

# **Landscape Assessment – Peer Review**

**Proposed Solar Farm**

**Nova Energy Ltd**

**Mackenzie Basin**

**3 June 2026**



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<b>Status</b>	<b>Issue 8</b>
<b>Issued</b>	<b>3 June 2026</b>

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## **1. INTRODUCTION**

- 1.1. Patch Limited (**Patch**) has been asked to undertake a Landscape Peer Review of a Landscape and Visual Effects Assessment (**LVA**) prepared by Rough Milne Mitchell Landscape Architects (**RMM**) for Nova Energy Ltd. That report provides a landscape and visual assessment of a proposed solar farm in the Mackenzie Basin.
- 1.2. This peer review has been prepared in accordance with the Environment Court's Code of Conduct for Expert Witnesses as specified in the Environment Court's Practice Note 2023. This peer review is within my area of expertise, except where I state that I rely upon the evidence of other experts. I have not omitted to consider any material facts known to me that might alter or detract from the opinions expressed.
- 1.3. A site visit was undertaken on 7 November 2024. I am familiar with the broader area, having lived in the South Island for over 20 years, undertaking landscape assessment and design work in the wider area and traversing the landscape through seasonal and diurnal changes.
- 1.4. In preparing this review I have read and refer to:
- Landscape Assessment Report prepared by Rough Milne Mitchell Landscape Architects for Nova Energy Ltd dated 24 April 2026,
  - Photos Simulation Information, Methodology and Simulations prepared by VirtualView dated 02 December 2024,
  - The Mackenzie Basin Landscape Study: Character and Capacities, prepared by Graham Densem Landscape Architects Ltd dated November 2007,
  - Assessment of Potential Ecological Effects of the Proposed Nova Energy Solar Farm near Twizel prepared by Wildlands Consultants dated June 2023, and
  - Glint and Glare Study – Final Report, Revision 3 prepared by ITP Renewables, dated November 2024.
- 1.5. This report has been prepared for Nova in respect of its application for all approvals under the Fast-track Approvals Act 2024 for the Twizel Solar Project. The Panel appointed to consider the application for the Twizel Solar Project may rely on this report for the purpose of making its decision under the Fast-track Approvals Act.

1.6. Overall, my assessment has identified some areas of disagreement with the LVA, but these are mostly minor matters that are based on emphasis and process. The main area of disagreement between my assessment and the LVA is the weight placed on the importance of the presence of Aoraki / Mt Cook. I consider that greater weight should be placed on this component of the landscape. However, despite this difference of opinion and process, my conclusions are aligned with those in the LVA.

## **2. REVIEW METHOD, PURPOSE AND STRUCTURE**

2.1. In undertaking this review I have applied landscape assessment best practice, particularly that set out in the New Zealand Institute of Landscape Architects Landscape Assessment Guidelines / Te Tangi a Te Manu (TTaTM).<sup>1</sup> I note this review is not a parallel assessment<sup>2</sup> and instead is an 'appraisal' of the assessment prepared by Mr Paul Smith of RMM.

2.2. This review is structured as follows:

- Report Methodology,
- Landscape Relevant Statutory Matters,
- Description of the Proposal,
- Description of the Landscape,
- Landscape and Visual effects,
- Conclusion, and
- Recommendations.

## **3. REPORT METHODOLOGY**

3.1. I confirm that the landscape assessment methodology that has been applied in the LVA is consistent with landscape assessment best practice and follows the TTaTM.

## **4. LANDSCAPE RELEVANT STATUTORY MATTERS**

4.1. Part 3 of the LVA appropriately sets out a description of the relevant statutory matters. Those associated with the Operative and Proposed Mackenzie District Plan are listed in Appendix 1 of the LVA. It is understood the Mackenzie District Plan is currently under review.

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<sup>1</sup> NZILA. Te Tangi a Te Manu Aotearoa New Zealand Landscape Assessment Guidelines. April 2021. p. 161 - 163.

<sup>2</sup> NZILA. Te Tangi a Te Manu Aotearoa New Zealand Landscape Assessment Guidelines. April 2021. Part 6.63.

## **Landscape Category**

- 4.2. Part 4.4 of the LVA identifies the site as being part of an Outstanding Natural Landscape (ONL) and I agree that ONL is the correct landscape category for the site and its surrounding landscape.

## **5. DESCRIPTION OF THE PROPOSAL**

- 5.1. Part 2 of the LVA provides a comprehensive description of the proposal which is supported by the report's graphic attachments. The LVA sets out the reason for the site selection, the extent of the solar farm, access, fencing, earthworks, water tanks, temporary structures, land management and the appearance of the solar panels, conversion unit and transmission lines.
- 5.2. In summary, approximately 565ha of land will be occupied by the solar farm. Approximately 446,000 solar panels are proposed in rows and each panel will be a maximum of 2.8m in height above ground level. Sixty-four inverters (within 20ft shipping containers at 2.9m height, mounted approximately 1m above ground level) are proposed within the solar farm. Two overhead transmission lines and poles cross the site. Access will be via improved tracks and site access off SH8. The perimeter of the solar farm will retain the farm fencing whilst some areas within the site may require security fencing for electrical safety purposes. Four x 30,000l water tanks are proposed to provide an 80,000L water supply for firefighting purposes.

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## **6. LANDSCAPE DESCRIPTION**

- 6.1. Part 4.1 of the LVA interprets the receiving landscape. TtATM reminds us:

*...that landscapes can overlap and have blurred boundaries—often it is enough to identify the general extent rather than the precise delineation.<sup>3</sup>*

- 6.2. The spatial extents of the receiving landscape as set out in the LVA should not read as clearly defining lines and instead should be considered as general extents. I concur with the general extents of the receiving landscape as set out in the LVA.
- 6.3. The LVA provides a comprehensive description of the site and surrounding landscape. I concur with the general description. I note:

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<sup>3</sup> NZILA. Te Tangi a Te Manu Aotearoa New Zealand Landscape Assessment Guidelines. April 2021. p. 516.

- The LVA identifies remnant indigenous vegetation and sensitive dryland habitats at the site margins, but does not describe the pre-human vegetation cover or original landscape condition across the terrace.
- I disagree that the primary experience of the Mackenzie Basin is along SH8. I consider that SH8 is a primary concern for assessment purposes, but the experience of the basin is much broader and includes all public and private places within and near the landscape (not just those listed in part 4.3 of the LVA). I also consider the landscape is experienced from the air and this is important for consideration as the landscape is often heavily used for commercial, scenic and recreational aircraft and the solar farm will be highly perceivable from the air.
- I agree with the areas of High Visual Vulnerability as set out in the LVA.
- The LVA landscape description does not comprehensively detail the landscape's existing associative values, particularly those associated with the history, identity and narrative of the Waitaki Hydro Scheme. I consider this landscape element to be an important consideration in the context of the proposed solar farm. I note the Landscape Study concludes that the landscape values are not solely naturally derived.<sup>4</sup> I consider intangible things that influence how landscapes are perceived is particularly important in this landscape and for the purpose of this application, which I will discuss under my review of the assessment of landscape effects.
- The landscape description does not sufficiently acknowledge the dramatic and memorable long-distance views of Aoraki / Mount Cook. In my view, this is a defining visual component of the landscape and warrants greater weight in the assessment of landscape values.

6.4. While these differences in opinion regarding the landscape description are noted, the following assessment, effects ratings and overall conclusions are generally aligned with the LVA. Although there are some differences in the interpretation of landscape attributes and values, the resulting assessment of effects is broadly consistent.

## **7. LANDSCAPE AND VISUAL EFFECTS**

### **General**

7.1. The LVA describes potential issues associated with the proposal. While I agree with these issues, I consider the Assessment of Landscape and Visual Effects portion of the LVA is somewhat 'top

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<sup>4</sup> Part 3.6.

heavy', placing greater emphasis on visual effects while, to a lesser extent, assessing effects on landscape character. However, it nonetheless provides an adequate assessment of landscape effects. I have therefore listed landscape character effects first in the following review.

7.2. I agree with the LVA that the landscape's:

*values experienced visually include a scenic outlook (views over a rural landscape), the high legibility, visual coherence of the broader landscape and the views to the distant mountains.*

I add that in many views, where the solar farm may have an effect, New Zealand's highest mountain, Aoraki / Mount Cook and its periphery, satellite glaciated slopes and peaks are highly visible and distinctive in the distance. For some receptors, especially those travelling from southern and eastern areas, views of Aoraki from the Mackenzie Basin are their first views of the massif and are dramatic and memorable. The LVA gives limited acknowledgement to the influence Aoraki / Mount Cook has on this landscape, and I consider the mountain to be a significant landscape element. While I give more significant consideration to those views than the LVA, our opinions on the effects of those values are consistent.

7.3. I have also reviewed the photo simulations prepared by VirtualView. I consider these are useful tools in understanding the scale and location of the proposed solar farm. However, I consider the actual appearance of the solar panels will be slightly different in reality (for example viewpoint 12a and 12b represent the panels as one grey mass, more or less). Furthermore, the appearance of the solar farm will vary through different diurnal and seasonal changes.

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### **Landscape Effects**

7.4. The LVA breaks its assessment of landscape effects into three parts; physical effects, associative effects, and perceptual effects. That method follows best practice for assessing effects on landscape.

#### *Physical Effects*

7.5. Physically, the proposed solar farm will cover a significant area of land and the LVA appropriately states that the solar farm will replace rural character with built form. The LVA describes this change as a semi-industrial and of a renewable power generation character. I consider 'industrial' is a shorter and a descriptive term for the character that will be perpetuated by the solar farm.

- 7.6. I agree with the LVA that the landscape's physical landform, being the flat terraces surrounded by steep scarp faces, will remain intact. I also agree that the legibility of the landform as an outwash plain will be retained (taking into consideration the concept of reversibility). The main physical effects associated with the proposal will be the replacement of open fields with infrastructure.
- 7.7. I disagree with the LVA assessment that a solar farm is similar in appearance and character to farming. I consider traditional farming methods (noting this is more of an associative effect) are associated with pastoral and agricultural uses, not industrial activities. It is my understanding that the use of the word 'farm' in solar farm is relative to an understanding that the solar panels 'harvest' the energy of the sun, not that it is similar to farming practices.
- 7.8. The LVA appropriately cites the ecological report in the context of natural character which concludes that most ecological values will not be affected to a more than minor degree. Currently the site does not hold large areas of significant vegetation (aside from those identified in the ecology report). The proposal will result in very limited effects on vegetation, and as discussed above, the proposal will also result in very limited effects on landform. However, the physical presence of the solar farm atop what is currently an open paddock will reduce the overall naturalness of the site by replacing open space with built elements. Consistent with the conclusion in the LVA, I consider the proposal will reduce the natural character of the landscape to a low degree, taking into account the role that the existing hydro scheme infrastructure plays in defining the overall landscape's character.
- 7.9. The LVA addresses open character, openness and open space together, when in my opinion they should be considered separately. In my experience, open character is synonymous with open space and refers to density, or a ratio of built form to open space. Openness refers to the level of vertical elements in an area, such that a forested area has a low degree of openness. Open character is something that *is*, whether it is experienced visually or not. Openness can be experienced in different ways, but is most often experienced visually. Regardless of differing uses of terminology, my conclusions are consistent with those of the LVA. If a receptor is adjacent to or within the immediate vicinity of the solar farm, the feeling of openness would be reduced by virtue of the solar farm structures enclosing that part of the landscape. However, when a receptor is farther away, or in an elevated position, the openness of the landscape will largely be unaffected by the proposal. I consider the landscape's open character will be significantly reduced by virtue of 562ha of open paddock being covered in solar panels and associated infrastructure. However,

the openness of the landscape, which is largely experienced from more elevated places, will largely remain intact.

- 7.10. I consider the proposed solar farm is located appropriately on a relatively flat area of land which is largely devoid of vegetation. While the proposal will introduce a noticeable change in character from an open pastoral landscape to one containing solar infrastructure and associated industrial elements, the relatively low profile of the development, limited earthworks and containment within the terrace landform will reduce the extent of physical landscape change experienced within the wider basin landscape. On this basis, I consider the physical effects on the wider landscape to be **low-moderate**.

*Associative effects*

- 7.11. Associative effects deals with intangible things, such as history and narratives. I consider the influence of the Waitaki Hydro Scheme to be a relevant associative value of the landscape. The understanding of this hydro scheme and its place in the formation of New Zealand as a country is dependent on the receiver's knowledge and understanding. I agree with the IVA that the co-locating of the solar farm within an area already affected by energy infrastructure reduces its potential adverse effects. I go on to consider that the co-locating of a solar farm with the existing infrastructure builds on the landscape's existing associated values. Solar energy is a relatively new form of renewable energy; one that was not available when the hydro scheme was developed. By co-locating the solar farm with other existing infrastructure, including the National Grid connection, the solar farm will build on existing associative values of the landscape. Through the lenses of some perceivers the solar farm will enhance (or at least will not be contrary to) the associative values of the landscape by contributing to the history and narrative of this part of the Mackenzie Basin. Conversely, some perceivers may consider the hydro scheme a mistake, which has irreversibly changed the character of this part of the basin. Those perceivers may consider additional infrastructure to perpetuate negative associative effects. However, one cannot 'turn back the clock' and the existing hydro scheme forms part of the landscape. Overall, I consider the proposal will contribute positively to the associative values of the landscape and will contribute to the landscape's sense of place.

### *Perceptual effects*

- 7.12. Perceptual values are largely synonymous with visual effects and values. I agree with the LVA, that the solar farm will sit low in the landscape and the visual coherence of the landform which will accommodate the solar farm will remain intact. Perceptual values and effects will be further described in detail below under visual effects.

### *Landscape effects summary*

- 7.13. I partially disagree with the LVA's approach to the assessment of effects on landscape character, however my findings are broadly consistent with the LVA overall. I consider the proposal will reduce the open character and naturalness of the landscape to a **moderate-low** degree, which is generally consistent with the LVA's assessment. I consider the physical adverse effects of the proposal on the landscape will be **moderate-low**, while associative effects will be positive, or at least neutral. The perceptual effects of the proposal will be more pronounced and are discussed further below. While there may be some moderate-high adverse visual effects from particular locations, I consider the overall perceptual effects on landscape character will be no more than **moderate**, which is broadly consistent with the LVA.

### **Visual effects**

- 7.14. The LVA clearly sets out public places where the solar farm may be visible and provides commentary on the amenity and character of these views, followed by an assessment of the proposal's potential effects on those existing visual values. I will follow a similar format in my peer review.

### *SH8 – LVA Viewpoints 1-7*

- 7.15. In general, I agree with the description of visual values as set out in the LVA. However, I consider that the presence of Lake Ruataniwha, the township of Twizel, the Pukaki Airport, the hydro canals, dam infrastructure and substations, and the National Grid power lines form a more influential role in shaping the amenity and visual experience of this part of SH8.
- 7.16. I agree with the LVA that the solar farm will be visible from parts of SH8 and will, in some locations draw the eye. I consider the solar farm will slightly reduce the sense of naturalness and open character. I agree with the LVA that the solar farm will result in **moderate** adverse visual effects as viewed from this part of SH8.

*Old Iron Bridge Road – LVA Viewpoints 8 - 9*

- 7.17. I consider the presence of the existing power generation infrastructure has a more significant influence on the visible landscape than set out in the LVA. While the wider landscape's visual character is still appreciable, I consider the power generation infrastructure detracts from open rural views. I agree with the LVA that if seen in views from the upper terrace, the solar farm will not appear out of place and that views will be brief. I concur with the LVA that adverse effects associated with visibility of the solar farm from this upper terrace will be no more than **low** in extent.
- 7.18. With regard to visual effects from the lower terrace which is depicted in the VirtualView Viewpoint 14, I consider that the solar farm will be highly visible. I agree that it will interfere with the cohesive appearance of the escarpment as set out in the LVA. However, the LVA does not consider that the background of this view contains Aoraki, which is a significant element in the visible landscape. I consider that from this view the solar farm will interfere with views to the surrounding mountains. However, that interference will be brief and irrespective of the greater weight I place on this view, I agree with the LVA that from this short view the solar farm will result in **low-moderate** adverse effects on visual amenity.

*McAughtries Road - LVA Viewpoints 10 – 20*

- 7.19. The LVA rightly sets out that McAughtries Road is not a public place, however it appears to be public and is publicly accessible. I agree with the LVA that a high degree of amenity is experienced when travelling along McAughtries Road. Again, I consider the LVA gives limited weight to views across the landscape to Aoraki.
- 7.20. I agree that the proposed solar farm will be readily visible from parts of McAughtries Road. I also agree that views of the solar farm will reduce the perceived naturalness and adversely affect the visual amenity that road users currently experience. The solar farm will contrast with the existing colours and textures of the landscape and will present a man-made structure within the landscape, which is currently occupied by open space. While I agree that the solar farm will not interfere with views of the wider Mackenzie Basin and surrounding mountains, I consider it will be in those views, particularly in the distant and memorable view of Aoraki. In my view its visibility will result in some change to the existing visual elements, amenity and experience from McAughtries Road and

overall I agree with the LVA that the proposed solar farm will result in moderate-high adverse visual effects as seen from elevated parts of McAughtries Road.

*Falston Road – LVA Viewpoints 21 and 22*

- 7.21. I agree with the LVA that a high degree of amenity is experienced when travelling along Falston Road. The interplay of the lake and distant mountain views is memorable and outstanding. It is understood that only a portion of the solar farm may be visible from Falston Road. This visibility will be from approximately 2 kilometres in distance. I agree that the overall size and extent of the solar farm will not be perceived from this distance. I consider there will be **low-moderate** adverse visual effects as viewed from Falston Road.

*Lake Benmore and the Lake Benmore – Ōhau C Campground – LVA Viewpoint 23*

- 7.22. I agree with the LVA that from this area intervening landform and vegetation will adequately screen the proposed solar farm such that it will not result in adverse visual effects.

*The Twizel River Trail*

- 7.23. At the time of preparing this review I have not visited the Twizel River Trail and I rely on the images attached to the LVA. I have studied the aerial photographs and graphic data associated with this trail and my desktop exercise confirms that largely, the solar farm will be well screened from the Twizel River Trail by intervening landform. The solar farm however may be visible from some distant views from the trail. In this instance I agree with the findings of the LVA and consider adverse visual effects as experienced from the Twizel River Trail will be **low**.

*Ōhau River Four-Wheel Drive Track*

- 7.24. I agree with the LVA that the amenity experience along the four-wheel drive tracks is high and is similar to that experienced from McAughtries Road. I also agree that adverse visual effects associated with the proposal will be **moderate** in extent from parts of the four-wheel drive track.

*Ben Ōhau – Greta Track*

- 7.25. Similar to the author of the LVA, I have not walked the Ben Ōhau – Greta Track. The LVA includes discussion of the level of track use and states that they are not advertised by DOC, but I do not consider that this is relevant because the popularity and use of tracks can change over time.

7.26. However, I agree with the LVA that the track could present extensive views across the wider landscape and that the proposed solar farm would be visible in these views. The proposed solar farm will be highly visible from parts of this track end and will appear as a large dark object. Its size and extent will draw the eye and it will be ever present in southern and western views from the track. However, I consider that the overall visual amenity experience from the track will only be slightly changed, and I consider effects will be **low-moderate** in degree, which is lower than suggested in the LVA.

*The Benmore Range Easement Track*

7.27. I have not walked the Benmore Range Easement Track. However, my assessment of visual effects from this track is similar to that of the Ben Ōhau – Greta Track. I consider that the overall visual amenity experience from the track will be slightly changed due to the presence of the proposed solar farm. In this instance however, the solar farm will form part of the foreground of the more valued and appreciable views to the north of Aoraki. I consider adverse visual effects as experienced from the Benmore Range Easement Track will be **moderate** in extent which is consistent with the LVA assessment.

*Aerial views*

7.28. While not assessed in the LVA, I consider views from the air to be an important consideration. When viewing much of the Mackenzie Basin and surrounding area from the air, there is a mosaic of different and often contrasting patterns; varying from irregular lines created by natural processes, to distinctly uniform and regular lines and shapes created by other man-made features. The proposed solar farm will be visible as an expansive, dark land area which will appear significantly different to other processes in the landscape which are visible from the air. While this visual effect will be different, it will not necessarily be adverse. I consider that while the solar farm will be visible from the air and will draw the eye, that effects associated with its visibility will not necessarily be adverse and that its presence in the landscape will contribute to the irregular mosaic of patterns visible from the air.

*Glencairn Station*

7.29. Glencairn Station is a private place and the LVA appropriately assesses that users of this private place will have a more intimate relationship with the landscape. The LVA describes Glencairn Station as being elevated and assesses that the solar farm will be highly visible. I concur that the

proposed solar farm will be visible in tandem with the existing hydro scheme infrastructure. I also concur with the LVA that from these more elevated private places, especially when viewed through the lens of locals and residents, that the solar farm will present **moderate-high adverse** visual effects.

#### *Visual effects assessment summary*

- 7.30. Overall, I consider the LVA presents a comprehensive assessment of visual effects. My assessment of visual effects is largely consistent with the LVA's assessment. However, I place more significance on valued views of Aoraki which may be affected by the proposal. My assessment of the visual effects of the solar farm ranges from **very low** to **moderate-high** which is consistent with the LVA.
- 7.31. The moderate-high adverse effect is gained from parts of McAughtries Road, Glencairn Station and potentially other areas where the solar farm will be visible in close proximity, and seen in the context of northern or western valued views across the wider landscape to Aoraki which is consistent with the LVA.

## **8. CONCLUSION**

- 8.1. The LVA presents a comprehensive, and well-structured assessment of the proposal. While I differ in my opinions of some parts of that assessment, I consider these differences generally relate to the significance I place on effects on valued views to Aoraki. While there will be some moderate-high adverse visual effects I consider the values of the landscape, which include associative values linked to historical power generation initiatives, will render the solar farm as an appreciable element within the landscape as viewed through the lens of some receptors. Overall, I concur with the LVA assessment that the proposal will adversely affect landscape character and visual amenity to no more than a **moderate** degree.

## **9. RECOMMENDATIONS**

- 9.1. I consider all transformers, water tanks, and other structures should be coloured in a natural and recessive colour within the hues of greys, greens and browns which have a light reflectance value of less than 30%. This would not include transmission poles, solar panel housing or fencing. I understand that this has been included as a condition of consent.

**Prepared by:**

**Steve Skelton**



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