa, Paerau, Ranfurly, and Naseby.⁶

11 While the 2008 district wide study is perhaps somewhat dated, the above is considered a useful overview of how the Maniototo landscape is valued at a broad scale.

⁴ BM report, Section 3.3.

⁵ This sentence appears to contradict the district-wide landscape assessment's mapping of the Maniototo Plains as being of limited sensitivity. However, upon closer examination, this sentence is referring to the openly exposed visibility of the plains and the high potential for visual effects of new elements. While this applies to much of the plains at a broad scale, specific locations may be more enclosed or variable and less susceptible to visual effects. Additionally (as cited here), the district-wide landscape assessment separately comments on the outskirts of settlements including Naseby.

⁶ "Central Otago District Rural Review – Landscape Assessment Report and Recommendations", LA4 Landscape Architects, July 2008, pages 21-23.

- 12 The BM report's discussion of visual catchment including its description of existing views and associated photographs gives a helpful baseline for the consideration of visual effects.

RELEVANT STATUTORY PROVISIONS

- 13 In relation to the Act, the BM report sets out the relevance of Sections 6(a), 6(b), 7(c) and 7(f). I agree that Section 6(b) is not of primary importance.
- 14 Regarding guidance that can be taken from the Central Otago District Plan (**CODP**), the BM report correctly identifies that the site is not within or near any ONL or SAL.
- 15 In relation to the CODP, the BM report identifies Section 4 – Rural Resource Area, and Section 13 – Infrastructure as the most relevant sections. In the later “Response to Statutory Provisions” section, the BM report sets out and comments on Objectives and Policies of Section 4 and the matters listed under Rule 4.7.4(iii).
- 16 I note that the proposal requires resource consent pursuant to the Rules of Section 13 of the CODP. The text of Section 13 sets out that this section of the CODP is to be a “complete code⁷”. As such, I do not consider that significant guidance can be taken from Section 4 of the CODP. Section 2 is relevant in that it sets out the district wide issues that relate to landscape and amenity⁸. Section 13 then sits under Section 2 and relates to Infrastructure. Reference to Section 4 is perhaps useful to inform consideration of what landscape values are generally important in the district's rural landscapes (for example, emphasis is given to open space and the natural character of hills and ranges), but my understanding is that primary guidance for the consideration of the landscape effects of the current proposal does not come from Section 4.
- 17 Related to the above point is the following commentary from TTatM:

Effects on landscape values are assessed against the existing environment and the relevant statutory provisions. Provisions often anticipate change and certain outcomes for landscape values.

Landscape effects are assessed against:

- *The landscape values (embodied in certain attributes); and*

⁷ CODP, 13.3, 13.4, 13.7.1.

⁸ CODP, 2.3.1,

- *The relevant provisions (what the objectives and policies say with respect to landscape values, what type and magnitude of development or change in the landscape is anticipated)⁹.*

18 The BM report comprehensively describes the existing landscape but does not specifically explore what could be anticipated or reasonably foreseeable as part of the environment. Some mention of this is made in the AEE (at Section 5.1). Given that Section 13 of the CODP sits as a complete code under Section 2 (and given the direction of the National Policy Statement for Renewable Electricity Generation 2011), I consider that there is some anticipation of the increased presence of renewable energy generation within the district's landscapes, particularly outside of ONLs and SALs. However, this does not detract from the Objectives and Policies that seek to avoid, remedy or mitigate adverse effects on landscape values¹⁰.

NATURAL CHARACTER EFFECTS

19 Taking direction from Section 6(a) of the Act, the BM report discusses effects of the proposal on the natural character of the site's waterways and wetlands. These are described as modified and of low natural character. My observations in the field accord with this, although I have not examined the watercourses/wetlands in any detail. I defer to the application's EIA and the expert peer review of it.

20 Again pursuant to the EIA, proposed planting, revegetation and fencing will lead to an overall enhancement of natural character over time in relation to the watercourses and wetlands. Given the information set out in the EIA, this appears entirely plausible. Again, however, I defer to the EIA and the peer review of it.

LANDSCAPE EFFECTS

21 Under the heading of landscape effects, the BM report discusses landscape character effects and biophysical effects in relation to both construction and operation of the proposed generation facility. It is explained that construction is expected to take approximately 24 months and be done in stages. Relatively minor earthworks are proposed and the piers on which panels are mounted will be driven into the ground rather than anchored in concrete or similar. Inverter structures and

⁹ TTatM, paragraphs 6.06 and 6.12.

¹⁰ CODP, 13.3.5, 13.4.7.

an approximately 1.1ha substation compound are proposed. It is stated that after a 35-year operational period, the facility is intended to be decommissioned, dismantled and removed. I imagine that plans may change over the course of the operational period, but it appears correct that the facility at least is able to be removed in the future.

- 22 As discussed, the mitigation planting and the wetland/watercourse planting are part of the proposal. While required mitigation planting is described in the BM report (Figures 7 A to D), full details are proposed to be given in a post-consent Landscape Mitigation Plan and Landscape Management Plan.
- 23 In relation to landscape issues, the Objectives and Policies of Section 13 of the CODP effectively direct that effects on landscape values are to be avoided, remedied or mitigated. When considering landscape effects, it is therefore important to relate these back to the identified values of the relevant landscape. These are discussed above under the heading of Existing Environment and include openness, exposure, expansiveness, flat terrain and rural character. The subject site contributes to these values but also includes some partial enclosure by way of existing shelterbelts and topographical undulations/terraces.
- 24 Regarding the construction stage, the BM report describes the use and movements of machinery and vehicles, cabling and trenching, construction of internal roading, laydown areas and proposed planting. It finds up to moderate-high adverse effects on landscape character during the construction phase.
- 25 Regarding the operational phase, the BM report describes:

... a broad change in landscape character from open, pastoral farmland to a landscape containing energy related infrastructure. The proposed solar farm will introduce numerous linear structures into a rural farming landscape that is currently open and expansive in character and that has been modified by extensive agricultural land use and forestry.

While the structures are relatively low in height, at less than 3m, the scale of the overall proposal is very large. Potential landscape character effects will largely be related to the change from a predominately open, rural landscape to an energy landscape with a high density of built form.

At the same time, opportunities for the enhancement of the key wetlands and extensive blocks of additional planting as part of an agri-industrial environment have the potential to improve aspects of the existing modified landscape character.

- 26 The retention of grazing and pastoral management in and around the facility is also set out by the BM report. It is understood that shelterbelt planting (and indeed all planting that is included in the proposal) is permitted. In relation to biophysical effects, the BM report emphasises the relatively minor earthworks and the beneficial planting that forms part of the proposal. The retention of grazing is given some weight in the BM report as a continued agricultural use which is relevant to landscape character. This is also discussed in the application's AEE but I can see no proposed conditions that relate to grazing and am unsure whether proposed condition 1 (general accordance) would require continued grazing.
- 27 The landscape values of openness and expansiveness are obviously important to the landscape at both a broad and a local level. Due to scale, the proposal will certainly have some effect on these values. I consider that the particular nature of the solar panel structures is relevant; being pole-mounted with landform contour continuing beneath, with a maximum height of 2.8m, and not themselves enclosing space in the way that buildings (sheds, barns, dwellings) do.
- 28 Ultimately, the report finds a moderate adverse effect on the local landscape character and values and a low effect on the broader Maniototo Basin, before mitigation planting establishes. Once mitigation vegetation becomes established, these adverse effects are reported to reduce to low-moderate (local) and very low (basin-wide).
- 29 I consider that these findings and ratings of adverse effects are generally logical, plausible and appropriate. In addition to the factors set out in the BM report (including the continuation of some agricultural use in the form of grazing), I have placed some degree of weight on the general reversibility of the changes to the landscape that the proposal will bring.
- 30 Notwithstanding my comments in the previous paragraph, an issue that is raised by a number of submissions is the timeframe over which mitigation planting is likely to become established. The BM report (including its Appendix 2) imply that after 5 years, planting can be termed established. The BM Landscape Planting and Maintenance Plan (28 May 2025) gives some more details regarding planting but is not definitive on issues such as plant irrigation and rabbit proofing. The

BM Landscape Planting and Maintenance Plan gives expected heights for planting after 5 years of growth and states that this is based on information from three locally experienced nurseries and Habitat Restorations Ltd¹¹. The heights after 5 years of growth that are given indicate vegetation that is starting to have a useful screening function in relation to the proposed activities. The application includes proposed conditions of consent that require a Landscape Mitigation Plan and Landscape Management Plan to be submitted to CODC for certification, setting out details of proposed planting and its management. The site is between 500 and 550 masl in elevation and is subject to the extreme climate conditions of the Maniototo. Beyond non-site-specific general knowledge, I can offer no expertise regarding growth rates in relation to this vicinity. I simply raise the issue that the timeframe over which effects may reduce in degree, due to mitigation planting, is not something that I can give expert advice on. For completeness, I also note that, other than the particular shelterbelt that is stipulated as being maintained at 3m high, no minimum maintenance height is specified for existing shelterbelts that are to be retained.

VISUAL EFFECTS

- 31 Regarding long-distance public views (over 1km from the site), the BM report discusses Ridge Road, SH85 and Bypass Road and comments, in relation to SH85, that:

“... individual solar panels will not be visible but will appear as dark bands amid the bands and layers of surrounding shelterbelts, partially screened and broken up by the lower native planting mix in the midground”¹².

- 32 No important long-distance views have been overlooked. From the relevant viewpoints, while there will sometimes be a line-of-sight to areas of panels, discerning what they are will be difficult. The BM report’s finding that adverse visual effects on observers in these locations will be of a very low to low degree, is plausible and appropriate. Similarly, observers in distant, elevated recreational areas will be affected to a very low degree.
- 33 Regarding closer public observers that are to the west of the site, the BM report finds a very low degree of adverse visual effect in relation to views from Naseby Link Road, Gimmerburn Naseby Road and Fennessy Road due to general lack of easy visibility. This is agreed, although some

¹¹ A specialist native ecological restoration and management contractor.

¹² BM report, page 42.

weight is placed on the proposed block of exotic tree planting at the very northern end of the site. I accept the usefulness of this tree planting but, as mentioned, am uncertain of growth rates.

- 34 Ranfurly Naseby Road adjoins the western edge of the site. The BM report describes a traveller's experience on this road and notes the setbacks, native mitigation planting, infill planting into the existing shelterbelt, proposed new shelterbelt planting, and the northern proposed block of tree planting. The report then gives the findings that adverse visual effects on these observers will be very low to moderate-high during construction, moderate once construction is complete, and reducing to low-moderate once planting is established. I consider the mitigation approach has been well designed, incorporating useful setbacks and planting that builds on existing vegetative character (noting that shelterbelt planting is permitted in any event). Details regarding plant species, densities, etc that will be submitted for certification via the Landscape Mitigation Plan and Landscape Management Plan will be important. Adjacent to the northern part of the site, plain views to a broad area of solar panels from Ranfurly Naseby Road and the eastern part of Fenessy Road will be available until the relevant mitigation vegetation reaches a consistent height equal to or greater than the eye height of road users. While I generally agree with the effects ratings given by the BM report, I consider it more accurate to say that from this part of Ranfurly Naseby Road moderate-high effects will continue until plantings reach approximately 1.5 to 2m in height.
- 35 Regarding close public observers that are to the east of the site, the BM report describes the experience of travellers on Ranfurly Back Road, which is a lower-use metal road adjoining the site. Setbacks, proposed tree planting near the site's northern end, a band of native mitigation planting along the road boundary, and the existing east-west shelterbelts are noted. The BM report finds that adverse visual effects on Ranfurly Back Road observers will be very low to moderate-high during construction, moderate once construction is complete, and reducing to low to low-moderate once planting is established. Subject to my previous comments and to conditions requiring appropriate details in relation to the required Landscape Mitigation Plan and Landscape Management Plan, I consider that the effects ratings given by the BM report are generally appropriate but again would add that for considerable parts of Ranfurly Back Road, moderate-high effects will continue until mitigatory vegetation reaches a height that provides reasonably consistent screening.

36 Regarding private views, the BM report's Appendix 2 gives visual effects assessment comments in relation to 17 private properties. These are identified on Figure 3 of the report.

37 It is relevant that:

Hybrid terms such as 'visual amenity', 'rural amenity', and 'natural amenity', are shorthand for 'landscape values that contribute to amenity values'.

A visual effect is a kind of landscape effect. It is a consequence for landscape values as experienced in views¹³.

38 Therefore, when considering a potential visual effect on an observer or property, we are not just measuring the visibility of a new element in the landscape. We are considering the degree to which the new element will discord with landscape values as they are experienced visually; the degree to which the values of the view will be degraded,

39 Properties 6 to 17 are more than a kilometre from the site and the BM report finds visual effects to be very low at most. I consider this to be accurate. The landowner of Property 1 is part owner of the subject site and has given approval to the proposal. Dwellings 2 to 5 are examined in more detail by the BM report. I note these properties have been visited by the report authors¹⁴.

40 Dwelling 2 sits to the north of the site. In southerly views there will be visibility as shown in Photographs 19 and 20 of the BM report. Considerable tree planting is proposed that will have a screening function. The BM report finds that adverse visual effects on this property will be low-moderate to moderate during construction, low-moderate once construction is complete, and reducing to low once planting is established. I consider this finding is appropriate, contingent upon my previous comments (particularly regarding the content of the Landscape Mitigation Plan and Landscape Management Plan and certainty on planting growth rates).

41 Dwelling 3 is located approximately 600m northeast of the site and its views are illustrated by Photograph 21 of the BM report. Minimal visibility is available, which will be further reduced by proposed vegetation within the site. I agree with the BM report that visual amenity will be reduced by a very low degree.

¹³ TTatM, paragraphs 5.58 and 6.08.

¹⁴ BM report, Section 1.4.4.

- 42 Dwelling 4 sits to the southeast of the site, approximately 400m from the site boundary. Northerly views from the property are illustrated by Photographs 22 and 23 of the BM report. Proposed solar panels can be seen as a mid-ground horizontal band between a pasture foreground and background skyline of the Hawkduns. Proposed mitigation planting within the site will eventually have some screening function but the BM report finds that this will require 8 to 10m of growth. The BM report finds that adverse visual effects on this property will be low-moderate to moderate during construction, low to low-moderate once construction is complete, and reducing to low once planting is established. While those ratings are appropriate in my opinion, it appears that it may be many years before planting is established enough to have a screening function. The BM report notes that visual screening from the Dwelling 4 curtilage area could be achieved by low hedging on the Dwelling 4 property itself, but obviously that would be at the property owner's pleasure (and, presumably, expense).
- 43 Dwelling 5 is located approximately 1km southwest of the site and its views are illustrated by Photograph 24 of the BM report. Very limited or no visibility of the proposed activities is available and given distance, they are unlikely to be recognisable. The BM report finds that that visual effects will be very low. In practical terms, I consider that there will be no effect on the visual amenity of this property.

CUMULATIVE EFFECTS

- 44 The approved 54.5ha Solar Bay solar farm is 330m from the subject site at its closest point, the intersection of Fennessy and Gimmerburn Naseby Roads. Conditions of the Solar Bay resource consent require perimeter vegetation to reach 3m in height before any development is undertaken¹⁵.
- 45 The BM report notes that there is some potential for the two solar farms to be visible together in the vicinity of the intersection of Fennessy, Gimmerburn Naseby and Ranfurly Naseby Roads, including the driveway of Dwelling 2. The report goes on to find that adverse cumulative effects will be of up to a low-moderate degree. Taking account of the abovementioned Solar Bay vegetation condition, I consider that the BM report's finding is appropriate in relation to this

¹⁵ BM report, Section 5.4.1.

particular vicinity at the extreme northern end of the subject site but again is subject to growth of proposed vegetation.

- 46 More broadly, my consideration is that the most relevant effects of the current 665ha solar farm proposal are stand-alone effects, rather than effects of its combination with the consented Solar Bay solar farm.

CONCLUSIONS

- 47 The BM report covers all relevant issues and follows an appropriate methodology and structure. As can be seen from the commentary of this report, I generally agree with the findings regarding the degree of adverse landscape and visual effects as they are reported in the BM report. In arriving at that conclusion, I have given consideration to some factors that are not discussed in the BM report. These are:
- I have taken guidance from Section 13 of the CDP with some reference to Section 2 but have not taken any direct guidance from Section 4.
 - Drawing from Section 13, I consider that the CDP includes some degree of expectation that there will be some increased presence of renewable energy generation within the district's rural landscapes, particularly outside of ONLs and SALs, and this is relevant to the environment against which the effects of the proposal should be assessed.
 - I have given consideration to the general reversibility of the changes to the landscape that are proposed.
- 48 Notwithstanding the above, I consider there are some outstanding or unclear issues that I comment in in subsequent paragraphs.
- 49 The measures that form part of the proposal that are intended to mitigate landscape and visual effects are generally appropriate and have been well designed in my opinion. I note that proposed consent conditions require the submission and certification of a Landscape Mitigation Plan and a Landscape Management Plan. Those conditions refer to Section 6 of the BM report. I consider that the conditions should also:

- refer to Figures 7A to D of the report,
 - refer to the Landscape Planting and Maintenance Plan (28 May 2025),
 - require details to be given of irrigation such that all planting is irrigated for at least the first 3 years after implementation and thereafter have irrigation available if required through harsh summer months,
 - give details of a comprehensive pest control plan to protect plantings,
 - give minimum maintenance heights for all relevant shelterbelts.
 - give some detail or undertaking regarding the continuation of grazing that is proposed since the BM report and AEE place some reliance on this land use.
- 50 The growth rates for the various areas of planting that are proposed (exotic and native) are not an issue I can give definitive advice on. This is relevant to the mitigation of effects and the duration of some effects, as I have set out in this report.

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