

**BEFORE THE EXPERT PANEL**

**IN THE MATTER**

of the Fast-Track Approvals Act 2024 (FTAA)

**AND**

**IN THE MATTER**

of an application by Lodestone Energy Limited  
under section 42 of the FTAA for the construction  
of a solar farm

**APPLICATION NO.**

FTAA-2508-1097

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**TE RŪNANGA O AROWHENUA  
RESPONSE TO INVITATION FOR COMMENTS BY EXPERT PANEL**

30 January 2026

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Prepared By:

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## 1. INTRODUCTION

1. This written reply has been prepared by Aoraki Environmental Consultancy Limited (AECL) in accordance with section 53(2) of the Fast Track Approvals Act 2024 on behalf of Te Rūnanga o Arowhenua (Arowhenua) in response to the invitation for comments (Minute 2) by the Expert Panel (dated 15<sup>th</sup> December 2025), regarding the Lodestone Energy Limited (Lodestone Energy) Fast Track substantive application for approval for the Haldon Solar array farm project.
2. The project site (Haldon Station) is located within the shared takiwā (territory) of Arowhenua, Te Rūnanga o Waihao (Waihao) and Te Rūnanga o Moeraki (Moeraki). The Waitaki Catchment in which Te Manahuna (Mackenzie District) is located is an area of rich cultural significance to Te Rūnanga o Ngāi Tahu (Kāi Tahu<sup>1</sup>) Iwi. Te Manahuna is the cradle of their creation stories, with the imagery of the area speaking of the footsteps of their tūpuna (ancestors). The place names, rivers and mountains also talk of these stories of their ancestors linking the cosmological world of the gods and present generations, reinforcing tribal identity and solidarity.
3. Arowhenua is a principal hapū of Kāi Tahu, acknowledged in Te Rūnanga o Ngāi Tahu Act 1996 and the Ngāi Tahu Claims Settlement Act 1998 (NTCSA). The takiwā of Arowhenua centres on Arowhenua and extends from the Rakaia River to the Waitaki River, and the from the coast to Aoraki and the Main Divide (Kā Tiritiri-o-Te-Moana). Arowhenua Marae is located near the Te Umu Kaha (Temuka) and is situated near the historic pā Te Waiateruatī and the well-known Arowhenua Bush that sustained local Kāi Tahu. Arowhenua connects ancestrally to the waka Takitimu and Ārai-te-uru, the mauka (mountain) Tarahoua, and the awas (river) Waitaki and Ōpihi.
4. AECL is a not-for-profit organisation mandated by Arowhenua to provide advice and act on its behalf in respect of all environmental policy, planning and strategy matters. This includes representation on proposals being processed under the Fast-Track Approvals Act 2024 (FTAA).
5. AECL are working closely alongside Aukaha who are representing Te Rūnanga o Waihao (Waihao) and Te Rūnanga o Moeraki (Moeraki) and Kāi Tahu planning staff on the Fast Track projects located in the shared takiwā. This response seeks to complement and support the responses

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<sup>1</sup> The Kāi Tahu dialect uses a 'k' interchangeable with 'ng'. The preference is to use a 'k', so southern Māori are known as Kāi Tahu, rather than Ngāi Tahu. In this document, the 'k' will be used except for names and references to legislation.

prepared by Kāi Tahu and Aukaha. It is not the intent of AECL for this report to be read in isolation or to lessen the messaging of the responses prepared by Kāi Tahu and Aukaha.

### 1.1. Arowhenua Position

6. Arowhenua takes a **neutral position** on the substantive application and has identified, through this response, remaining concerns and uncertainties. These include instances where further information and engagement with Lodestone Energy are expected to clarify or narrow outstanding issues.

## 2. OVERVIEW

7. Minute 2 does not ask specific questions that Arowhenua are required to answer, instead, it seeks general “comments on the substantive application” (para 1). This written response seeks to cover the following matters:
  - a) Positive Aspects Associated with Solar,
  - b) Consultation,
  - c) Response to Expert Panel Conference Matters,
  - d) Concerns Associated with Substantial Application,
  - e) Cumulative Effects,
  - f) Mitigation Opportunities,
  - g) Additional Information Required,
  - h) Further Engagement with Lodestone Energy, and
  - i) Conclusion.

## 3. POSITIVE ASPECTS ASSOCIATED WITH SOLAR

8. Arowhenua would like to emphasise to the Expert Panel that Rūnaka are not opposed to solar farms. Rūnaka support the development and construction of renewable energy as opposed to the burning of fossil fuels and the construction of large dam structures that flood and alter key/unique ecological, social, economic and cultural landscapes. This is evident by Arowhenua supporting Lodestone Energy in the construction of their solar farm at Clandeboye near Temuka.
9. Whilst Arowhenua Rūnaka support renewable energy proposals, Rūnaka are also of the belief that such activities need to be situated in appropriate areas where the visual and physical impacts are avoided and/or appropriately mitigated. For example, introducing new plant species not known to exist in a landscape in order to screen a solar farm.

#### 4. CONSULTATION

10. AECL outlined in its response to Minute 1 (29<sup>th</sup> October 2025) prior to the Convenor Conference that very little consultation had taken place between Lodestone Energy Limited and Arowhenua. AECL confirmed that two of its Cultural Consultants visited the application site with the primary focus being to view the site and to consider the ecology of the area. In addition to these visits, an online hui (meeting) between Lodestone Energy Limited and representatives of Aukaha, AECL and Kāi Tahu was held on 24 October 2025 for half an hour<sup>2</sup>.
11. During the Convenor Conference on 3 November 2025, the Convenor emphasised the need for applicants to communicate clearly and meaningfully ‘engage’ with manawhenua rather than simply ‘consult’, which the Convenor indicated can often appear to be tokenistic and superficial with the sole intent to just show a conversation took place.

##### 4.1 Site Visit

12. Following the Convenor Conference, time was taken to agree a Scope of Works contract with Lodestone Energy Limited for AECL to partake in the Fast Track process. The tight timeframe between finalising the Scope of Works contract and the organised site visit on 19<sup>th</sup> November 2025, meant there was insufficient time for Rūnaka members from Arowhenua, Waihao and Moeraki, and staff from AECL, Aukaha and Kāi Tahu to meet. This meant that ahead of the site visit there was no opportunity for Rūnaka to discuss matters such as the proposed activity, ascertain the level of support for the solar farm and the level of contention or other disputed matter, proposed consent conditions, potential mitigation and mātauranga māori opportunities. These matters were therefore not discussed during the site visit.
13. It was noted that during the Expert Panel Overview Conference (10<sup>th</sup> December 2025) that Lodestone Energy was asked by the Panel if mahika kai opportunities had been discussed during the site visit. AECL were surprised by Lodestone Energy’s response that no such discussions had occurred as this was not the understanding of Arowhenua representatives.
14. During the site visit, Arowhenua representatives identified a stand of raupō (*Typha orientalis*) growing within the freshwater adjoining Te Ao Marama (Lake Benmore) shoreline. Arowhenua traditionally harvested raupō for thatching the walls and roofs of whare and storehouses, creating temporary rafts, baking sweet light cakes and weaving to make caskets for tangi. Consequently, securing access to the shore of Te Ao Marama (Lake Benmore) to harvest mahika

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<sup>2</sup> Length of online hui has been corrected due to the original response referencing one hour rather than 30 minutes.

kai (raupō) was discussed at length with both the landowner as well as Lodestone Energy Limited representatives and agreed to by both parties.

#### **4.2 Wananga**

15. An in-person meeting (wananga) involving representatives from Lodestone Energy, Rūnaka, Kāi Tahu, AECL and Aukaha took place at Kāi Tahu offices in Christchurch on Wednesday 21<sup>st</sup> January 2026. During the meeting the applicant indicated a commitment to build a legacy relationship with manawhenua, to not only minimise adverse cultural effects (should the required approvals be granted) but to actively contribute to mana-enhancing outcomes for current and future Kāi Tahu Whānui, given the immense cultural significance of Te Manahuna.
16. While Lodestone Energy and manawhenua are currently exploring opportunities to formalise a relationship outside of the conditions of consent, to provide certainty that the cultural effects will be mitigated for the duration of the consent (if granted), it is requested that Lodestone Energy amends its volunteered Kaitiaki Working Group consent conditions to better align with the feedback received from manawhenua. In addition, it is requested that a further consent condition is included, that requires the preparation of a 'Cultural Management Plan' to allow for the ongoing involvement of manawhenua for the duration of the solar farm project. The details in which a Cultural Management Plan can cover is discussed later in this response.
17. Kāi Tahu, Aukaha and AECL would welcome the opportunity to further discuss with Lodestone Energy the substance and mechanics of the proposed conditions, given the recent and evolving nature of these discussions.

### **5. RESPONSE TO MATTERS RAISED DURING EXPERT PANEL OVERVIEW CONFERENCE**

#### **5.1 Attendance at Site Visit**

18. It was noted that during the Expert Panel Overview Conference (10<sup>th</sup> December 2025) that the Expert Panel asked who from manawhenua attended the site visit on 19<sup>th</sup> November 2025 and who Lodestone Energy Limited had consulted with. AECL can confirm that the following representatives attended the site visit:
  - a) Aoraki Environmental Consultancy Limited/Arowhenua – Kylie Hall (Principal Planner), Sally Reihana (Cultural Consultant/Arowhenua representative), and John Henry (Cultural Consultant/Arowhenua representative),
  - b) Aukaha – Tim Vial (Senior Planner),
  - c) Moeraki - Trevor McGlinchey (Moeraki representative), and

d) Te Rūnanga o Ngāi Tahu/Kāi Tahu – Amy Beran (Consultant Planner).

## **5.2 Capacity of the Rūnaka**

19. Another matter that was raised by during the Expert Panel Overview Conference that AECL would like to address was whether manawhenua had the capacity to be heavily involved in Fast Track applications and the associated Department of Conservation (DOC) concession permits. AECL can confirm it has the capacity to undertake the necessary work to be involved in the Fast Track process for the various applications within the Arowhenua takiwā.
20. The various Kāi Tahu Rūnaka have established Regional Environmental Entities (AECL and Aukaha in this instance) that employ staff to assist the Rūnaka in the environmental and resource management space. The Rūnaka inform the Environmental Entities of the work streams that they are to prioritise; however, it is the highly qualified and experienced planners and policy analysts that undertake planning and policy work on behalf of the Rūnaka.
21. AECL find capacity is often confused for ability/resourcing to undertake work. Capacity to participate and complete work by the Environmental Entities is no different to government departments, councils and other organisations who must manage staff workloads. The ability to participate in work is often restricted through matters like organisations:
- a) providing all the relevant information required for Rūnaka to make an informed decision,
  - b) accounting for consultation and underestimating the time required to engage with Rūnaka, so pressure is placed on Rūnaka to make a decision within a short timeframe or miss the timeframe,
  - c) not being sure what the role of Rūnaka and the Environmental Entities are, and
  - d) some being reluctant to, or not in a position to fund Rūnaka to participate.

## **6. CONCERNS ASSOCIATED WITH THE SUBSTANTIVE APPLICATION**

### **6.1 Assessment of Planning Instruments**

22. Arowhenua and AECL will not provide a detailed assessment of the relevant provisions of the Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009, Mackenzie District Plan, Canterbury Regional Policy Statement, Canterbury Air Regional Plan, and Canterbury Land and Water Regional Plan as this is best completed by the representatives of each Council. However, AECL would like to make the following comments:

23. The substantive application prepared on behalf of Lodestone Energy does not provide an assessment of the cultural values associated with the SASM sites (SASM9, SASM19 and SASM48) located on the project site.
24. The substantive application provides a summary of the Site and Area of Significance to Māori (SASM) Chapter (PC24) in the Mackenzie District Plan. The substantive application does not provide a detailed assessment of the relevant Strategic Direction provisions (MW-01 and MW-02), simply concluding that the establishment of a Kaitiaki Working Group with mana whenua will ensure the cultural values associated with the project site are appropriately provided for (section 9.9.1, page 131).
25. In terms of the SASM Chapter, the substantive application does not provide a detailed assessment of the SASM provisions, including objectives (SASM-02, SASM-03, and SASM-04), and policies (SASM-P1, SASM-P2, SASM-P3, SASM-P4, SASM-P5, and SASM-P6). The application simply concludes that *“the Project is located and designed to avoid adverse effects on ecological and cultural values of the Site as far as practicable .... some adverse effects are unavoidable, but these are not considered to be significant, and the consideration of offsetting or compensation under REG-P6 is not engaged”* (page 138).
26. In terms of the relevant provisions, Rule SASM-R6 states *“the establishment of New or Expansion of Existing: Landfills; Waste Disposal Facilities; Wastewater Treatment Plants; Crematoria; New Cemeteries; Hazardous Facilities; Quarrying or Mining within a SASM”* is a discretionary activity if the activity is able to comply with the relevant matters of discretion. The substantive application does not clearly articulate what chemicals or materials will be located/stored within the proposed onsite buildings to ascertain whether the activity can be defined as a hazardous facility; therefore, Arowhenua and AECL are unable to determine if the activity is to be assessed as a discretionary or non-complying activity. Further clarity will be required from Lodestone Energy to assist Mackenzie District Council in determining the correct activity status.
27. In terms of the Assessment of Environmental Effects, the substantive application simply implies that the adverse effects on historic, heritage and cultural values will be negligible due to the inclusion of an accidental discovery protocol condition. Arowhenua do not believe this is an informed assessment of potential effects.

## 6.2 Loss of Connection with the Whenua

28. As indicated in paragraph two above, the Kāi Tahu association with the Waitaki Catchment (including Te Manahuna) extends back to the first human habitation of Te Wai Pounamu. As such, the river (now Te Ao Mārama/Lake Benmore) and the significant landforms representing the sacred ancestors (cosmological world) from whom Kāi Tahu descend is an essential element of the identity of Kāi Tahu as an iwi.
29. Arowhenua is concerned that the establishment of large solar farms on the edge of Te Ao Marama/Lake Benmore (Waitaki River) will further alienate Kāi Tahu and Rūnaka from their ancestral land, further severing the links present generations have with their whakapapa, negatively impacting the identity of Tamariki (children).
30. Prior to European settlement, Kāi Tahu and Arowhenua moved extensively through South Canterbury, the Waitaki and Te Manahuna hunting and gathering resources from the land and rivers. Movements were according to the seasons following the lifecycles of animals and plants, and the high country of Te Manahuna was a fundamental element of these systematic seasonal food gathering patterns. Kāi Tahu and Arowhenua undertook seasonal migrations to the high country to gather food resources such as weka, kākāpō, kiore (*Rattus exulan*) and tuna (eels) utilising ancient trails that followed food and freshwater resources, which were consumed by Rūnaka members on their journeys. These trails (also referred to as 'taoka') were the arteries of economic (trade) and social relationships, critical to the survival of Kāi Tahu and Arowhenua.
31. With colonisation and early European settlers arriving in New Zealand, large areas of land were taken through Kemp's Deed preventing Kāi Tahu from accessing significant portions of Te Manahuna. This disenfranchisement of Kāi Tahu from their land, known as *te tango whenua* (the taking of the land) has had profound and ongoing impacts on the economic, social and cultural wellbeing of Arowhenua as their ability to access land and water ways in order partake in traditional mahika kai gathering activities was significantly severed.
32. Between 1920 and 1970, Kāi Tahu witnessed further alienation from significant areas of Te Manahuna with the introduction of eight hydroelectric power stations associated with the Waitaki River, through the creation of Lakes Aviemore, Ōhau, Pūkaki, Takapō, Te Ao Marama/Benmore, Ruataniwha and the Takapō, Ōhau and Pūkaki canals. The development of massive hydroelectricity saw traditional hunting expeditions to the mahika kai resources blocked and the ending of the historical economic trade of mahika kai by Rūnaka. The construction of the Waitaki hydro dams also saw numerous permanent and temporary nohoaka (occupation

sites) urupā (burial site), wāhi tapu and wāhi taonga sites and māori rock art destroyed as the valley was flooded in order to create storage lakes.

33. In more recent times, the agricultural intensification and conversion of sheep and beef farms to dairy within Te Manahuna combined with the enforcement of property rights have created yet another “cultural barrier”, preventing Kāi Tahu and Arowhenua from accessing numerous urupā, wāhi tapu and wāhi taoka sites that are at the centre of memories and traditions passed down by Kāi Tahu tūpuna. Whilst Arowhenua still grieve the loss of their traditional connection with Te Manahuna, there is solace in the fact that large expanses of the basin were to be protected from further land use intensification through various planning instruments such as Outstanding Natural Landscape (ONL), Outstanding Natural Feature (ONF) and Site and Area of Significance to Māori (SASM) policy overlays within the Mackenzie District Plan. These attempts to protect Te Manahuna enables Arowhenua to visualise the landscape and imagine how their tupuna viewed and occupied the land. Being able to see and experience the open spaces assists Rūnaka in passing on the considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga that the tūpuna held to future generations.
34. As outlined above, Arowhenua are not in opposition to renewable energy; however, Arowhenua are concerned that their takiwā has been unfairly targeted for the benefit of the rest of the country. The construction of hydro lakes and canals has seen large, braided rivers diverted and channelled through stop banks and concrete hydro weirs at the expense of the unique habitats of indigenous plant, bird and fish species as well as the unique landforms and vistas utilised by Rūnaka for navigation purposes as well as keeping look out for territory defence purposes.
35. The introduction of agriculture and tourism has also seen significant soil erosion, the draining of ecologically sensitive high country wetlands to make way for agriculture, the introduction of animal pests for hunting purposes and the mass spread of pest plant species such as wilding pines. The slow destruction of Te Manahuna is seen by Arowhenua as “a death by a thousand cuts”.
36. Arowhenua are concerned that the introduction of large-scale industrial/electrical infrastructure, the introduction of fertilisers to enhance pasture for sheep grazing purposes, permanent security fencing, new access roads, and consent durations that span decades will permanently alter the landscape, effectively eroding any remaining ancestral connections Arowhenua have to Te Manahuna. Arowhenua are also concerned that yet again, the takiwā is being permanently modified and negatively impacted for the benefit of the rest of the country.

37. Arowhenua would like to see the commercial businesses profiting from the solar projects but not residing in Te Manahuna give back to the biodiversity of Te Manahuna, the residents of Fairlie, Tekapo, Twizel and rural Mackenzie, and Rūnaka for the permanent loss of land.

### 6.3 Taonga Species

38. The ecological assessment undertaken by AgScience Limited (dated 31 July 2025) concluded that indigenous “vegetation [and herpetofauna] ecological values are now minimal, even though a very low frequency of grazing resilient dryland indigenous vascular species remains” (page 48).
39. Arowhenua are concerned that the substantive application provides a relatively limited assessment of the proposal’s potential effects on indigenous taonga species<sup>3</sup>, both within the project site and within the surrounding environment. The original ecological assessment identified bird species based solely on observations made during site-specific field surveys, with limited reference to available desktop data that could assist in identifying additional species that may be present at the site. In addition to this, the assessment did not consider the potential impacts of the proposed activity on taonga fish species or their habitats that may be present within Te Ao Mārama (Lake Benmore), which adjoins the southern boundary of the project site.
40. Arowhenua acknowledge and accept that the proposed earthworks will be limited to the project site and not the wider lake edge and wetland environments; however, the expected earthworks volumes appear to have been minimised in the substantive application. Arowhenua are concerned the potential implications of establishing and operating the solar farm near these significant habitats and food sources are not clearly understood. In particular, earthworks and operational activities may generate sediment and stormwater run-off, which could impact taonga species, including birds, fish, invertebrates and plants. Avifauna may also face an increased risk of injury or mortality when moving through or over the project site.
41. Prior to finalising this response, AECL, Aukaha and Kāi Tahu received a copy of further ecological assessments undertaken at the project site<sup>4</sup> from the Canterbury Regional Council (Environment Canterbury). This information includes preliminary outcomes from additional lizard surveys as well as a terrestrial invertebrates’ assessment. Based on an initial review, it is understood that the site may provide habitat for at least one type of lizard species as well as several types of grasshoppers, wētā and other invertebrate species and several notable plant species. Considering these findings, Arowhenua, AECL, Aukaha and Kāi Tahu would support further

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<sup>3</sup> Please refer to the discussion on Taonga species discussed within the response prepared by Kāi Tahu.

<sup>4</sup> 23 January 2026 through Environment Canterbury.

avifauna surveys and consideration of fish species, to provide a more comprehensive understanding of potential impacts on taonga species.

#### **6.4 Ecological Restoration**

42. Arowhenua noted the substantial application did not propose any ecological restoration or screen planting to address the visual and environmental impacts arising from the proposed solar farm when viewed from surrounding vistas.
43. Arowhenua noted during the Expert Panel Overview Conference that the Panel and representative Ecologists suggested the existing ecological restoration project undertaken by Arowhenua and Te Kete Tipuranga O Huirapa Ltd (Arowhenua Nursery) close to the Haldon Arm Campground access road be extended. Arowhenua endorse and support any further ecological enhancement that has the potential to enhance existing tuna (eel) and avifauna habitats and food sources.
44. Arowhenua and AECL are also aware that during the November 2025 visit to the site that the landowner does not wish to see planting undertaken at the southern end of the project site as this area is utilised by the family during the summer vacation period. A lack of screening in this area will result in the solar farm being clearly visible from Te Ao Mārama (Lake Benmore) and Falston Road on the far side of the lake.
45. AECL notes that a rabbit proof fence is proposed. As this is intended to stop rabbits from accessing the solar farm area and damaging infrastructure, AECL considers this cannot be an environmental benefit as it does not assist in the management of the wild rabbit population.
46. Lodestone Energy have not proposed any planting to screen the solar farm from Te Ao Marama (Lake Benmore) or Haldon Arm Campground access road. The application states the solar farm will be screened by existing trees located on the embankment between the campground and the solar farm site. The trees located on the embankment consist of exotic and invasive willow and poplar trees. Additionally, the trees are not located on land owned or managed by Lodestone Energy; therefore, the trees could be removed at any time. Consequently, relying on existing vegetation to screen the proposed solar farm should not be considered an effective mitigation measure.
47. Arowhenua and AECL request that the Expert Panel consider these issues carefully to ensure a balance is achieved.

## **6.5 Fire Risk**

48. A review of the substantive application notes that a detailed fire risk assessment for the proposed activity was not included in the package. The proposed solar farm, Haldon Station and Haldon Arm Campground is (1 hour drive) from Fairlie, 56 km (50-minute drive) from Tekapo Township, and 116 km (1.5 hour drive) from Twizel. If an electrical fire was to become established the length of time it would take for fire rescue services to reach the site is considerable.
49. Arowhenua and AECL are concerned that if an electrical fire was to become established within the dry and wind-swept environment there is the potential for the only exit route to become blocked, preventing people from escaping the area if necessary. Whilst the site is located on a site adjoining Te Ao Marama (Lake Benmore), which can provide a water source, consideration needs to be had regarding the practical implications of a fire becoming established on the site and spreading to the wider environment.
50. It is recommended that further assessment is required to ensure the effects of fire are mitigated to the fullest extent possible.

## **6.6 Flooding Risk**

51. Arowhenua are concerned that the substantive application provides a relatively limited assessment of the potential flooding impacts, both within the project site and within the surrounding environment. While relatively large setbacks<sup>5</sup> between the solar farm and Te Ao Mārama (Lake Benmore) are proposed, Arowhenua is particularly concerned about the management of stormwater during both the construction and operational phase of the project, including potential changes in runoff volumes, water quality and erosion effects.
52. The substantive application concludes that adverse effects from stormwater generated at the site will be negligible on the basis that the site will remain as pastoral farmland, allowing rainfall to continue to infiltrate to the ground and that any localised concentration of flows will disperse across the surrounding area in a manner similar to existing site conditions. Arowhenua note that the flood risk assessments completed to date indicate that the site and surrounding area generally consist of well-draining gravels, which is expected to limit surface runoff generation and that proposed onsite mitigations will manage onsite risks and minimise the likelihood of changes to off-site flow paths.

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<sup>5</sup> *Approximately 200 m setback proposed between the site and Te Ao Marama.*

53. Arowhenua acknowledge that a majority of the project site is located on a higher terrace and away from waterways; however, during a recent visit to Te Manahuna significantly raised water levels were observed in a number of waterways. This included elevated water levels in Te Ao Mārama (Lake Benmore) and steady flows in usually dry sections of the Pūkaki River. The Haldon Arm Campground as well as the nohoaka entitlement was also impacted by surface flooding, with campers moved out of the campground.



*Figure 1: Photo of Haldon Arm Campground and Te Rūnanga o Ngāi Tahu nohoaka site (taken by Haldon Station staff on 22/01/2026)*

54. The above photo provided by Haldon Station staff illustrates the recent January 2026 flooding of the campground area and nohoaka site, a direct result of Meridian Energy having to release water from Lakes Pūkaki, Takapō and Te Ao Marama/Benmore (first time in seven years) due to high lake levels created by higher than normal rainfall volumes in the Southern Alps. No photos were provided of the southern end of the project site; therefore, Arowhenua and AECL are unable to ascertain if or how much of the southern portion of the site was flooded, which has not been modelled or considered in the substantive application.
55. Arowhenua are concerned that climatic changes in the future will result in more instances of high lake levels and the hydro scheme having to be artificially adjusted to ensure compliance with consent conditions. The need for Meridian Energy to increase and decrease lake levels potentially has impacts on the ability of Lodestone Energy to comply with stormwater conditions and prevent localised flooding that would have a detrimental impact on the solar farm operation. Arowhenua and AECL ask that sufficient information is provided to the Expert Panel

to ensure a clear understanding of the flood hazard risks is achieved and that the Expert Panel consider all components carefully.

56. In addition to climatic implications, Arowhenua have concerns regarding potential contaminant sources including lubricants associated with the panel tracking mechanisms that allow the panels to rotate, oils associated with the proposed substation and sediment- laden runoff arising from soil disturbance and erosion under the solar panels and associated infrastructure. With solar farms of this size having not yet been constructed in the South Island, Arowhenua are concerned that limited research and evidence of such impacts, particularly in sensitive environments could result in insufficient mitigation being required through conditions of consent.

#### **6.7 National and Regional Benefits of Project**

57. Arowhenua note the substantial application states The Haldon Solar project is expected to deliver regionally and nationally significant infrastructure by supplying electricity to approximately 45,000 households annually. Further, the economic assessment prepared by ME Consulting anticipates that approximately 235-242 direct jobs, 290-291 indirect jobs and 219-220 induced jobs will be created during the construction phase of the project, while approximately 5-6 direct jobs will be sustained during the operational phase, due to ongoing maintenance monitoring activities. Lodestone Energy have concluded that the overall value added by the proposal is estimated to be at least \$134 million.
58. Arowhenua are uncertain in terms of the projects ability to deliver these economic benefits long term. Arowhenua acknowledge employment opportunities will be generated during the construction phase; however, this is for a short duration and likely to be tendered to established construction teams experienced in large scale solar development that are located outside of the district, not the residents of Fairlie, Tekapo and Twizel or Rūnaka.
59. Longer term, employment opportunities for those residing in the Mackenzie District along with Rūnaka will be minimal given the need for specialised electrical engineering skills and the likelihood of Lodestone Energy having already hired these staff to maintain and service all Lodestone Energy solar farms across New Zealand, not just the Haldon Solar project. It is also envisaged that the landowner of Haldon Station will be responsible for maintaining the exterior rabbit proof fencing and the grazing stock as they are located on site. Again, restricting employment opportunities for local residents and Rūnaka. Consequently, long term employment opportunities may be fewer than what is required to maintain current farming

practices, having negative flow on effects to the local economy due to fewer people residing and shopping in the District.

60. As a result, uncertainty remains in terms of the projects ability to deliver the anticipated infrastructure and economic benefits. These matters are closely linked to Arowhenua concerns about cumulative effects, as constraints on the transmission network may directly influence which projects are able to be built.

## **7. CUMULATIVE EFFECTS**

### **7.1 Multiple Solar Farms in Te Manahuna**

61. The Conference Convenor asked Kāi Tahu, Rūnaka, and Lodestone Energy to consider the cumulative effects on Kāi Tahu values associated with the construction of multiple solar farms (Lodestone Energy, Far North Solar, Nova Energy and Helios Energy) over a 2,432 ha area. In terms of existing information on all potential large-scale solar developments planned in the area, Arowhenua is aware of nine proposals, and these have been illustrated in Figure 2 below. The proposed solar farms to be considered through the Fast Track process have been identified in red while the solar farms yet to be considered through the Fast Track process or through the traditional RMA process have been identified in yellow.
62. Figure 2 also illustrates the location of the Transpower transmission lines (purple) that criss-cross Te Manahuna. Whilst Arowhenua are aware of only nine solar farms (refer to Table 1 below), the location of the transmission lines demonstrates where future potential solar farms could be located if there was a market demand for additional solar electricity.

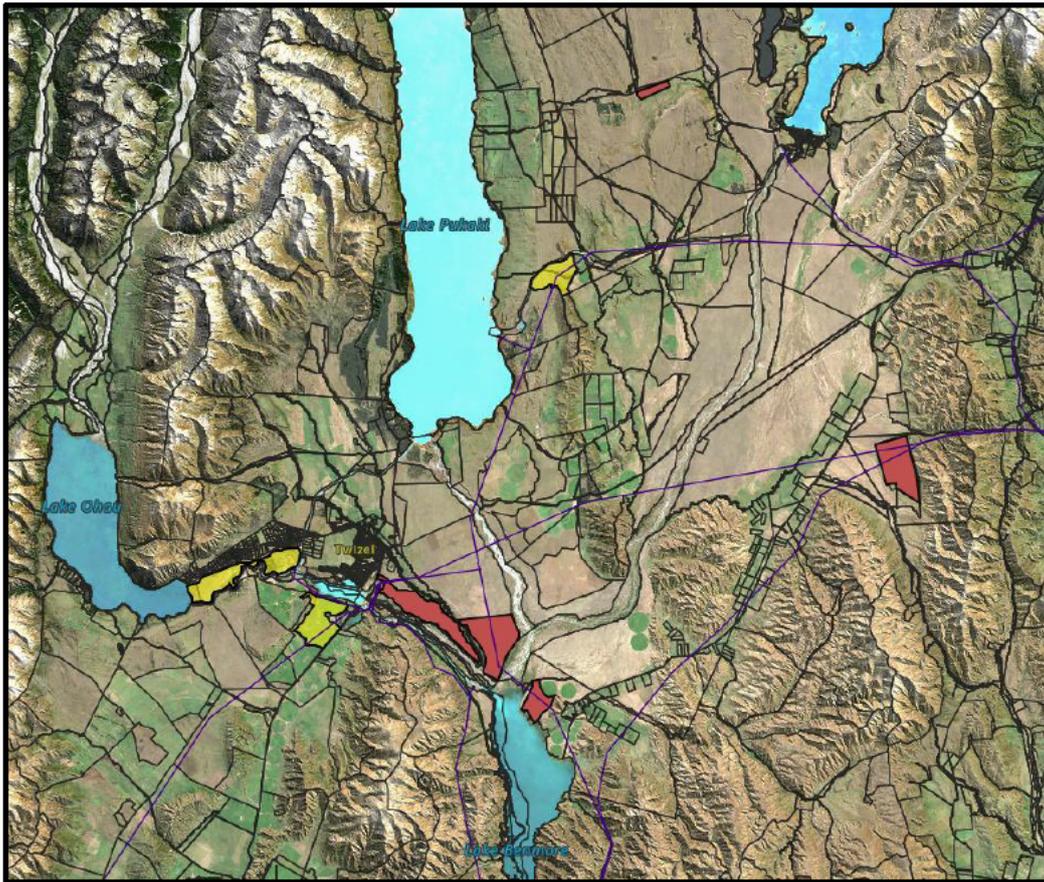


Figure 2: Location of Fast Track solar farm projects (red) and other future solar farms (yellow) yet to be lodged with Councils or the Environmental Protection Agency (Source: Canterbury Maps).

Table 1: Solar Farms Proposed for Te Manahuna.

Project Name	Solar Farm Size	Colour on Map	Process – Fast Track / RMA
Lodestone Energy – Haldon Solar	180 MW	Red	Fast Track (listed)
Far North Solar – The Point Solar Farm	450 MW	Red	Fast Track (listed)
Nova Energy – Twizel Solar Project	300 MW	Red	Fast Track (referral)
Helios Energy – Grampians Solar Project	300 MW	Red	Fast Track (referral)
Simpsons – Balmoral Station Solar Array	88 MW	Red	Fast Track (listed)
Far North Solar – Ōhau A (area has been defined)	280 MW	Yellow	Undetermined
Twizel Solar Farm Ltd – Twizel Solar (area has been defined)	280 MW	Yellow	Undetermined
Manawa Energy – Irishman Creek Station (extent is currently unknown)	220 MW	Yellow	Undetermined
Kakariki Renewables – Mackenzie Basin Solar (extent is currently unknown)	600+ MW	Not shown – location not known	Undetermined

63. Arowhenua have heard Kākāriki Renewables<sup>6</sup> are investigating the construction of a 600+ megawatt solar farm with a 1,200 MWh battery energy storage system. Arowhenua and AECL do not know where the solar farm will be located or the area of land it will occupy. The Kākāriki Renewables website states the project is at the “planning approvals, community and iwi engagement, and commercial agreements are advanced to prepare projects for financial closure”; however, no one from Kākāriki Renewables has been in contact with Kai Tahu, Arowhenua, AECL and Aukaha to discuss the proposal. Given this solar farm is another potential development located within Te Manahuna, AECL have included the project in Table 1.
64. Arowhenua are concerned that during the Overview Conference that Lodestone Energy determined they did not need to consider any cumulative effects because they were the first solar farm proposal in Te Manahuna to be considered through the Fast Track process; therefore, it was up to the other solar farm applicants to address the issue. Arowhenua do not agree with this justification. If Lodestone Energy was to provide an assessment of the cumulative effects, Arowhenua believe there is sufficient information of the other Fast Track Referral and Listed projects on the Fast Track website to assist this.
65. If Lodestone Energy were to provide an assessment on cumulative effects, Arowhenua would like the assessment to incorporate the effects on Te Manahuna of the existing electricity infrastructure in the area (hydro-projects and transmission infrastructure).
66. Arowhenua note that during a recent site visit to Far North Solar’s site ‘The Point’ that due to the site being substantially higher in ground level than the Haldon Solar site that both the Haldon and Nova Energy site were clearly visible from ‘The Point’. The ability to view three large scale solar farm sites from the ‘The Point’ raises concerns around the potential scale of solar farm development within Te Manahuna. Arowhenua are concerned that if both Haldon Solar and The Point were to proceed in conjunction with the existing hydro scheme, there will be a significant change to the currently open landscape to that of an industrial landscape, characterised by extensive solar infrastructure and associated built form.
67. Arowhenua are concerned that the proximity of the Fast Track solar farm applications that the change in landscape will dramatically impact the ability of Rūnaka to connect with the cultural landscape, including important landforms and waterbodies. Consequently, Arowhenua respectively asks that the Expert Panel carefully considers the cumulative effects that may arise

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<sup>6</sup> Website for proposal is <https://kakarikirenewables.com/mackenzie-solar>

as a result of the two solar farm projects being processed under the Fast Track legislation, but also the cumulative impact arising from existing hydro infrastructure as well as future solar farm projects.

## **7.2 Renewable Energy Efficiencies**

68. The substantive application prepared for Lodestone Energy has not addressed the issue of locating solar farms within a small geographical area of New Zealand that is isolated from the where the power is needed.
69. The substantive applications for each of the proposed solar array farms have all stated that there is the need to locate the solar farms within Te Manahuna due to the high sunshine hours, the flat topography, and proximity of sites to the national electricity grid created as a result of the adjoining hydro system.
70. Locating such large solar farms within proximity of each other will see electricity generated and fed electricity into the national grid at the same time due the energy source being the same and highly predictable. Being able to predict the position of the sun in the sky many years in advance will result in the proportional output from each site being nearly identical. Consequently, the electricity generated is not distributed evenly over a 24 hour period or during peak periods (mornings and evenings), instead creating a boom and bust cycle.
71. Another issue of locating large solar farms in proximity to each is that climatic and weather variance cannot be accommodated. Distributing renewable energy across New Zealand can enable security of supply. Consequently, there is a significant economic disincentive to construct large solar plants all in the same location, unless there are significant increases in electricity demand.
72. Arowhenua is concerned that reliance upon development within this area by so many providers over such a large area could preclude the focus of providing alternatives closer to where the energy is required. For example, providing solar panels on the roof space of large scale retail and commercial buildings and carparks in urban areas, on large industrial scale buildings and rural accessory buildings associated with dairy sheds. The current solar farm applications being processed through the Fast Track process appear to be developed without an overall guide to how best to provide power to New Zealand into the future. Additionally, there does not appear to be any accurate projections provided by Transpower to indicate future electricity demands, peak demand levels, and potential pinch points. Arowhenua appreciate the lack of direction

provided by Transpower has enabled large commercial business proposals to design extremely large solar farms in order to secure the lion's share of the remaining electricity demand.

## **8. MITIGATION OPPORTUNITIES**

### **8.1 Ecological Restoration**

73. During the Expert Panel Overview Conference, a discussion was had between the expert ecologists regarding Lodestone Energy contributing to an existing ecological restoration project taking place at the end of Haldon Arm Road, close to the entry to the camping ground. Whilst the extent of the ecological enhancement has not yet been determined, Arowhenua and Te Kete Tipuranga O Huirapa Ltd (Arowhenua Nursery) would welcome any additional support to assist funding the Haldon Wetland and Tekapo Wetland restoration project they commenced in October 2025.

## **9. ADDITIONAL INFORMATION REQUIRED**

74. Based on the above comments, Arowhenua considers that additional information would assist to better understand the potential impacts on identified cultural and landscape values and in some instances, would help to clarify or narrow down the issues of concern.

### **9.1 Transmission Capacity and Connection (Transpower)**

75. At the outset, Kāi Tahu and Arowhenua considered that Transpower (as the owner and operator of the electricity network) needed to confirm what capacity exists within their existing network, what the capacity exists within their future network (if upgrades are proposed), and given the scale (and known megawatts expected to generate) and location of the proposed solar farm projects, how many solar farms can be accommodated within the grid. Without this information, uncertainty remains as to whether other solar farms can be built along with the Point solar project. As such, Arowhenua considers that information from Transpower should be addressed as a matter of priority, and that the scope and timing of the other requested information, (including any assessment of cumulative effects), should be considered once this information has been obtained.

### **9.2 Additional Information from Lodestone Energy**

76. An integrated assessment of the cumulative effects that could arise if the substantive application is granted (combination with other large-scale solar developments in Te Manahuna (including the Point Solar Farm) and existing electricity infrastructure. Focus on potential effects on:

- a) Ecological values and taonga species.
- b) Stormwater, flooding, and groundwater including effects on Te Ao Mārama catchment.
- c) Landscape and visual values.

### **9.3 Ecological assessment and taonga species**

77. Further avifauna assessments with a focus on the southern end of the project site (near the lake) is advisable to gain a true understanding of the cumulative effects of multiple solar projects..

### **10. FURTHER ENGAGEMENT WITH LODESTONE ENERGY**

78. As an aside to the above comments, Kāi Tahu, Aukaha and AECL on behalf of manawhenua have engaged constructively with the Lodestone Energy since attending the initial Panel Conveners Conference in October 2025 and would like the opportunity for this work to continue. Arowhenua and AECL alongside Kāi Tahu and Aukaha would like to engage further with Lodestone Energy and the Expert Panel to explore opportunities to formalise relevant conditions of consent, to provide certainty that the cultural effects will be mitigated for the duration of the consent (if granted), and assist in the preparation of a 'Cultural Management Plan' condition that addresses the following matters:

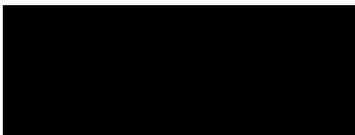
- a) Allow for the establishment of a Kaitiaki Governance Group that facilitates ongoing engagement and feedback on the solar project as well as ensure appropriate tikanga and kawa practices are adhered to.
- b) Allow for the establishment of a methodology for manawhenua to monitor and report on cultural values of the natural environment (matauranga māori) within and around the site for the duration of the solar farm.
- c) Ensure manawhenua have an opportunity to participate in the development of an ecological restoration plan that builds on the wetland enhancement project commenced by Arowhenua, as well as explore options for further enhancement on land adjoining the project site.
- d) Ensure manawhenua have an opportunity to provide feedback on relevant management plans to ensure the ongoing protection of taonga species.
- e) Ensure appropriate archaeological discovery requirements are in place during the construction phase of the project.
- f) Ensure manawhenua have ongoing access to the lake shore to enable the harvest of mahika kai (e.g. raupō) for the duration of the solar farm.

- g) Ensure manawhenua are informed of all incidents at the same time as Councils and relevant authorities.
  - h) Ensure all monitoring reports (required by relevant conditions of consent) are provided to manawhenua in a timely manner.
  - i) Ensure that if Lodestone Energy was to on sell/pass on the consents to another party that the conditions and agreements with manawhenua are adhered to.
79. An example of a potential condition is set out in the response provided by Kāi Tahu. Arowhenua and AECL support the intent and scope of the condition and would be happy to work alongside the Expert Panel Planner, Lodestone Energy's Planner, any other Planner assisting the process and the planning team of Kāi Tahu and Aukaha to refine the condition to ensure it works for all involved.

## **11. CONCLUSION**

80. Arowhenua and AECL thank the Expert Panel for the invitation to comment on the substantive application prepared on behalf of Lodestone Energy.
81. Whilst Arowhenua is not opposed to the substantive application being approved by the Expert Panel, Arowhenua and AECL wish to emphasise that this position has been reached with a general understanding that the outstanding concerns held by Rūnaka and Kāi Tahu can be addressed through the approaches set out in our combined comments, which importantly includes Rūnaka establishing a meaningful and enduring relationship with Lodestone Energy and the landowner.
82. In addition, Arowhenua understands that Lodestone Energy is committed to establishing a relationship with Rūnaka and therefore, welcomes the opportunity to continue discussing the comments raised in this response through ongoing engagement.

Dated: 30 January 2026



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Ally Crane  
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Aoraki Environmental Consultancy Limited