



Undertake Earthworks

Resource Consent Application and Assessment of Environmental Effects

Prepared for Andrew William Simpson and Karen
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5 May 2022



Document Quality Assurance

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CONTENTS

1.0	Introduction	1
2.0	Applicant and Property Details	2
3.0	The Reasons for the Proposal	3
3.1	The Simpson Family	3
3.2	Infratec	3
3.3	Relationship with Government Direction and Policy	3
4.0	Description of the Site and Surrounding Area	5
4.1	The Site	5
4.2	The Surrounding Area	5
5.0	Description of the Proposal	6
5.1	Earthworks	6
6.0	Reasons for the Application	8
6.1	Resource Management (National Environmental Standards for Freshwater) Regulations 2020	8
6.2	Canterbury Land and Water Regional Plan	8
6.3	Definitions	9
6.4	Summary	9
7.0	Section 104(2) Permitted Baseline	10
7.1	Canterbury Land and Water Plan	10
8.0	Assessment of Environmental Effects	11
8.2	Positive Effects / Benefits	12
8.3	Proposed conditions	13
8.4	Conclusion of Assessment of Environmental Effects	13
9.0	Statutory Assessment	14
9.1	Water	14
9.2	Earthworks	18
9.3	Waitaki Iwi Management Plan	18
9.4	Part II of the RMA	19
9.5	Conclusion on Statutory Considerations	19

10.0	Iwi Engagement	20
10.1	Iwi Engagement	20
11.0	Notification	21
11.1	Public Notification	21
11.2	Limited Notification	22
11.3	Conclusion of Notification Assessment	24
12.0	Conclusion	25

Appendices

Appendix 1: Application Form

Appendix 2: Record of Title

Appendix 3: Site Plan

Appendix 4: Draft trenching and access track cross sections

Appendix 5: Statutory Assessment

Appendix 6: Objectives and Policies

Appendix 7: Email from Aukaha.

Appendix 8: Record of hui with AECL and outcomes.

Appendix 9: Letter of support from AECL.

1.0 Introduction

The purpose of this document is to provide a comprehensive planning application and assessment of actual and potential effects in relation to earthworks associated with the construction of a solar array on Braemar Road, Balmoral Station, Tekapo.

This AEE sets out:

- the full name and address of the owner/occupier of the site:
- a description of the site at which the activity is to occur:
- a description of the activity:
- an assessment of the activity:
 - against relevant objectives, policies, or rules in planning documents;
 - in terms of its effects on the environment; and
 - against any relevant provisions of a document referred to in section 104(1)(b).

An AEE is required to accompany any application for resource consent under Section 88 of the Resource Management Act 1991 (RMA). This AEE has been prepared in accordance with the Fourth Schedule of the RMA, covering those matters of relevance identified in the Canterbury Regional Policy Statement, Canterbury Land and Water Regional Plan and other relevant statutory documents.

2.0 Applicant and Property Details

Completed application forms are enclosed as **Appendix 1**.

The summary details relating to the applicant and subject site are as follows:

To:	Canterbury Regional Council.
Applicant Names:	Andrew William Simpson and Karen Frances Simpson Balmoral Station Tekapo.
Address for Service:	Boffa Miskell Ltd PO Box 110, Christchurch 8140 Attn: Claire Kelly Phone: 03 353 7561 Email: clairek@boffamiskell.co.nz
Address for Fees:	Andrew William Simpson and Karen Frances Simpson PO Box 3 Lake Tekapo 7945 New Zealand.
Site Address:	397 Braemar Road Balmoral Station Lake Tekapo.
Legal Description:	Part Run 344 (refer to Appendix 2) Situated in Block V11, V111, X1, X11, X11, XV, XV1 and XV11 Jollie, 11 and 1V Pukaki, 1 Burke and X111 Tekapo Survey Districts CB529/21. Leased under s83 Land Act 1948.
Owner/Occupier Name and Address:	<u>Owner</u> Land Information New Zealand Crown Property Christchurch Crown Property Christchurch (Pastoral) Private Bag 4721 Christchurch 8140. <u>Occupier</u> Andrew William Simpson and Karen Frances Simpson Balmoral Station Tekapo.
Site Area:	Approximately 113ha.
District Plan Zoning:	Rural.
Designations / Limitations:	None.

3.0 The Reasons for the Proposal

3.1 The Simpson Family

The Simpson family are fourth generation Tekapo farmers, with a passion for Te Manahuna (the Mackenzie Basin). They view themselves as custodians of the land and have been involved in conservation type projects such as fencing off 180 hectares, followed by a further 220 hectares of significant ecological areas. These have proved a useful comparison between 'conserved' land and land that is farmed in terms of understanding the ecological impacts of farming activities.

The family business today, encompasses farming (mainly beef and sheep), visitor accommodation, horse trekking and residential development, and is carbon positive because of forestry blocks established on more than 500ha of land between Tekapo and Pukaki. As such, solar generation is seen as a fitting extension of this sustainable investment commitment.

The family's vision is to "create an environmentally and economically diverse business for the benefit of future generations and our community". In pursuit of that vision, the Simpson family has engaged with Infratec New Zealand Limited (Infratec) to investigate and develop plans for a major solar array on land leased by the Applicant.

3.2 Infratec

Infratec is a leading renewable energy EPC (engineer, procure, construct) and project developer in the New Zealand market, with extensive experience on similar projects in New Zealand, the Pacific and ASEAN regions. The core business of Infratec is the design, procurement and installation of solar photovoltaic, battery storage, microgrids and high voltage networks, ground-mount systems, and utility scale plants.

3.3 Relationship with Government Direction and Policy

A new domestic emissions reduction target by 2050 was set into law with the Climate Change Response (Zero Carbon) Amendment Act in November 2019. This Act provides a framework by which New Zealand can develop and implement clear and stable climate change policies that:

- contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels.
- allow New Zealand to prepare for, and adapt to, the effects of climate change.

The changes do four key things:

- set a new domestic greenhouse gas emissions reduction target for New Zealand to:
 - reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050.
 - reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030.
- establish a system of emissions budgets to act as stepping-stones towards the long-term target.

- require the Government to develop and implement policies for climate change adaptation and mitigation.
- establish a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals.

This proposal aligns with the move towards decarbonisation, and a decrease in the generation of greenhouse gases and improved sustainability. This coupled with cost efficiencies in renewable generation and an increase in the consumption of energy, is driving rapid growth in renewable and alternative generation. Solar power is on the rise across New Zealand, with decreasing cost and steadily improving performance leading to increasing interest in grid and network connected solar arrays.

Furthermore, the Mackenzie District has been identified as one of the most promising areas in New Zealand for solar generation, with long sunshine hours, limited shading and a high clear sky index, along with good proximity to the national electricity transmission network (National Grid).

4.0 Description of the Site and Surrounding Area

4.1 The Site

The Site is located on Braemar Road, Tekapo at approximately 850m above sea level and lies approximately 9km to the northwest of the Tekapo township. The Site is comprised of two areas known as Cattle Yard and Tom's Paddock and is approximately 113ha in area. It has an established shelterbelt of pine trees along all its boundaries, with small gaps for vehicle access and where a perennial wetland flows through and out of the Site. There is also a wetland in the southwest corner of the Site.

The topography is gently undulating with hummocks and low-lying areas where water is retained after heavy rainfall events.

The Site is Crown Pastoral Lease and the Applicant has the right to cultivate, sow seed, top-dress, apply fertiliser and plant a shelterbelt. To date, the Site has been used for grazing sheep and beef cattle during the winter months. However, the proposed solar array will not meet the conditions of the current pastoral lease. Therefore, the Applicant has prepared and lodged an application with LINZ/ Crown Property to obtain an easement over the Site to establish the solar array, which is currently in the latter stages of being considered.

4.2 The Surrounding Area

The Site is in the heart of Te Manahuna (the Mackenzie Basin), an outstanding natural landscape that is valued by its residents, New Zealanders and visitors alike. The land surrounding the Site is typical of that found in Te Manahuna (the Mackenzie Basin), being dry, tussock grassland that is used for grazing with a very low density of built development (outside of the main settlements) and some scattered blocks of forestry. The Braemar Road rock glacier (a Geopreservation Site) lies to the northeast.

To the immediate north of Braemar Road, the land is used by the New Zealand Defence Force (NZDF) and is designated for this purpose. Land to the south of the Site falls away to become lower lying with the Old Man wetland to the south, before the land rises steeply to the Old Man Range, a distinctive rounded feature in the immediate area. Approximately 1.85km to the east is Balmoral Homestead and 4.5km to the southeast is a NZDF facility that is accessed off SH8.

An Alpine Energy transmission line (33kV) runs to the north of the Site that terminates at Mt Cook. SH8, which connects Tekapo to Twizel is the main road in the area, lying approximately 4.8km to the southeast of the Site at its nearest point.

5.0 Description of the Proposal

5.1 Earthworks

It is proposed to undertake a total volume of 13,074m³ of earthworks over a total area of 27,372m² (2.74ha or 2.4% of the Site) associated with the construction of a solar array with a maximum generation capacity of approximately 88MW at Braemar Road, Tekapo.

The proposed solar array will be developed in two phases:

Phase	Megawatt-peak capacity	Area (approx.)	Length of construction period	Date when construction commences
1	12MWp	13.5ha	9 months	2023.
2	76MW	86ha	18 months	Subject to the cost, time and planning considerations of network upgrades to both Transpower and Alpine Energy infrastructure.

Phase 1 will cover that part of the Site shown in pink on the Site Plan in **Appendix 3**. In real terms, over the course of a year this will produce enough electricity to power 2,800 households, equivalent to around 70% of the Tekapo township.

Phase 2 will cover the balance of the Site as shown on the Site Plan in **Appendix 3** but will be constructed in 3 blocks, hereafter referred to as Block 1, Block 2 and Block 3.

The earthworks are required to:

- provide a flat platform for structures, parking for 9 cars and the laydown areas of approximately 25m x 50m, and
- create internal roads; and
- minor levelling works within the array area; and
- create trenches or reticulation of DC and AC cables between modules, inverters, transformers and to the grid connection. These will be backfilled once work is complete and allowed to revegetate.

Draft trenching and access track cross sections can be found in **Appendix 4**.

The piles for the modules will be driven and therefore there are no 'earthworks' required as there will be no cutting, filling or displacement of earth.

The volumes and area per phase are set out below:

Phase	Volume	Area
1	3,096m ³	6,298m ²

2	Block 1: 3,903.96m ³ Block 2: 2,777.28m ³ Block 3: 3,296.76m ³ Total = 9,978m ³	Block 1: 7,961.65m ² Block 2: 6,046.05m ² Block 3: 7,066.30m ² Total: 21,074m ²
Total	13,074m³	27,372m²

The minimum depth of cut will be 0.2m and the maximum depth of cut will be 1m, associated with the digging of trenches.

Earthworks will be setback at least 20m from the wetlands on the Site. A swale drain will also be created along each of the access tracks to channel surface water run-off and keep it away from the works/array area and wetlands. These measures will form part of an Erosion and Sediment Control Plan (ESCP) that will be prepared and implemented to ensure potential adverse effects are avoided or mitigated as much as practicable. The general principles that will be adopted during the earthworks activities and incorporated in the ESCP reflect the scale of the works and are as follows:

- Minimise the disturbance area due to earthwork activities as far as practicable, noting that Phase 1 and Phase 2 will be undertaken years apart, while satisfying all requirements for construction of the Site.
- Progressively stabilise exposed areas following completion.
- Divert all clean water runoff away from exposed earthworks areas, to minimise the risk of sediment entering the wetlands.
- Intercept sediment-laden runoff (as required) from exposed areas with sediment retention ponds to provide filtration and retention of sediment prior to discharging to land.
- Regularly inspect the erosion and sediment control measures and undertake any maintenance necessary to maximise the potential retention of sediment on the Site.
- If necessary, earthwork activities may be limited in specific areas during periods of high wind and rainfall.
- Ongoing assessment of the erosion and sediment control measures and, if required, adjustments as the work progresses.
- Ensure site staff are aware of the requirements of the ESCP and the relevant resource consent conditions prior to the works commencing.
- Ensure that after hours contact details are available.
- Dust will be controlled through the use of water trucks, if required, to ensure no offensive or objectionable effects beyond the site boundary.

These principles are generally in accordance with the Environment Canterbury (ECan) Erosion and Sediment Control Online Toolbox for erosion and sediment control.

Furthermore, the earthworks contract developed for the Site will place specific responsibilities on the contractor for the environmental management of the Site. As part of this management, the contractor will be responsible for providing and maintaining adequate erosion and sediment control measures to protect the wetlands.

6.0 Reasons for the Application

The following section discusses the applicable definitions and activity status applicable to each aspect of the application. A full statutory assessment can be found in **Appendix 5**.

6.1 Resource Management (National Environmental Standards for Freshwater) Regulations 2020

The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FM) came into force on 3 September 2020.

The most potentially relevant parts of the NES-FM are Subpart 1- Natural Wetlands of the NES-FM and provisions Part 3 (45): Construction of specified infrastructure. Specified infrastructure has the meaning given by the National Policy Statement for Freshwater Management:

Specified infrastructure means any of the following:

(b) regionally significant infrastructure identified as such in a regional policy statement or regional plan.

The Canterbury Regional Policy Statement defines 'regionally significant infrastructure' as including:

6. National, regional and local renewable electricity generation activities of any scale.

14. Electricity distribution network.

There are two 'natural wetlands' as defined by the NPS-FM located within the solar array site.

It is determined that this proposal does not trigger Regulation 45 (construction of regionally significant infrastructure) – Discretionary activities, as:

- the proposed works will be located at least 20m from the wetland and will not result, or are not likely to result, in the complete or partial drainage of all or part of either natural wetland.
- it is not proposed to undertake vegetation clearance within 20m of the natural wetlands.
- it is proposed to undertake earthworks outside a 10m, but within a 100m, setback from the natural wetlands, but the works will not result in the complete or partial drainage of all or part of the wetlands.
- all construction-phase stormwater from the proposed access tracks and laydown areas will either be directed to sediment ponds or a discharge point at least 100m from the natural wetlands on the Site to minimise any risk of sediment entering the wetlands.

6.2 Canterbury Land and Water Regional Plan

The Canterbury Land and Water Regional Plan (CLAWRP) manages the region's natural resources to, amongst other matters, achieve sustainable development, maintain and improve water quality and to enable economic development.

6.3 Definitions

Highest groundwater level means *the single highest elevation to which groundwater has historically risen that can be reasonably inferred for the site, based on all relevant hydrogeological and topographic information.*

In summary, consent is required under the CLAWRP for the following activities:

Rule	Activity	Status
5.176	Undertake earthworks that exceed 100m ³ within 50m of a wetland. Undertake earthworks that may not be more than 1m above highest groundwater level.	Restricted Discretionary.

6.4 Summary

In summary, consent is required to undertake earthworks as a Restricted Discretionary activity under the Canterbury Land and Water Regional Plan.

7.0 Section 104(2) Permitted Baseline

7.1 Canterbury Land and Water Plan

Under the CLAWP, the following are permitted activities:

- earthworks over 100m³ provided that there is more than 1m of undisturbed material between the deepest part of the excavation and the highest groundwater level and the excavation does not occur within 50m of any surface waterbody.
- The discharge of construction-phase stormwater, other than into or from a reticulated stormwater system, to a surface waterbody, or onto or into land in circumstances where a contaminant may enter groundwater or surface water, provided certain conditions are met.

It is appropriate to apply the permitted baseline as the activities set out above are relevant to the proposal and could be carried out as of right. They are not fanciful and clearly illustrate the nature and extent of activities and associated adverse effects that are considered appropriate at the Site.

8.0 Assessment of Environmental Effects

A comprehensive assessment of the effects of the earthworks has been undertaken, focusing on the assessment matters as specified in the Canterbury Land and Water Regional Plan.

8.1.1 Earthworks

The exercise of discretion is restricted to the following matters:

- 1. The actual and potential adverse environmental effects on the quality of water in aquifers, rivers, lakes, wetlands; and*
- 2. Any need for remediation or long-term treatment of the excavation; and*
- 3. The protection of the confining layer and maintaining levels and groundwater pressure in any confined aquifer, including any alternative methods or locations for the excavation; and*
- 4. The management of any exposed groundwater, and*
- 5. Any adverse effects on Ngāi Tahu values or on sites of significance to Ngāi Tahu, including wāhi tapu and wāhi taonga.*

Matter 1

Earthworks can have adverse effects on the quality of water in surface waterbodies such as wetlands and groundwater as sediments or contaminants may enter water. The Site contains two wetlands, therefore careful consideration of the effects of earthworks on water quality is required.

Earthworks will be controlled through the use of an Erosion and Sediment Control Plan (ESCP), which will include a Dust Management Plan. The ESCP approach and principles are set out in the proposal description, and its implementation will ensure that any adverse effects are avoided or mitigated appropriately.

Heavy vehicles coming to the Site to deliver materials or machinery will use either of the existing vehicle access points located in the north-western and south-eastern corners of the Site or the new access points along Braemar Road. These vehicle crossings will minimise the number of internal tracks, which will be gravelled as required to manage potential dust and sediment issues.

Matter 2

The earthworks are temporary in nature and there is no need for long-term treatment. The earthworks to create the access tracks and laydown areas will be stabilised and gravelled. The cable trenches will be re-vegetated to reduce the risk of any sediment run-off or on-going erosion of the land.

Matter 3

This matter is not relevant as the aquifer is not confined.

Matter 4

Depth to groundwater is approximately 6m: as this area has not been irrigated and there are no domestic or commercial bores/wells on or in proximity to the Site, there are no long-term records of depth to groundwater. The depth has been determined from the Applicant's knowledge of the Site and the depth of the public water supply bore owned by Mackenzie District Council, 3km to the east.

The maximum depth of cut is 1m, which means that there will be at least 5m between the maximum cut depth and the current level of groundwater for the Site. Whilst the highest groundwater level is not known, the need to lay electrical cables in trenches will mean that the works will not be undertaken during periods of wet weather when the water table may be high. As such, it is anticipated that there is a low likelihood of groundwater being exposed during the excavations.

Furthermore, any cuts will be filled with free-draining material, which means that if groundwater is exposed, there will be no adverse effects on water quality as no contaminants will be placed in the trenches or will run off from the surrounding area. Neither are there any potable water supply bores in the immediate vicinity of the Site that may be affected.

Matter 5

Ngāi Tahu exercises kaitiakitanga for the purposes of the Resource Management Act 1991 over the area based on the Area of Interest agreed between Ngāi Tahu and the Crown in the Deed of Settlement.

The Canterbury Regional Landscape Study Review (Boffa Miskell Ltd, 2010), identifies the following Tangata Whenua Values in relation to Te Manahuna (the Mackenzie Basin):

- Lakes Tekapo, Pukaki, Benmore and Ohau are acknowledged in the Ngai Tahu Claims Settlement Act (1998).
- The Mackenzie Basin lakes (Tekapo, Pukaki and Ohau) are all referred to in the legend of “Nga Puna Wai Karikari o Rakaihautu” which describes how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu.
- Maori used the lakes in this area for mahinga kai (waterfowl).
- These lakes are part of a wider mahinga kai trail that ran from Lake Pukaki down the original path of Waitaki River to the coast.

Based on this, proposed activities that occur within Te Manahuna (the Mackenzie Basin) are relevant and will potentially affect iwi cultural values and other associative values.

Therefore, engagement with iwi has been a key part of the process and this is discussed further in section 10.1.

8.2 Positive Effects / Benefits

8.2.1 Relationship with Government Direction and Policy

This proposal aligns with the domestic emissions reduction target by 2050 was set into law with the Climate Change Response (Zero Carbon) Amendment Act in November 2019. It will assist in reducing greenhouse gas emissions by reducing reliance on fossil fuels, and build resilience into the electricity generation network by reducing reliance on hydro electricity generation, which is under pressure due to changing weather patterns, which may be related to climate change. Furthermore, it will provide a locally generated, resilient electricity supply; reducing the need for long transmission distances and the costs associated with that. It may also assist with lowering the risk of unreliable supply due to events such as earthquakes that can disrupt supply.

8.3 Proposed conditions

The following conditions of consent are offered by the Applicant to ensure that any adverse effects of the proposal are effectively managed:

1. That the proposed activities shall proceed in general accordance with the information and plans submitted with the application, except where otherwise stated in the conditions of this consent, including the following documents and plans:
 - Resource Consent Application and Assessment of Environmental Effect Assessment of Environmental Effects', prepared for Andrew William Simpson and Karen Frances Simpson, dated 4 May 2022, by Boffa Miskell Limited.
 - Ecological Impact Assessment, prepared for Infratec New Zealand Ltd, dated 26 April 2022, by Boffa Miskell Limited.
2. A Sediment and Erosion Control Plan including a dust management plan shall be prepared and provided to Mackenzie District Council for certification prior to any works commencing on the Site.

Advice Note: 'Exercised' is defined as implementing any requirements to operate this consent and undertaking the activity as described in these conditions and/or application documents

8.4 Conclusion of Assessment of Environmental Effects

It is concluded that the adverse effects of the earthworks on the environment will be less than minor because the proposal will:

- adopt an ESCP that will manage the adverse effects of earthworks especially on the wetlands.
- protect the natural character of the wetlands by ensuring that earthworks are setback from the edges of the wetlands thus maintaining existing vegetation cover.
- not impact on the soils within the Site as it is only proposed to dig post holes and trenches, and not remove any soils as it is intended to undertake primary production i.e. sheep grazing on the Site.

9.0 Statutory Assessment

In accordance with Section 104(1) of the Resource Management Act 1991 ('RMA'), this part of the report addresses the following statutory documents which are relevant to this proposal:

- National Policy Statement for Freshwater Management 2020 (NPS-FM).
- Canterbury Regional Policy Statement 2013 (CRPS).
- Canterbury Land and Water Regional Plan (CLAWRP).
- Waitaki Iwi Management Plan (WIMP).
- Part II of the RMA.

The focus for the assessment of these documents is on the areas that are particularly relevant and within the scope of the consents that have been applied for.

These planning documents are in a hierarchy whereby the lowest-order documents are required to give effect to the mid and higher-level documents (e.g. district plan provisions are to give effect to the regional policy statement provisions which in turn give effect to the national planning documents).

Due to the different timescales at which these documents have been prepared and made operative, some higher-order documents have not been given effect to by the lower order documents in the hierarchy. In this case:

- the CRPS does not give effect to the NPS-FM.
- the CLAWRP does not give effect to the NES-F and therefore this project needs to be assessed against a wider set of documents.

A full list of the relevant objectives and policies contained within the above documents is set out in **Appendix 6**. To facilitate the identification and analysis of the documents, the following assessment groups and assesses the relevant provisions according to the various policy themes rather than looking at each document individually.

9.1 Water

Document	Objectives and Policies
NPS-FM	2.1 Objective (1) The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises: (a) first, the health and well-being of water bodies and freshwater ecosystems (b) second, the health needs of people (such as drinking water) (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai.

	Policy 2: Tangata whenua are actively involved in freshwater management (including decision making processes), and Māori freshwater values are identified and provided for. Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments. Policy 4: Freshwater is managed as part of New Zealand's integrated response to climate change. Policy 5: Freshwater is managed through a National Objectives Framework to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved. Policy 6: There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted. Policy 7: The loss of river extent and values is avoided to the extent practicable. Policy 8: The significant values of outstanding water bodies are protected. Policy 9: The habitats of indigenous freshwater species are protected. Policy 10: The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9. Policy 11: Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. Policy 12: The national target (as set out in Appendix 3) for water quality improvement is achieved. Policy 13: The condition of water bodies and freshwater ecosystems is systematically monitored over time, and action is taken where freshwater is degraded, and to reverse deteriorating trends. Policy 14: Information (including monitoring data) about the state of water bodies and freshwater ecosystems, and the challenges to their health and well-being, is regularly reported on and published. Policy 15: Communities are enabled to provide for their social, economic, and cultural wellbeing in a way that is consistent with this National Policy Statement.
CLAWRP	The objectives and policies that deal with stormwater and groundwater protection are summarised and assessed below. 3.1 Land and water are managed as integrated natural resources to recognise and enable Ngāi Tahu culture, traditions, customary uses and relationships with land and water. 3.2 Water management applies the ethic of ki uta ki tai – from the mountains to the sea – and land and water are managed as integrated natural resources recognising

	the connectivity between surface water and groundwater, and between fresh water, land and the coast. 3.8 The quality and quantity of water in fresh water bodies and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon. 3.8A High quality fresh water is available to meet actual and reasonably foreseeable needs for community drinking water supplies. 3.13 Groundwater resources remain a sustainable source of high-quality water which is available for abstraction while supporting base flows or levels in surface water bodies, springs and wetlands and avoiding salt-water intrusion. 4.17 Stormwater run-off volumes and peak flows are managed so that they do not cause or exacerbate the risk of inundation, erosion or damage to property or infrastructure downstream or risks to human safety.
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Discussion

NPS-FM

Objective 1 and Policy 1: It is not proposed to take or use water but undertake works in proximity to wetlands. The assessment of effects has determined that there will be no adverse effects on the health and well-being of the wetlands due to the implementation of an ESCP. In fact, there are benefits in terms of the removal of stock grazing, the construction of fencing and weed control if the solar array is constructed. However, this relies on being able to undertake the proposed earthworks. Overall, it is considered freshwater will be managed in a way that gives effect to Te Mana o te Wai.

Policy 2: The proposed application has been assessed against the relevant iwi management plan and is consistent with the objectives and policies of that plan as set out in Section 8.4 below.

Policies 3, 4 and 5 relate to integration, whole of catchment management, NZ's integrated climate change response and the National Objectives Framework. These policies are pitched at a higher level than is relevant to this proposal and are given effect through the CLAWRP and ECan management. Again, the proposal is consistent with these policies by ensuring protection of freshwater values. As stated above, the works in proximity to the wetlands will not adversely affect their health and well-being or the ability to provide for the health needs of people.

Policy 6: Whilst it is proposed to undertake works in proximity to wetlands, there will be no drainage of the wetlands resulting in loss of extent. Furthermore, the health of the wetlands will be protected by maintaining vegetation along the wetland, installing erosion and sediment controls, erecting stock fences to exclude sheep and undertaking weed control.

Policy 7 seeks to avoid the loss of river extent and values. This policy is not relevant as no river will be affected by this proposal.

Policy 8: There are no outstanding water bodies within or adjacent to the Site, so this policy is not relevant.

Policies 9 and 10 relate to indigenous freshwater species, trout and salmon. It is considered that there will be no change in the effects on any habitats of indigenous freshwater species, trout and salmon.

Policy 11 is not relevant as it is not proposed to take any freshwater.

Policy 12 relates to national targets for water quality improvements and is not relevant to this proposal as it affects wetlands. Although it is noted that the proposal will result in the land being grazed by sheep and not cattle, which may result in benefits for water quality in the wetlands.

Policies 13 and 14 relate to water quality improvements and are not relevant to this proposal as works are in proximity to wetlands, and there will not be any discharge to the wetlands.

Policy 15: The proposal will enable the construction of a solar array that will provide renewable electricity to the local network. This activity will provide for the economic wellbeing of the Applicant as well as supporting economic activity that will benefit the local, regional and national economy. The proposal will also enable people to provide for their social and cultural wellbeing by providing a reliable source of renewable electricity.

The objective and policies in Part 2 of the NPS-FM have been assessed, and overall, it is considered that the proposal is not contrary to the objective and relevant policies of the NPS-FM and is therefore generally consistent with the concept of Te Mana o te Wai.

However, Part 3 is not considered relevant as it relates to implementation of the NPS-FM by the regional council rather than whether an individual application gives effect to or is aligned with, the intent of the NPS-FM.

Construction phase stormwater

Earthworks and associated runoff can have adverse effects on the quality of water in surface waterbodies such as wetlands and groundwater as sediments or contaminants may enter water. The earthworks will be staged over a number of years thereby minimising the area of disturbance area and the largest areas of earthworks are associated with the car parking, buildings and the access tracks, which will be located more than 100m from the wetlands. The ESCP will be used to manage potential adverse effects on water quality by progressively stabilising exposed areas following completion and diverting all clean water runoff away from exposed earthworks areas, to minimise the risk of sediment entering the wetlands and, intercepting sediment-laden runoff (as required) from exposed areas with sediment retention ponds to provide filtration and retention of sediment prior to discharging to land at least 100m from the wetlands.

The maximum cut depth of 1m means that it is unlikely that groundwater will be exposed on the Site and the need to lay electrical cables in trenches will mean that the works will not be undertaken during periods of wet weather when the water table may be high. As such, it is anticipated that there will be a low likelihood of groundwater being exposed during excavations.

Furthermore, any cuts will be filled with free-draining material, which means that if groundwater is exposed, there will be no adverse effects on water quality as no contaminants will be placed in the trenches or will run off from the surrounding area. Neither are there any potable water supply bores in the immediate vicinity of the Site that may be affected, the nearest being 3km to the east.

Overall, it is considered that the proposal will be in accordance with the objectives and policies in the CLAWRP in relation to water.

9.2 Earthworks

Document	Objectives and Policies
CRPS	Chapter 15 seeks to, amongst other matters, maintain and improve the quality of Canterbury's soil to safeguard their mauri, their life supporting capacity, their health and their productive capacity by ensuring that land-uses and land management practices avoid significant long-term adverse effects on soil quality, and to remedy or mitigate significant soil degradation where it has occurred, or is occurring; and to promote land-use practices that maintain and improve soil quality.
CLAWRP	Earthworks over aquifers 4.18 The loss or discharge of sediment or sediment-laden water and other contaminants to surface water from earthworks, including roading, works in the bed of a river or lake, land development or construction, is avoided, and if this is not achievable, the best practicable option is used to minimise the loss or discharge to water. 4.19 The discharge of contaminants to groundwater from earthworks, excavation, waste collection or disposal sites and contaminated land is avoided or minimised by ensuring that: a. activities are sited, designed and managed to avoid the contamination of groundwater....

This proposal will not impact on the soils within the Site as it is only proposed to dig post holes and trenches, and not remove any soils as it is intended to undertake primary production i.e. sheep grazing on the Site.

Further, all earthworks will be well set back from the wetlands within the Site and will be appropriately managed via an Erosion and Sediment Control Plan to further ensure the protection of the wetlands and the quality of surface and ground water.

Overall, the proposal accords with the direction of the objectives and policies that address earthworks.

9.3 Waitaki Iwi Management Plan

The Waitaki Iwi Management Plan (WIMP) was developed by Te Rūnanga o Arowhenua, Te Rūnanga o Waihao and Te Rūnanga o Moeraki as an expression of rakatirataka and in fulfilment of their kaikiaki responsibilities.

The WIMP addresses the improvement of water quality.

Discussion

The proposal will also not adversely affect water quality given that earthworks will not penetrate groundwater and an ESCP will be implemented to manage any adverse effects arising from the proposed earthworks.

9.4 Part II of the RMA

The CRPS was made operative in 2013 and the CLAWRP was made operative in 2016. Both of these documents were competently prepared through a hearing and decision-making process in a manner that appropriately reflects the provisions of sections 5-8 of the Act.

Accordingly, it is concluded that no further assessment against Part 2 is considered necessary.

9.5 Conclusion on Statutory Considerations

It is concluded that the proposal accords with the intent of the objectives and policies across the relevant statutory documents and will not be contrary to the outcomes sought by the Waitaki Iwi Management Plan.

10.0 Iwi Engagement

10.1 Iwi Engagement

Te Rūnanga o Arowhenua and Te Rūnanga o Waihao both hold mana whenua over the Site.

Initially the Applicant engaged with both Te Rūnanga o Arowhenua and Te Rūnanga o Waihao but was advised by Aukaha¹ that Aoraki Environmental Consultancy Limited (AECL)² would essentially take the lead on this project and that no reply would be provided on behalf of Te Rūnanga o Waihao (please refer to the email in **Appendix 7**).

A copy of the draft application and technical reports were provided to AECL on 22nd March, so they could digest these prior to a hui on 30th March 2022. Engagement with iwi has been a key part of the process and the hui provided an opportunity to discuss the proposal and for iwi to provide comments and/or recommendations on the application.

A record of the hui with AECL is provided in **Appendix 8** that records the key issues raised and how these have been addressed by the Applicant. It is also noted that a Memorandum of Agreement is proposed with Te Rūnanga o Arowhenua to establish, for example, a programme of cultural health monitoring, explore opportunities to engage with local schools: ecological/cultural monitoring and renewable energy and explore opportunities to replace the pine shelterbelt with indigenous planting.

¹ The Rūnaka based consultancy service with Governance that has five Rūnaka owners: Te Rūnanga o Waihao, Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga

² AECL provide advice for Rūnanga south of the Rakaia to the Waitaki River.

11.0 Notification

11.1 Public Notification

The application has been assessed against each of the steps under section 95A to determine whether public notification is required.

Section 95A provides a step-by-step guide in determining whether public notification is required:

Step 1	Mandatory public notification in certain circumstances. An application must be publicly notified if: • the applicant requests public notification • public notification is required under section 95C • the application is made jointly with an application to exchange recreation reserve land.
Step 2	If not required by step 1, public notification is precluded in certain circumstances. An application cannot be publicly notified if: • a rule or national environmental standard (NES) precludes notification. • the application is for one or more of the following, but no other, activities: – a controlled activity; – a restricted discretionary, discretionary or non-complying activity, but only if the activity is a boundary activity.
Step 3	If not precluded by step 2, public notification is required in certain circumstances. Other than for those activities in step 2, public notification is required if: • a rule or NES requires public notification. • the assessment under section 95D determines that the activity will have, or is likely to have, adverse effects on the environment that are more than minor.
Step 4	Public notification in special circumstances If notification is precluded under step 2, or isn't required under step 3, consideration must be given to whether special circumstances exist that warrant public notification of the application.

In assessing the proposal under section 95A it is noted that:

- None of the circumstances of Step 1 (section 95A(3)) apply because the Applicant has not requested public notification and the application is not made jointly with an application to exchange recreation reserve land.

- Public notification is not precluded under Step 2 as a rule or national environmental standard (NES) does not preclude notification, and the application is not for a controlled activity, or a boundary activity.
- The circumstances in Step 3 are particularly relevant. There is no NES requiring public notification. The assessment under section 95D determines that the activity will not have, or is not likely to have, adverse effects on the environment that are more than minor.
- Step 4 does not apply as there are no special circumstances which could warrant public notification under s95A(9).

Accordingly, the consent authority is requested not to publicly notify this application.

11.2 Limited Notification

Where the consent authority accepts that public notification is not required (see Part 11.1 above), the consent authority must then determine if limited notification is required under section 95B:

Step 1	Certain affected groups and affected persons must be notified. If the consent authority determines that certain people or groups are affected, these persons/groups must be given limited notification: • affected protected customary rights groups • affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity) • an affected person under section 95E to whom a statutory acknowledgement is made (if the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement)
Step 2	If not required by step 1, limited notification is precluded in certain circumstances. An application cannot be limited notified if: • a rule or NES precludes limited notification of the application • it is for either or both of the following, but no other, activities: – a controlled land use activity under a district plan – an activity prescribed through regulations.
Step 3	If not precluded by step 2, certain other affected persons must be notified. Determine whether, in accordance with section 95E, the following persons are affected persons: • in the case of a boundary activity, an owner of an allotment with an infringed boundary; and • in the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity.

	In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.
Step 4	Further notification in special circumstances. If the consent authority determines special circumstances exist that warrant limited notification of the application to any other persons not already determined to be eligible for limited notification (excluding persons assessed under section 95E as not being affected persons), the council must give limited notification to those persons.

Limited Notification under section 95B is precluded because:

- None of the circumstances of Step 1 (section 95B(2) or (3)) apply as there are no affected protected customary rights groups, customary marine title groups or an affected person under section 95E to whom a statutory acknowledgement is made.
- None of the circumstances of Step 2 apply as a rule or NES does not preclude limited notification of the application, and the application is not for a controlled land use activity under a district plan or an activity prescribed through regulations.
- Step 3 does not apply, as there are no adversely affected persons in accordance with section 95E (as assessed below).
- Step 4 does not apply as there are no special circumstances which would warrant limited notification under Section 95B(10) to persons other than those considered as affected persons under section 95E.

With regard to affected persons, Section 95E states:

95E Consent authority decides if person is affected person

- (1) *For the purpose of giving limited notification of an application for a resource consent for an activity to a person under section 95B(4) and (9) (as applicable), a person is an affected person if the consent authority decides that the activity's adverse effects on the person are minor or more than minor (but are not less than minor).*
- (2) *The consent authority, in assessing an activity's adverse effects on a person for the purpose of this section—*
 - (a) *may disregard an adverse effect of the activity on the person if a rule or a national environmental standard permits an activity with that effect; and*
 - (b) *must, if the activity is a controlled activity or a restricted discretionary activity, disregard an adverse effect of the activity on the person if the effect does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion; and*
 - (c) *must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.*
- (3) *A person is not an affected person in relation to an application for a resource consent for an activity if—*

- (a) the person has given, and not withdrawn, approval for the proposed activity in a written notice received by the consent authority before the authority has decided whether there are any affected persons; or*
 - (b) the consent authority is satisfied that it is unreasonable in the circumstances for the applicant to seek the person's written approval.*
- (4) Subsection (3) prevails over subsection (1).*

With regard to the above, no persons are considered to be adversely affected by the proposal because:

- the adverse effects of the proposal have been assessed as generally less than minor, and able to be appropriately managed through an ESCP.
- adverse effects will generally be internalised to the Site.

Further Te Rūnanga o Arowhenua and AECL have provided a letter of support (**Appendix 9**) to the proposal expressing their appreciation in being involved in the project from conception and being able to review the draft conditions of consent.

Accordingly, it is considered that the consent authority need not give notice of this proposal to any person.

11.3 Conclusion of Notification Assessment

Pursuant to Sections 95 to 95G of the RMA, this application must be processed without public notification and without limited notification to any person because:

- None of the steps under section 95A require the consent authority to publicly notify the application; and
- None of the steps under section 95B require the consent authority to limited notify the application; and
- There are no persons identified as being adversely affected under s95E.

12.0 Conclusion

It is proposed to undertake earthworks totalling 13,074m³ over a total area of 27,372m² (2.74ha or 2.4% of the Site) with a minimum depth of cut of 0.2m and a maximum depth of cut of 1m. These are related to the construction of a solar array with a maximum generation capacity of approximately 88MW at Braemar Road, Tekapo. The proposed solar array will be developed in two phases.

Consent is required as a Restricted Discretionary activity under the Canterbury Land and Water Regional Plan.

An assessment of the effects of the proposal has been undertaken, with key elements of this assessment focussing on the matters of non-compliance and the assessment matters as specified in Canterbury Land and Water Regional Plan:

- Earthworks: it is considered that the effects of the proposed earthworks will be effectively managed through an ESCP.
- Mana Whenua Values: the proposed activities occur within Te Manahuna (the Mackenzie Basin) and will potentially affect iwi cultural values and other associative values. Therefore, engagement with iwi has been a key part of the process and a hui with AECL provided an opportunity to discuss the proposal and for iwi to provide comments and/or recommendations on the application. Their support of the proposal strongly suggests that it aligns with their values and the direction set out in the WIMP.
- Positive Effects / Benefits: this proposal aligns with the domestic emissions reduction target by 2050 was set into law with the Climate Change Response (Zero Carbon) Amendment Act in November 2019.

The proposal has been assessed against the relevant objectives and policies of the:

- National Policy Statement for Freshwater Management 2020 (NPS-FM).
- Canterbury Regional Policy Statement 2013 (CRPS).
- Canterbury Land and Water Regional Plan (CLAWRP).
- Waitaki Iwi Management Plan (WIMP).

and found to not be contrary to these.

The application can be processed on a non-notified basis without notice to any person pursuant to Section 95 of the RMA because effects on the environment will be no more than minor and no persons have been identified as being adversely affected. It is also considered that no special circumstances exist.

In conclusion, it is considered that the Mackenzie District Council and the Canterbury Regional Council has the authority to grant consent to the proposed development on a non-notified basis in terms of Sections 104 and 104C of the RMA for the reasons stated above.